IDENTIFYING AND EXPLORING PROFILES OF HOME-BASED CHILD CARE PROVIDERS BASED ON THEIR BELIEFS AND PRACTICES

by

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A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Human Development and Family Studies

Spring 2017

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ACKNOWLEDGMENTS

This project was supported by the Child Care Research Scholars Grant from the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services (Grant #90YE0160**)**. Its contents are solely the responsibility of the author and do not necessarily represent the official views of the Office of Planning, Research and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services.

I would like to express my sincere gratitude to my advisor, Dr. Rena Hallam. Thank you for your guidance, time, encouragement, and thoughtful feedback throughout the past six years. I am thankful for the opportunity to work with you and learn from you, and I could not have asked for a better mentor to guide me through this process. I would also like to thank my dedicated committee members Dr. Myae Han, Dr. Martha Buell, and Dr. Elizabeth Farley-Ripple.

Thank you to Christine Skrobot and Danielle Riser for your assistance collecting and analyzing data for this project. Thank you for taking an interest in this work and for helping to shape the final project. I would also like to thank the child care providers who graciously participated in this project, especially those who invited me into their home and openly shared their challenges and successes.

To my family, thanks for always encouraging me and reminding me to take care of myself. To my husband Matthew, thank you for supporting me throughout this process. It hasn’t always been easy, and it hasn’t always been fun, but we made it through together. Thank you for having faith in me. To all of the HDFS faculty, thank

you for your insight and commitment to serving children and families. It has been an honor to learn from you. Finally, to all of my HDFS and DIEEC friends, I am thankful for you. I had no idea that I would make so many wonderful friends during my time at UD, and I am so grateful for you all.

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ABSTRACT

This series of studies seeks to broaden the understanding of the diverse home-based child care provider workforce through identifying categories of providers based on their beliefs about caregiving and their practices with children and families. Seven million children from birth to five receive care in home-based child care settings. However, relatively little is known about characteristics of home-based providers and how to effectively engage them in quality improvement initiatives. Through secondary analysis of the National Survey of Early Care and Education data on listed home-based providers, latent profile analysis is used to explore how providers group into profiles based on key characteristics related to their beliefs and practices, as well as additional provider characteristics that predict profile membership. A similar strategy is used to analyze a sample of licensed and unlicensed home-based providers in Delaware based on the results of a statewide survey. Finally, a multiple case study approach is used to further explore providers in each profile, specifically considering how they view their roles and the quality of the care they provide and to better understand their practices with children and families.

Chapter 1

INTRODUCTION

An increasing number of children five and under spend time in one or more non-parental child care settings. In fact, over 60% of US children under five years of age, 12.5 million, attend at least one regular non-parental child care arrangement (Laughlin, 2013). There has been significant recent attention at the state and federal level to improve access to high-quality child care and to ensure that children are prepared to be successful when they enter kindergarten. With this has come increased attention to children's experiences in home-based child care (HBCC). Recent national data suggests that approximately seven million children from birth to five are cared for in HBCC settings, such as with a relative or neighbor or in a regulated family child care program (NSECE Project Team, 2015a). This includes a disproportionately high number of families with infants and toddlers, single-parent households, minority families, and low-income families (Maher & Joesch, 2005; NICHD Early Child Care Research Network, 2004; Rulf Fountain & Goodson, 2008). However, relatively little is known about home-based providers, their beliefs and practices related to working with children and families, and how to engage them in quality improvement initiatives.

HBCC is a broad term that encompasses a wide range of caregivers, including those caring for related and unrelated children, those who are paid and unpaid, and those regulated and unregulated by their state. Because of this variation, there are often unclear and inconsistent definitions of terms used to categorize HBCC providers.

This research aims to increase the understanding of HBCC providers and their beliefs and practices through identifying profiles of providers using both national and state-specific samples and conducting an in-depth exploration of providers in each profile through three connected studies.

Theoretical Framework

The three studies within this project draw on Bronfenbrenner's (2005) bioecological theory as a theoretical framework. According to this theory, development occurs with multiple nested and interconnected systems within an individual's environment that bi-directionally influence development. Children attending child care are influenced by both the microsystem of the family and that of their child care setting, and these two microsystems interact to form a mesosystem. When there is consistency between the microsystems, it enhances the potential for positive development to occur. Home-based providers can address children's developmental needs and support positive family functioning through their relationships with children and families (Scott, London, & Hurst, 2005; Vortruba-Drzal et al., 2004). Additionally, development is influenced by factors at the macrosystem level, including policies related to regulation and subsidy for home-based providers. Specifically, the Person-Place-Context Time model (PPCT; Bronfenbrenner & Morris, 1998) offers a framework for understanding how proximal processes, the dynamic interactions that occur within the microsystem, influence the development of both home-based providers and the children they serve. In the PPCT model, proximal processes facilitate development within the context of individual characteristics, context, and time.

Forry et al. (2013) used a bioecological perspective to identify proximal and distal influences on quality in FCC. They identified providers' personal characteristics, resources, professional knowledge, and beliefs as the most proximal influences on quality, while structural features of care including group size and ratio are more distally related to quality. Research on HBCC has primarily focused on the more distal influences on quality, such as those related to macrosystem-level policies and regulations. More research attention is needed to better understand HBCC providers' personal characteristics, beliefs, and practices that compose the more proximal influences on quality.

Research Design

This project is a mixed methods study of home-based providers with three connected research phases. The project utilizes a multiphase mixed methods design (Creswell & Plano Clark, 2011). In this design a topic is examined using a series of sequentially aligned methods that build upon one another to address a central objective. In mixed methods designs, both quantitative and qualitative data are collected, analyzed, and mixed for interpretation within a single study in order to answer a research question more completely (Tashakkori & Teddlie, 2010). A mixed method approach is used because neither quantitative nor qualitative data on its own is sufficient to capture the complexity of HBCC. In combination, these methods complement one another and allow for more in-depth exploration of the research questions (Greene & Caracelli, 1997). The multiphase design is useful when a topic is studied in a series of sequential phases, each with its own objective but contributing to an overall research goal (Creswell & Plano Clark, 2011). Data collection and analysis

for this project took place in three sequential phases, which are referred to as Study 1, Study 2, and Study 3. The research design is represented visually in Figure 1.

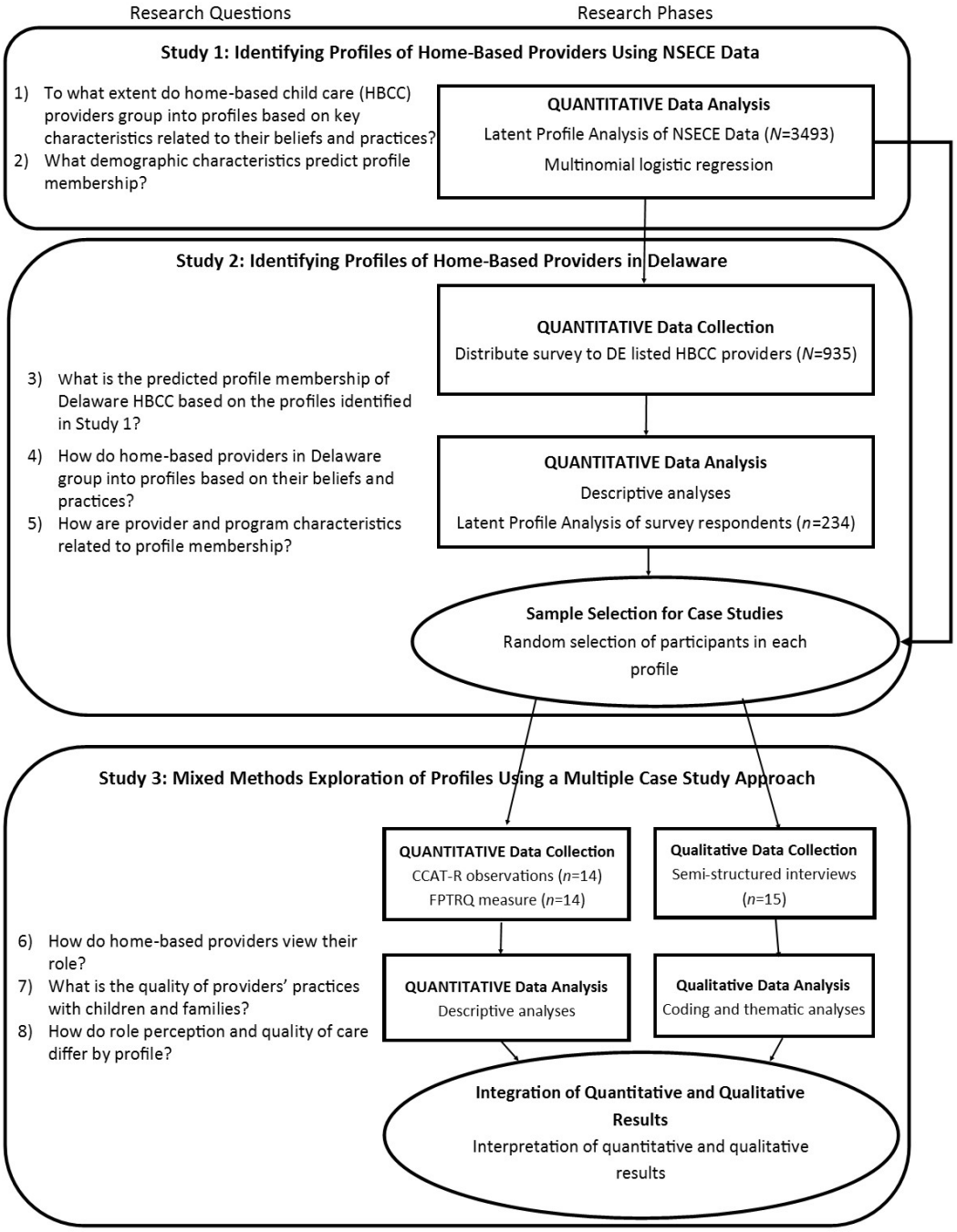

Figure 1 Visual model of multiphase mixed methods designs.

In the following chapters, the rationale, methods, results, and implications of each of the three studies are discussed. Study 1 identifies profiles of HBCC providers through quantitative analysis of listed providers' self-report of their beliefs and practices related to working with children and families using data from the National Survey of Early Care and Education. Study 2 includes the collection and analysis of quantitative survey data from home-based providers in Delaware in order to identify profiles of providers within a state-specific sample and examine provider characteristics that predict profile membership. Study 3 consists of program observations and provider interviews using a mixed methods multiple case study approach in order to further explore the profiles identified in Study 1 and Study 2. Using this approach, it was possible to gain a deeper understanding of how providers in each profile perceive their role and the quality of care they provide to children and to move beyond providers' self-report of their practices. The final chapter includes an analysis of the findings across the studies, implications for policy and practice, and directions for future research given those findings.

Chapter 2

STUDY 1: IDENTIFYING PROFILES OF HOME-BASED PROVIDERS USING A NATIONALLY REPRESENTATIVE SAMPLE

Recent data suggests that many children from birth to five, more than the number cared for in center-based settings, regularly attend HBCC in the United States, including many children at risk (Laughlin, 2013; NSECE Project Team, 2015b). Despite this, relatively little is known about HBCC providers and their beliefs and practices. Gaining a better understanding of HBCC providers is one important step in supporting positive developmental outcomes for the many children attending this form of child care.

HBCC is a diverse context that includes all non-parental child care arrangements taking place in a residential setting. In addition, state policies related to the licensing and regulation of HBCC providers, as well as their opportunities to participate in initiatives focused on improving the quality of early care and education (ECE) like Quality Rating and Improvement Systems (QRIS), vary greatly (NACCRA, 2012; The Build Initiative & Child Trends, 2015; Tout et al., 2011). Because the majority of research on child care settings for young children has focused on center-based child care, much is still unknown about the providers who care for children in homes. The research that has included home-based providers often focuses on one category of provider, such as licensed family child care (FCC) programs. However, differences in state policies, especially those related to licensing requirements, make it difficult to generalize findings to the larger population.

This study examines a national sample to identify profiles of listed HBCC providers based on their caregiving beliefs, educational practices, professional engagement, and family support using data from the National Survey of Early Care and Education (NSECE). By focusing on grouping providers related to their beliefs and practices and by considering additional provider characteristics that may differ by profile, the results of this study can inform quality improvement efforts and targeted support to HBCC providers to assist them in providing high-quality care. Specifically, it may be an effective strategy for better understanding these providers with the ultimate goal of linking them to appropriate and relevant resources to support them in their work with children and families and promote quality improvement.

When HBCC providers receive support and access outside resources, it can be very beneficial to them and to the quality of the experiences they provide to children (Bromer et al., 2009; Forry et al., 2013; Gable & Halliburton, 2003). Unfortunately, HBCC providers are less likely to have access to outside supports than center-based providers. They often work in isolation (Rusby, 2002; Tuominen, 2003), they may or may not be licensed or engaged with other state systems, and they may not have formal education in child development or early education (Whitebook et al., 2004). Better understanding HBCC providers and how to connect them to resources and supports that will meet their needs are important to supporting children's development in these settings.

Literature Review

Home-Based Child Care as a Caregiving Context

Children attending HBCC spend an average of 30 hours per week in care (Laughlin, 2013), and this often includes some time during the nights and weekends when other forms of child care may not be available. HBCC providers are more likely to offer care during non-standard hours, including in the evening, overnight, and on weekends than center-based providers. Additionally, HBCC providers are more likely than centers to allow children to attend on a flexible schedule and to allow families flexibility in payment (NSECE Project Team, 2015a).

HBCC has a number of unique features that promote positive child development, and HBCC providers are uniquely situated to support the families of the children for whom they care. Mixed-age groups of children are common, which means siblings can be cared for together, and older children and younger children often have opportunities to interact with and learn from one another. Children tend to remain with the same provider for multiple years, which provides consistency and stability (Whitebook, Phillips, Bellm, Crowell, Almarex, & Jo, 2004). This continuity of care supports stable attachment relationships between a provider and child which can support the child's social and emotional development (Hayes, Palmer, & Zaslow, 1990).

Parents select HBCC for a range of reasons. Many HBCC providers, especially unlicensed family, friend, and neighbor providers, are related to the children for whom they care (NSECE Project Team, 2015a), and parents may choose these providers because of this relationship. Even if the provider does not have a prior relationship to the family, parents can often find a HBCC provider in their own community. Lack of

transportation can be a barrier to accessing child care, so utilizing a HBCC provider in their own community can be the most feasible and time-effective option for some families. Additionally, parents may more readily be able to find a provider who shares their culture and language, and due to this cultural and language match, parents may feel they can communicate more openly and effectively and build trust with their child care provider (Miller, Votruba-Drzal, Coley, & Koury; 2014; Thomas, Boller, Johnson, Young, & Hu, 2015). Parents also select HBCC because of its home-like environment. Many parents prefer to place their children, especially infants and toddlers, in a home environment because of the family-like atmosphere and the individualized attention children receive due to lower ratios (Layzer & Goodson, 2006).

HBCC providers tend to charge less than center-based programs, which is very important to many families, given the high cost of child care. HBCC providers as a whole accommodate families' nontraditional schedules more than center-based programs, often allowing parents to use different numbers of days or hours each week based upon their work needs and caring for children overnight and on weekends (NSECE Project Team, 2015a), and this is a primary reason parents select HBCC (Coley et al., 2001). Parents who utilize HBCC consistently report higher levels of satisfaction with their care arrangement than parents whose children attend centers. They perceive that their children receive more individual attention, and they appreciate the close communication and flexible hours HBCC providers often offer (Coley et al., 2001; Layzer & Goodson, 2006; Porter & Kearns, 2005a).

In addition to serving a diverse group of children and families, HBCC providers themselves are very diverse, with wide variation in age, race, and

socioeconomic status. They are predominantly female, and approximately 90% of them are parents, often caring for their own children along with other children (Albanese, 2007; Kontos, Howes, Shinn, & Galinsky, 1995; Whitebook et al., 2004). Paid home-based providers make up a sizeable portion of small business owners in the United States, and therefore play an important role in the economy (National Child Care Information Center & National Association for Regulatory Administration, 2008). Because of the prevalence of HBCC and the flexibility it can offer to meet families' child care needs, it is important to better understand its characteristics and the ways in which it may influence children's development.

Supporting Quality Improvement in Home-Based Child Care

Recently there has been increased research and policy attention directed towards supporting quality improvement for HBCC providers due to the wide range of quality observed in these settings. However, for quality improvement initiatives to be effective and improve outcomes for children and providers, it is important to understand characteristics of the providers. Understanding HBCC provider characteristics is important to designing programs that will have content and delivery methods that meet their needs (Porter et al., 2010) and that will support positive outcomes for children and families. Previous research has found that quality improvement supports are most effective when they build on providers' needs and interests and consider their previous education and experience (Hamm, Gault, & Jones-DeWeever, 2005; Porter & Rice, 2000; Shivers & Wills, 2001).

QRIS have emerged as a key strategy for rating and improvement quality in early childhood settings, and licensed HBCC providers in many states now have the opportunity to participate in their state or local QRIS (The Build Initiative & Child

Trends, 2015). However, they often participate at lower rates than center-based programs (Tout et al., 2011) and access fewer of the supports offered by the QRIS (Smith, Schneider, & Kreader, 2010). Little research has considered the characteristics of HBCC providers who choose to participate in QRIS.

In addition to QRIS, there are a variety of other quality improvement supports designed specifically for licensed and unlicensed HBCC providers. However, there remains a lack of consensus for how to best support quality improvement in HBCC (Paulsell et al., 2006). Previous research has grouped quality improvement strategies into four main categories of supports: home visiting, collaborations with existing ECE programs, play and learn groups, and education and training (Hatfield & Hoke, 2016; NWLC, 2016; Paulsell, Porter, & Kirby, 2010). Often, programs combine two or more of these strategies, and research has shown that programs that offer a range of services are often the most effective (Raikes et al., 2006). Examples include staffed support networks offering a range of supports (Bromer et al., 2009; Porter et al., 2016), onsite coaching combined with group professional development (Koh & Neuman, 2009; Rusby, Jones, Crowley, & Smolkowski, 2016), and home visiting combined with networking meetings (McCabe & Cochran, 2008; Ocampo-Schlesigner & McCarty, 2005).

There are few studies examining the fit between provider characteristics, such as education, beliefs, and motivation, and specific approaches to quality improvement (Bromer & Korfmacher, 2016). One study of a quality improvement initiative for FCC providers that included coaching, monthly support groups, and training found that while participants showed increase program quality as a result of the initiative, those providers who showed low readiness to change did not increase their program quality.

As a result, the researchers adjusted the project in the final year so that only providers demonstrating readiness to change received the coaching component (Peterson & Weber, 2010). This suggests that providers' personal characteristics may influence their participation in quality improvement supports and that a tailored approach that considers personal characteristics may be most effective in support quality improvement among the heterogeneous HBCC workforce. This may include offering a menu of supports from which providers can select based upon their interests and needs (Bromer et al., 2009; Porter et al., 2016). Results from previous research provide some helpful insight about how to support HBCC providers in their work with children. However, the challenge of generalizing findings due to inconsistent categories of providers is a major limitation.

Challenges in Delineating Categories of Home-Based Child Care

HBCC is a very broad category, encompassing providers who are licensed or regulated by the state or unregulated, related or unrelated to children in their care, and paid or unpaid. However, subcategories of HBCC providers are often unclear due to differences in regulations between states. One commonly used subcategory of HBCC is family child care (FCC), which is typically defined as HBCC for primarily non-relative children that is regulated by the state and for which providers receive pay (Morrissey & Banghart, 2007). Unregulated HBCC, also called family, friend, and neighbor (FFN) care, kith and kin care, or license-exempt care, may be provided by a relative or non-relative and is not subject to state regulation. Low-income families are especially likely to utilize unregulated care (Henly & Lyons, 2000).

Family members who care for only related children are exempt from regulation in all states (Porter & Kearns, 2005b). Beyond this, there are many state differences in

regulation. The primary form of state regulation is licensing. In addition to licensing, several states have a lower level of oversight for home-based providers that do not serve the number of children required for licensing. These providers are referred to with different terms depending on the state, including certified, registered, and voluntary licensed. They are subject to only basic requirements, such as completing an introductory training, passing a criminal background check, and having a working telephone (NACCRRA, 2012).

According to NACCRRA's 2012 report ranking the states' licensing standards and oversight for small FCC homes, ten states and the District of Columbia require home-based providers to be licensed if they care for one or two children who are unrelated to the provider. An additional 23 states license providers when they serve between 3 to 5 unrelated children, and 11 states begin regulating when providers serve somewhere between 6 and 13 unrelated children (NACCRRA, 2012). These statistics highlight the difficulty of categorizing providers based on their licensing or regulatory status and making comparisons of licensed or regulated providers across states. Grouping providers as relative and non-relative providers is also unclear, because providers often care for both related and unrelated children together. These inconsistent distinctions between HBCC lead to confusion in defining samples in research and generalizing findings. Additionally, they make it challenging to establish a framework that is useful in developing and implementing initiatives to support HBCC providers (Porter et al., 2010).

The NSECE (NSECE Project Team, 2013), a recent nationally representative study of ECE, is the first study to provide a nationally representative picture of HBCC providers. This study used a unique approach to classifying providers. With the goal of

gaining a comprehensive portrait of HBCC, the survey used a three-part classification, grouping providers into listed, unlisted paid, and unlisted unpaid categories. Listed providers are those who appear on any state or national list, and they may be licensed, registered, or license-exempt, depending on state regulations. Unlisted providers do not appear on any state or national list and can be paid or unpaid. This classification system helps eliminate overlap between categories (NSECE Project Team, 2015b). Within each classification, however, there remains significant variation between providers. Porter et al. (2010) suggested categorizing providers based on other characteristics, such as providers' motivation for providing care and their participation in professional development (PD) activities, may result in more meaningful groupings. However, there is little guidance in the research literature about effective and meaningful strategies for categorizing HBCC providers beyond using licensing status.

Beliefs and Practices of Home-Based Providers

Previous research suggests that among HBCC providers, there are differences in important provider characteristics that contribute to the quality of care children receive. These include providers' caregiving beliefs, their educational practices with children, their professional engagement, and the ways in which they support families. Research around each of the following areas is described below.

Caregiving Beliefs

Caregiving beliefs are often classified as traditional, which is synonymous with adult-directed and authoritarian, and progressive, which is more child-centered and democratic. Beliefs are very personal (Nespor, 1987) and are shaped by many different factors, including early experiences and cultural context (Fang, 1996;

Schreiber, Moss, & Staab, 2007). Additionally, beliefs are likely to remain consistent unless they are challenged (Pajares, 1992; Schommer-Aikins, 2004; Schreiber et al., 2007).

The limited amount of research which has included or focused on HBCC providers' beliefs has consistently found that more child-centered beliefs are positively related to global quality, instructional practices, and social-emotional support (Cassidy et al., 1995; Clarke-Stewart et al., 2002; Marshall et al., 2003). Forry et al. (2013) examined the relationship between FCC providers' caregiving beliefs, quality of care provided, and children's pre-academic outcomes. They found that more child-centered beliefs were positively associated with measures of quality and child outcomes.

Although research has not specifically considered the ways in which caregiving beliefs vary among HBCC providers, some studies have found differences in beliefs among different groups of providers. Through a series of focus groups with FFN providers, Porter et al. (2003) found that providers' beliefs and understanding related to child development varied greatly. While some providers reported they engaged children in developmentally appropriate activities to stimulate cognitive development, other providers held unrealistic expectations for children and used harsh discipline practices. A study of child care providers in Los Angeles found that for HBCC providers, participation in PD was associated with more child-centered beliefs (Fuligini, Howes, Lara-Cinisomo, & Karoly, 2009).

Educational Practices

Fairly little is known about the educational practices offered to children in HBCC. Generally, studies have found that providers spend less time on learning

activities, provide less cognitive stimulation, and are less likely to engage in high-level conversations than center-based teachers (Dowsett, Huston, Imes, & Gennetian, 2008). Additionally, children attending HBCC tend to score lower on measures of cognitive outcomes compared to peers attending center-based care, Head Start, and public pre-kindergarten (Bradley & Vandell, 2007; Loeb, Bridges, Bassok, Fuller, & Rumberger, 2007). However, there is evidence that providers who intentionally plan activities and experiences for children have higher global quality and caregiver sensitivity (Kontos et al., 1995).

HBCC providers use television at a higher rate than center-based providers, over an hour a day on average compared to about 12 minutes per day in center-based care (Bassok, Fitzpatrick, Greenberg, & Loeb, 2016; Layzer & Goodson, 2006; Paulsell et al., 2006; Tout & Zaslow, 2006). HBCC providers are less likely than center-based providers to receive training on a formal curriculum (Fuligini et al., 2009) or to implement a curriculum with children (NICHD ECCRN, 2000; Phillips & Morse, 2013).

A recent study by Bassok et al. (2016) using data from the Early Childhood Longitudinal Study–Birth Cohort found that among HBCC providers, 60% reported doing daily math activities and 68% reported reading to children daily. In contrast, 93% of center-based teachers reported doing both reading and math activities daily. They also found that children attending HBCC had significantly lower reading scores at kindergarten entry compared to children attending center-based care. This may be due in part to the differences in exposure to educational activities between HBCC and centers. However, the authors found that accounting for the quality of the HBCC setting substantially reduces those differences in outcomes. In this study, quality was

measured by examining provider-child ratio, safety of the environment, caregiver education and turnover, frequency of educational activities, and observed quality as measured by the Family Day Care Rating Scale and Arnett Caregiver Observation Scale. When all of these quality measures are included in analyses, they reduce differences in child outcomes between HBCC and center-based care to the degree that they are no longer statistically significant. However, the frequency of educational activities by itself does not significantly mediate the relationship between sector and child outcomes (Bassok et al., 2016).

Together, these findings suggest that there is variation among educational practices in HBCC and that this variation may be related to children's outcomes. There are some noted areas of strength in educational practices in HBCC. For example, children have more exposure to educational outings, including trips to the library, zoo, or aquarium (Bassok et al., 2016), and these activities have been found to be positively associated with children's outcomes (Frost, Wortham, & Reifel, 2012).

Professional Engagement

There are many ways in which HBCC providers can be professionally engaged, including attending training, taking college courses, participating in mentoring programs, or enrolling in QRIS. Networking with others caring for children is another aspect of professional engagement. Professional engagement has consistently been linked to higher quality care (Norris, 2001) and an increased professional identity as an early childhood educator (Swartz, Wiley, Koziol, & Magerko, 2016). Some research has noted the specific importance of professional engagement for HBCC providers (Bromer, Van Haitsma, Daley, & Modigiliani, 2009; Forry et al., 2013; Hallam, Bargreen, & Ridgley, 2013). Through professional

engagement, HBCC providers can develop the specialized skills needed to provide high-quality caregiving (Bordin et al., 2000; Gable & Halliburton, 2003; Norris, 2001; Weaver, 2002).

Previous research on HBCC providers' professional engagement has typically examined licensed and unlicensed providers separately using different research questions. Research findings suggest that unlicensed providers often express interest in participating in training and quality improvement initiatives, but they may have few opportunities to do so. Across groups of HBCC providers, those with more education are more likely to participate in PD (Layzer & Goodson, 2006). Research on licensed FCC providers has found that providers are more likely to be professionally engaged when they have opportunities to attend in-person training (Edwards et al., 2002).

Isolation is a potential challenge for HBCC providers; they may not see or talk to others who care for children and are likely to have fewer opportunities to collaborate and network compared to those working in center-based programs (Albanese, 2007; Hamm et al., 2005; Rusby, 2002; Tuominen, 2003). Kontos et al. (1995) found that in a national sample of regulated FCC providers, 25% did not know another provider, and 42% had no contact with another provider during a typical week. Isolation may be even more prevalent among unlicensed providers, because they may have less contact with other people caring for children (Brown-Lyons et al., 2001). Providers across categories typically express a desire to get together with others (Brandon et al., 2002; Drake et al., 2004), and research suggests that providers may benefit professionally from communicating and sharing ideas with other HBCC providers (McCabe & Cochran, 2008; McGaha et al., 2001; Rusby, 2002; Taylor et al., 1999). Previous research has found that a lack of social support can be a barrier to

quality improvement and professionalism (Hamm et al., 2005; Mueller & Orimoto, 1997), and providers cite isolation as one of the greatest challenges they face (Lanigan, 2010).

Family Supportive Practices

HBCC providers, especially those in low-income neighborhoods, often care for at least one child with whom they have a prior relationship (NSECE Project Team, 2015b) and therefore are likely to have closer relationships with the families they serve. Flexibility is highlighted as a unique aspect of HBCC that is specifically important to families (Walker & Reschke, 2005). Home-based providers are more likely than center-based providers to offer flexible payment options when families are struggling financially. Many HBCC providers serve children during non-standard hours, compared to only 8% of center-based providers. HBCC providers are also more likely to allow families to vary their schedules from week to week (NSECE Project Team, 2015a). The support that HBCC providers can offer to families is a unique strength of HBCC and may help families balance work and parenting (Bromer & Henly, 2009; Porter et al., 2010) and support parents' overall wellbeing (Kossek, Pichler, Meece, & Barratt, 2008).

Relationships with families seem to vary across types of HBCC. Unlicensed providers tend to communicate more frequently with families than licensed providers. However, home-based providers as a whole have closer relationships with families than center-based providers (Coley et al., 2001; Porter & Rice, 2000). Specifically, unlicensed HBCC providers often provide additional support to families by cooking meals, taking children to appointments, and providing transportation (Porter et al.,

2003; Porter & Vuong, 2008). In fact, it is estimated that 80% of these providers offer additional support to families beyond providing child care (Pausell et al., 2006).

Demographic Characteristics That Vary Among Home-Based Providers

HBCC providers have a wide range of educational backgrounds, and their level of education has been found to relate to the quality of care they provide (Elicker et al., 2005; Norris, 2001). Providers with more education tend to provide more enriching learning environments and have more responsive caregiving practices (Clarke-Stewart, Vandell, Burchinal, O'Brien, & McCartney, 2002; Raikes et al., 2005; Whitebook et al., 2004). Previous studies have found that among HBCC providers, there are differences in education between regulated and unregulated providers, with regulated providers more likely to have a high school degree (Brown-Lyons, Robertson, & Layzer, 2001; Susman-Stillman & Banghart, 2008).

Many HBCC providers serve children receiving child care subsidy. According to Child Care Development Fund estimates for 2010, approximately 24% of children receiving subsidy attend HBCC, and 19% of families use subsidy to pay for license-exempt home-based care, 59% of whom are cared for by relatives (Child Care Bureau, 2011). Providers have reported that child care subsidies make it possible for them to care for children (Bromer, 2005; Porter, Rice, & Mahon, 2003). Subsidy receipt may also be related to quality, both the quality of HBCC and the quality of care families select. Raikes, Raikes, and Wilcox (2005) found that providers serving fewer children on subsidy tend to have higher quality, and Krafft, Davis, and Tout (2017) found that when families have access to subsidy, they select higher-quality FCC.

The 2014 reauthorization of Child Care and Development Block Grant (CCDBG) Act introduced changes in requirements for subsidy receipt for HBCC

providers, including increased training requirements for providers who traditionally have not been required to participate in training in many states. Therefore, research about HBCC providers and how to engage them in quality improvement initiatives may help states design and implement training opportunities that will meet the needs of providers and support quality improvement among providers receiving subsidy.

Previous findings suggest providers who care for related children have some consistent differences between those caring for unrelated children. Nonrelative providers are more likely to attend training, while related providers tend to display more responsiveness and nurturing behaviors than unrelated providers (Layzer & Goodson, 2006; Porter, Rice, & Rivera, 2006). Previous research suggests that providers caring for related children are less likely to view themselves as professionals, may be less interested in participating in formal training, and often provide care to help a family member (Porter 1998; Porter et al., 2010; Snyder, Bernstein, & Adams, 2008).

Program location is another source of variation among HBCC providers, specifically the poverty density and urban density of the community. Child care quality varies widely across communities, specifically based on socioeconomic status (Bassok, Fitzpatrick, & Lobe, 2012; Gordon & Chase-Lansdale, 2001). HBCC and center-based programs located in low-income communities tend to score lower on quality measures (Bassok & Galdo, 2016; Hatfield, Lower, Cassidy, & Faldowski, 2015). Families living in high-poverty areas have less access to high-quality child care (Gordon & Chase-Lansdale, 2001) and are more likely to use FFN care (Walker & Reschke, 2007). Rural communities have fewer regulated FCC programs, and providers have lower levels of education and specialized training and less access to

resources (Magnuson & Waldfogel 2005; Maher et al. 2008). Children in large urban and rural areas enter kindergarten with less advanced academic skills than children from smaller urban or suburban areas, and this finding was partially explained by children's non-parental child care experiences (Miller & Votruba-Drzal, 2013).

Overall, there is little guidance beyond considering licensing status for understanding the heterogeneous HBCC workforce, and wide variation in licensing policies make it difficult to generalize findings about licensed providers in one state to providers in other places. However, findings from previous research suggest that providers differ in their educational practices with children, their own professional engagement, their caregiving beliefs, and their practices related to supporting families. Additionally, there is evidence that each of these areas is related to the quality of children's and families' experiences with HBCC. Therefore, this study seeks to classify providers by considering their beliefs and practices in these four constructs. Specifically, the study explores these research questions: 1) To what extent do home-based providers group into profiles based on key characteristics related to their beliefs and practices? and 2) What demographic characteristics predict profile membership?

Methods

Data Source

The data for this study comes from the NSECE. The NSECE is a national survey funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration of Children and Families (ACF), US Department of Health and Human Services. It was conducted in 2012 in order to provide an in-depth picture of ECE in the United States. It includes a description of the workforce, the availability and use of

care, and families' preferences related to ECE (NSECE Project Team, 2013). Additionally, the NSECE specifically sought to understand the non-parental care utilized by low-income families. This dataset provides the first national portrait of ECE availability for a broad range of care providers and includes data on all forms of non-parental care used in the households included in the sample. Specifically, it provides the first and only nationally representative sample of home-based providers (NSECE Project Team, 2013).

The NSECE dataset consists of data from four nationally representative surveys, including a household survey, a home-based provider survey, a center-based survey, and a workforce survey. Respondents for the surveys were identified from both a household sample and from administrative lists. The household sample was created using an address-based sample selected from the Delivery Service File, which is a list maintained by the United States Postal Service. Selected households completed a screener which determined if they were eligible to be included in the household sample (if they had at least one child under 13 living in the household) or the unlisted home-based sample (if an adult regularly provided non-parental care to a child under 13).

Design

The NSECE used a multistage probability sample design. First, 219 primary sampling units (PSUs) were selected. The PSUs represented all 50 states and the District of Columbia, and the number of PSUs for each state was determined by the population of children under 18 living in the state. In the second stage of sampling, secondary sampling units (SSUs) were selected for the household survey. Units with a high percentage of low-income households were oversampled in this stage due to the

NSECE's focus on capturing the experiences of low-income families. In total 755 SSUs were selected, including 537 in lower-income areas (NSECE Project Team, 2013).

Home-based providers in the NSECE are categorized using a three-part classification that emerged from the sampling approach of the NSECE. Listed providers were sampled from state and national lists of HBCC providers. These included lists of licensed, regulated, license-exempt, and registered HBCC providers. Listed providers were eligible to be included in the sample if they were caring for at least one non-custodial child in a residential setting. Unlisted providers were identified using a household screener if a member of a household reported that someone in that household provided non-parental care for at least five hours per week. All HBCC providers identified through the household and listed provider screener were approached to complete the home-based provider questionnaire.

Sample

The sample for analysis was drawn from the NSECE data on listed home-based providers. Because the NSECE used a complex multistage sampling design, sample weights were used in all analyses to ensure estimates are nationally representative. A total of 3,934 listed and 2,052 unlisted home-based providers completed the provider questionnaire. They represent 121,013 listed and 5,044,354 unlisted providers. Because of the very large differences in sample weights between listed and unlisted providers, the NSECE Project Team (2013) strongly advises researchers not to combine the listed and unlisted providers in analyses. Therefore, the analytic sample was restricted to listed providers caring for at least one child age five or under. Providers who care for only children with whom they have a prior

relationship completed an abbreviated survey that did not contain all of the variables of interest and therefore were also excluded from the analysis (*n* = 441). The unweighted sample for analysis includes 3,493 providers, representing 106,573 providers.

Measures

Variables from the NSECE public-use home-based provider questionnaire were used to identify profiles of providers. The variables were selected to represent the four constructs of interest: providers' educational practices, caregiving beliefs, professional engagement, and family supportive practices.

Caregiving Beliefs

The Modernity Scale, adapted from the Parental Modernity Scale (Schaefer & Edgerton, 1985), was used to identify the degree to which providers' caregiving beliefs are traditional or progressive. It has been used in a number of other studies to measure beliefs of ECE providers, including the NICHD Study of Early Child Care, the Early Head Start Family and Child Experiences Survey, the Early Head Start Research and Evaluation Project, Quality Interventions for Early Care and Education Evaluation, and the National Center for Early Development and Learning Multi-State Study of Pre-Kindergarten. The NSECE used a shorter form of the original measure, including five items on the traditional beliefs subscale and five items on the progressive beliefs subscale. The participants rate each statement on a five-point Likert scale from strongly disagree (1) to strongly agree (5). The subscales are scored by adding the item ratings, and each subscale score ranges from 5 to 25, resulting in a subscale score for traditional beliefs and one for progressive beliefs. The original

measure has high internal consistency, with a Cronbach's alpha of .84 in the original validation study of the measure when used with parents (Schaefer and Edgerton, 1985) and .78 when used with preschool teachers (Justice et al., 2007). Internal consistency within this sample was slightly lower, .73 for the traditional belief subscale and .67 for the progressive belief subscale. The authors report that the split-half reliability is .90 and test-retest reliability is .84 (Shaefer & Edgerton, 1985), and subsequent studies have also shown high reliability (Pianta et al., 2005; Mashburn, Hamre, Downer, & Pianta, 2006). The measure total score and subscale scores are highly correlated with other measures of parenting and child outcomes (NICHD ECCRN, 2000).

Educational Practices

Providers' educational practices are represented by the variables related to their curriculum use, implementation of planned learning activities, and time spent planning. The curriculum variable was constructed based upon providers' report of whether or not they use a curriculum or set of planned learning activities. The implementation of planned learning activities variable is based on provider report of how many days during the last week they did a planned learning activity with children, ranging from zero to five days. Providers also reported how many hours during an average week they spend planning children's activities.

Professional Engagement

Providers' professional engagement is measured using four variables from the NSECE. Providers reported whether they have participated in coaching or home visiting within the last year. They also reported whether they have taken a course in higher education related to caring for children in the last year. Additionally, providers

reported how many hours during the last month they spent participating in PD. To capture if providers are engaging in social support activities, a variable is included that indicates whether or not providers regularly meet with others who care for children to receive support or share ideas. Providers also reported whether or not they belong to a professional association, such as a national early childhood organization. Time spent in PD activities is a continuous variable, while coaching, coursework, meeting with others, and belonging to a professional association are dichotomous variables.

Family Supportive Practices

Providers' practices to support families are measured by four variables from the NSECE. Providers reported if they serve children during any non-standard hours, whether they allow parents to pay for and use a varying number of hours each week, and whether they have access to a family support resource to help them with issues parents raise. These are dichotomous variables. Providers were also asked whether they helped families access the following outside services in the last year: health screening, development assessments, therapy, counseling, and social services. A composite variable was created to identify the percentage of services HBCC reported that they helped families access.

Demographic Characteristics

A range of provider demographic characteristics were examined as predictors of profile membership. Providers reported their highest level of education by selecting from a range of categories, which were recoded into four categories: high school diploma or less, some college credits, associate's degree, and bachelor's degree or higher. Providers also reported their total enrollment, which in the analytic sample

ranged from 4-28, and whether they cared for a child receiving subsidy. The NSECE included measures of the poverty and urban density of the provider's location by matching the provider's address to 2010 US Census data. Provider age, years of experience caring for children under 13, household income, and whether they care for any children with whom they have a prior relationship were also included as predictors.

Analytic Plan

First, descriptive analyses and correlations between the selected NSECE variables for the analytic sample were examined. Then latent profile analysis (LPA) was used to identify the optimal number of latent profiles of HBCC providers using Mplus 7.4 (Muthén & Muthén, 2012). Because no single model fit index determines the ideal number of classes, a range of model fit indices were considered simultaneously, including the Akaike Information Criterion (AIC), Bayesian Information Criteria (BIC), sample-size adjusted BIC (aBIC), and Lo-Mendell-Rubin Likelihood Ratio Test (LMR-LRT; Lo, Mendell, & Rubin, 2001). Smaller AIC, BIC, and aBIC values represent better model fit (Geiser, 2013). The LMR-LRT is used to compare nested models. For this test, a significant p-value suggests that the given solution is a significantly better fit than the solution with one fewer class (Nyland et al., 2007). Entropy, which represents the precision of classification for the whole sample across all latent profiles and describes the extent of separation between profiles (Ramaswamy, DeSarbo, Reibstein, & Robinson, 1993), was also considered. Entropy values range from 0 to 1, and higher values suggest better separation between classes. Values above .80 indicate good classification accuracy (Geiser, 2013). It is not uncommon for fit indices to support multiple model solutions. Therefore, it is

important for the researcher to consider conceptual interpretability of each solution along with the fit indices, selecting the most parsimonious and conceptually sound model (Geiser, Okun, & Grano, 2014; Muthén, 2014; Nylund et al., 2007). For this study, four potential models were evaluated. The final model was selected by examining fit indices and considering the interpretation and class separation.

A three-step approach was used to test for differences between the profiles on provider demographic characteristics. In this three-step process, the LPA is estimated in step one, each participant is assigned to their most likely class in step two, and class membership is regressed on the predictors using multinomial logistic regression in step three (Asparouhov & Muthen, 2013; Gudicha & Vermunt, 2013; Vermunt, 2010). The three-step method incorporates measurement error from the determination of the most likely latent profile in the evaluation of the relationship between the latent profiles and predictors. It is superior to traditional methods where participants are assigned to their mostly likely profile and then standard multinomial logistic regression is conducted (Asparaouhov & Muthen, 2013; Vermunt, 2010).

Missing data was handled through a hybrid approach. Missing data for the LPA was addressed using Mplus's full information maximum likelihood (FIML) algorithm, which makes use of all available data points and produces less biased estimates than methods like listwise deletion. FIML is the preferred method for handling missing data in latent variable modeling (Acock, 2012; Enders & Bandalos, 2001). Missing data on the predictors of class membership was handled using multiple imputation (Rubin, 1987; Schafer, 1997). Little's MCAR test indicated data was not missing completely at random (MCAR), $\chi^2(22) = 42.802$, $p < 01$. It was assumed data was missing at random (MAR). Although this cannot be tested and confirmed,

previous research indicates that assuming data is MAR hardly influences estimates and standard errors (Collins, Schafer, & Kam, 2001; Schafer & Graham, 2002). Twenty-five datasets were imputed in Mplus to account for uncertainty of imputed values, and results from the pooled datasets are presented below. Missing data on the predictors ranged from 0%-16.0%, with household income having the most missing data. No data was missing on total enrollment, poverty density, and urban density.

Results

Descriptive statistics for the weighted analytic sample are shown in Table 1. The majority of listed HBCC providers are White and non-Hispanic. There is wide variation in their level of education and years of experience. The majority of providers are located in low-poverty and highly or moderately urban-dense locations.

Table 1 Weighted Descriptive Statistics for the NSECE Analytic Sample

Variable	%
Race and ethnicity	
White, non-Hispanic	70.0%
African-American, non-Hispanic	15.1%
Hispanic/Latino descent	14.9%
Education	
HS diploma/GED or less	32.1%
Some college	35.4%
Associate's degree	15.9%
Bachelor's degree or higher	16.5%
Enrolls school-age children	68.6%
Urban/rural location	
High density of urban	51.9%
Moderate density of urban	31.8%
High density of rural	16.3%
Community Poverty Density	
Low poverty	65.4%
Moderate poverty	19.5%
High poverty	15.1%
Years of experience	
Less than 10 years	36.9%
10 to 20 years	35.4%
More than 10 years	27.7%

Note: N = 3493

The weighted descriptive statistics for the full sample on the profile variables are presented in Table 2, and Pearson correlations between the profile variables are presented in Table 3. The correlation table indicates low correlations between all profile variables, which suggests that each variable is contributing something unique to the analysis.

Table 2 Descriptive Statistics for Profile Variables for the Full Analytic Sample

Variable	%	*M* (SD)	*n*
Non-standard Hours	34.1%		3473
Varying Pay	39.9%		3449
Referring Families		22.0% (31.2)	3396
Family Support	51.6%		3409
Learning Activities		4.0 (1.7)	3407
Hours of Planning Time		4.5 (4.3)	3365
Curriculum Use	54.1%		3437
Meeting with Others	31.5%		3439
Professional Association	26.3%		3429
Coaching	36.8%		3437
Coursework	27.6%		3433
Hours PD		0.9 (1.8)	3207
Progressive		18.5 (2.6)	3445
Traditional		15.4 (3.5)	3450

An exploratory LPA was run with two through five classes to determine the best model fit. Model fit indices for the four models are shown in Table 4. In addition to considering the model fit indices, the percentage of providers in each profile and the mean scores on each variable were also considered for the different models to ensure that the profiles were meaningfully different. This combination of examining model fit and interpretability led to the decision to select the three-profile solution. This solution had the highest entropy value as well as the best interpretability, with each profile having mean scores that was meaningfully different. The three profiles were named based on their characteristics and were selected to highlight the differences in mean values on the profile variables between groups.

Table 3 Pearson Correlations of NSECE Profile Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Non-standard Hours	-													
2. Varying Pay	.161**	-												
3. Referring Families	.173**	.128*	-											
4. Family Support	.073*	.111*	.198**	-										
5. Learning Activities	-.037*	-.066*	.194*	.058*	-									
6. Hours of Planning Time	.030	.070*	.240*	.113*	.298*	-								
7. Curriculum Use	.013	-.049*	.207*	.131*	.310*	.190*	-							
8. Meeting with Others	-.006	.079*	-.026	-.015	-.035*	-.012	-.009	-						
9. Professional Association	-.019	.018	.145*	.101**	.105*	.085*	.114*	.004	-					
10. Coaching	-.031	.028	.145*	.197*	.080*	.055**	.135*	-.019	.088*	-				
11. Coursework	.012	-.040*	.223*	.069*	.165*	.117*	-.042*	-.042*	.111*	.240*	-			
12. Hours PD	.055*	-.019*	.225*	.100*	.102*	.146*	.141*	-.054*	.094*	.142*	.269**	-		
13. Progressive	-.034*	.078*	.085*	.100*	.081*	.000	.028	.050*	.011	.118*	.101**	.021	-	
14. Traditional	.114*	-.074*	-.125*	-.125*	-.047*	.011	.022	-.041*	-.096*	-.056*	-.060*	-.005	-.164**	-

Table 4 Model Fit Indices for Study 1 LPA

Number of Classes	AIC	BIC	Sample Size Adjusted BIC	Relative Entropy	PLMR	Percentage in Smallest Class
5	107444.37	107937.05	107682.85	.945	.761	2%
4	109022.86	109423.16	109216.63	.979	.769	2%
3	111072.36	111380.29	111221.42	.982	.502	12%
2	113837.17	114052.72	113941.51	.645	.556	17%

Note: LMR = Lo-Mendell-Rubin

The three profiles of HBCC providers are represented in Figure 2. This figure represents the mean standardized scores on the profile variables. All variables were converted to *z*-scores to account for the mix of continuous and categorical variables. Table 5 shows the unstandardized descriptive statistics for each profile on the variables used to determine profile membership. The majority of providers fall into the Formal/Educational profile (72.4%, *n*=2531). This profile is characterized by higher scores on variables related to educational practices and professional engagement. The other providers fell into the Somewhat Formal (15.7%, *n*=549), and Informal (11.8%, *n*=413) profiles.

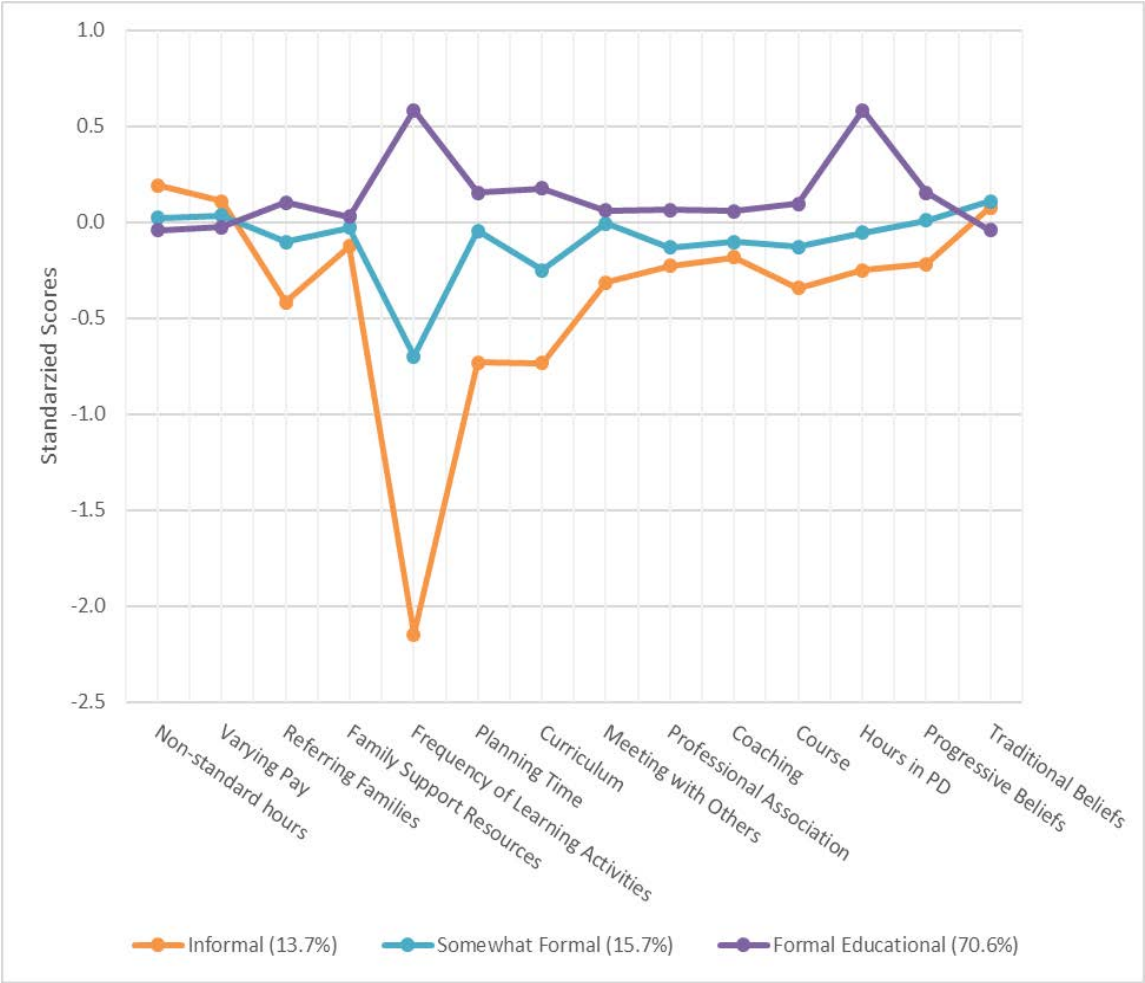

Figure 2 Standardized LPA Results for NSECE Profiles

Wald tests of parameter constraints were used to identify where differences between the profiles were statistically significant. Significant differences are noted in Table 5. Providers in the Formal/Educational profile had significantly higher average values than the other profiles in their rate of referring families, the frequency of learning activities, time spent planning, use of curriculum, belonging to a professional association, and participating in coaching and coursework. They also had more

progressive beliefs than Informal providers. Generally, the Somewhat Formal profile fell between the Formal/Educational and Informal profiles on most variables, including referring families, frequency of learning activities, time spent planning, use of curriculum, and participating in coursework. There were no significant differences between profiles in their frequency of serving children during non-standard hours and offering varying payment and scheduling, access to a family support resource, regularly meeting with other providers, and their traditional beliefs.

Table 5 Descriptive Statistics by Profile for NSECE Sample

	Informal (n = 413)		Somewhat Formal (n = 549)		Formal/Educational (n = 2531)	
	M (SD)	%	*M* (SD)	%	*M* (SD)	%
Non-standard hours		38.70%[a]		34.9%[a]		33.2%[a]
Varying payment and scheduling		45.00%[b]		41.8%[b]		38.7%[b]
Referring families	0.1 (0.2)		0.2 (0.3)		0.3 (0.3)	
Family support resource		44.80%[c]		49.0%[c]		53.5%[c]
Frequency of learning activities	0.1 (0.3)		2.7 (0.5)		4.9 (0.3)	
Planning time	1.2 (2.2)		4.1 (3.5)		5.2 (4.5)	
Uses a curriculum		18.60%		42.5%		63.7%
Regularly meets with other providers		37.00%[f]		31.6%[f]		30.6% [f]
Professional association		16.40%[g]		20.5%[g]		29.2%
Coaching		30.90%[d, e]		29.0%[d]		39.5%[e]
Coursework		11.70%		21.3%		31.6%
Hours of PD	0.4 (1.4)[h]		0.8 (1.5)[h, i]		0.9 (1.9)[i]	
Progressive beliefs	17.9 (2.2)[j]		18.5 (2.7)[j, k]		18.6 (2.6)[k]	
Traditional beliefs	15.6 (3.3)[l]		15.8 (3.6)[l]		15.3 (3.5)[l]	

Note: Classes differed at $p < .05$ unless noted. Superscripts indicate which pairs of groups were not significantly different at $p < .05$; $N = 3493$

Demographic data related to provider, program, and community characteristics suggests there are some differences in these characteristics by profile. Multinomial logistic regression was conducted in order to explore the significance of these differences. The Somewhat Formal and Formal/Educational profiles were compared to the Informal profile, which served as the reference category. The results of the MLR are displayed in Table 6. These results suggest that provider education differs between the Informal and Formal/Educational profile, with providers in the Formal/Educational profile being approximately two times more likely to have some college education. The community characteristics of poverty density and urban density of the program location both significantly predict profile membership as well. Providers in both the Somewhat Formal and Formal/Educational profile are less likely to be located in high-poverty areas. Providers in the Formal/Educational profile are about two times more likely to be located in urban-dense communities compared to rural communities than Informal providers.

Table 6 Odds Ratios of the Association between Predictors and Latent Profile Membership

	Somewhat Formal			Formal/Educational		
	Odds Ratio	95% Confidence Intervals		Odds Ratio	95% Confidence Intervals	
Years of experience	0.90	0.73	1.09	0.94	0.79	1.11
Total enrollment	0.94	0.86	1.03	0.97	0.90	1.06
Household income	1.05	0.87	1.27	0.96	0.82	1.12
Provider age	1.02	0.99	1.05	1.02	0.99	1.04
Serves a child receiving subsidy	0.72	0.40	1.30	0.65	0.38	1.11
Provider education						
High school diploma or less	Reference			Reference		
Some college	1.33	0.64	2.76	2.11*	1.10	4.07
Associate's degree	1.36	0.54	3.42	2.12+	0.94	4.78
Bachelor's degree	1.17	0.46	2.95	2.10+	0.92	4.83
Community poverty density						
Low poverty	Reference			Reference		
Moderate poverty	0.90	0.46	1.76	0.57+	0.30	1.08
High poverty	0.38*	0.18	0.80	0.40*	0.21	0.75
Community urban density						
Low urban	Reference			Reference		
Moderate urban	0.81	0.31	2.11	1.99	0.86	4.62
High urban	1.93	0.87	4.27	2.32*	1.13	4.77
Children with prior relationship	0.00	0.97	1.03	0.98+	0.95	1.00

*$p < .05$ +$p < .1$; Note: all latent classes are compared to the Informal profile

Discussion

The goal of this study was to examine how HBCC providers align into profiles based on their beliefs and practices and which demographic characteristics predict profile membership. Results of this study suggest that listed HBCC providers fall into three distinct groups. This study focused on beliefs and practices in four constructs: family supportive practices, educational practices with children, professional engagement, and caregiving beliefs. Results show that the profiles are largely driven by differences in providers' educational practices with children. This finding suggests that the frequency of planned learning activities, time spent planning activities, and use of curriculum vary widely among providers and that examining providers' educational practices may be a key area that differentiates HBCC providers.

There were also significant differences among profiles in professional engagement, with Formal/Educational providers more likely to report engaging in coaching and coursework and belonging to a professional association. Additionally, they report spending more hours planning children's activities. Somewhat Formal providers have values between Formal/Educational and Informal providers on these areas. However, regularly meeting with other providers did not vary significantly across groups. This appears to occur relatively infrequently in all profiles.

There were fewer differences among profiles in the constructs of family supportive practices and caregiving beliefs. Providers in the Formal/Educational profile had more progressive beliefs than Informal providers, but there were no significant differences in traditional beliefs. This may be because caregiving beliefs do not differ across profiles, or perhaps there are other aspects of caregiving beliefs not measured in the NSECE that would vary among these groups. The rate of referring

families to outside services was significantly different across the three profiles, with Formal/Educational providers doing this most frequently. However, the other aspects of family supportive practices examined were similar across all groups. This suggests that as providers' practices become more formalized, they do not appear to offer less support and flexibility to families, which has been highlighted as an important aspect of HBCC (Bromer & Henly, 2004).

Most providers are in the Formal/Educational profile. Although data about providers' licensing status is not available in the NSECE, it is likely many of the providers in the sample are licensed by their state because the sample was restricted to listed HBCC providers. Therefore, they may be required to meet certain regulations related to the types of educational experiences that make available to children (NACCRRA, 2012). Because results suggest that the providers in the Formal/Educational profile are more likely to use a curriculum and implement planned learning activities, they may be providing similar types of experiences to children as center-based child care programs, and they may be familiar with the importance of providing early educational experiences to children. Providers in this profile may find quality improvement efforts such as QRIS beneficial and relevant to their work, and QRIS may be an appropriate strategy for supporting quality improvement among this group of providers. As states pilot or redesign QRIS, they should continue to consider how to best include HBCC providers (The Build Initiative & Child Trends, 2015; Tout et al., 2011).

The remaining providers fall into the smaller Somewhat Formal and Informal profiles. The Somewhat Formal profile's practices generally fall between that of Informal and Formal/Educational providers. They report that they are implementing

some planned learning activities and spending some time planning children's activities, so it may be that with support, providers in this profile may be open to further formalizing their practices. Together, these findings suggest the three profiles represent three distinct groups of providers with important practice differences that may relate to differences in quality and in children's learning outcomes (Forry et al., 2013).

Predictors of Profile Membership

Providers in the Formal/Educational profile had significantly higher levels of education than providers in the Informal profile. This supports previous research that providers with higher levels of formal education tend to provide more enriching learning experiences (Clarke-Stewart et al., 2002; Raikes et al., 2005). This variable does not specify if the higher education is in ECE or child development specifically. It may be that providers who have completed degrees related to caring for children learned about implementing curriculum and planning children's activities and are implementing what they have learned as they provide child care. More research is needed to understanding whether ECE education specifically is related to formalization of providers' practices and to profile membership specifically.

Community characteristics related to poverty and urban density significantly predict profile membership. This finding suggests that the context in which HBCC providers live and work may be influencing their access to resources, which in turn may affect their practices with children and families. Previous research has found that providers from low-income communities score lower on quality measures (Bassok & Galdo, 2016; Hatfield et al., 2015), and children who attend child care in rural areas score lower on measures of school readiness (Miller & Votruba-Drzal, 2013).

Providers in poverty-dense and rural communities often have less access to services and fewer PD opportunities, and there are fewer regulated FCC programs in these areas (Magnuson & Waldfogel 2005; Maher et al. 2008). This reduced access to resources and support systems based on geography may contribute to more HBCC providers in these areas being in the Somewhat Formal and Informal profiles. In fact, the lack of access to outside services could be one reason providers in more rural and lower-poverty areas are in the Informal and Somewhat Formal profiles. Providing additional supports targeted to providers in lower-income and more rural areas may be one strategy for helping HBCC providers in these settings increase their educational practices.

Limitations

Although this study provides insight into the variation among home-based providers, there are several limitations. One general limitation of person-centered analyses is that profiles can be affected by the sample size and characteristics (Masyn, 2013). The profiles in this study are based on providers' self-report about their beliefs and practices. Additional research that includes other data sources, such as observational data to confirm providers' educational practices or administrative data related to their professional engagement would strengthen these findings. Although this study includes a nationally representative sample, it excludes the small portion of listed HBCC providers that care for only related children and excludes all unlisted HBCC providers. Additionally, no data is available about providers' licensing status.

Directions for Future Research

This analysis is exploratory in nature, and therefore there are many directions for future research. Although the results suggest that many providers report planning learning activities regularly, more research into the types and quality of learning activities providers are planning and implementing would provide more insight into this finding. Additionally, future research could explore providers' curriculum use, including how they define curriculum, what curricula they are using and how they are implementing curriculum, and how well these curricula address the learning needs of multiage children.

Future research could also examine providers' practices and beliefs using a variable-focused approach in order to better understand the ways in which some of the variables used to construct the profiles relate to one another. Additionally, in the future it would be helpful to consider whether belonging to a certain profile is related to program quality and to children's academic and social outcomes, as well as the relationships between profile membership and provider's licensing status or QRIS participation.

The typology identified through the three profiles could be used to classify providers in future research, because it addresses some of the challenges of classifying providers by other characteristics, such as licensing status, payment, and caring for related or unrelated children (Porter et al., 2010). The same survey questions could be used to identify and further explore provider characteristics with other samples. Additionally, the process for identifying profiles of providers could be further refined by using more specific questions related to the profile constructs. Finally, similar research could be conducted with unlisted HBCC within the NSECE or another

sample of unlicensed FFN providers to determine how those providers align into profile and whether the profile structure is similar to those of listed providers.

Implications for Practice

Listed HBCC are a diverse group, and traditional distinctions between providers may not adequately capture this diversity in beliefs and practices with children and families. This approach to classifying HBCC providers is one strategy for addressing the issues around using licensing, payment, and relationship to children enrolled to categorize the HBCC provider workforce (Porter et al., 2010).

The results of this study provide one approach to describing the differences among HBCC providers, which is an important step in better understanding how to support them in their work and assist them in providing high-quality care to the many young children and families they serve. Using these findings, both the differences in practices across the profiles and the provider characteristics that predict profile membership, can help systems connect HBCC providers to relevant resources and support systems. It may be useful to consider how to increase access to resources for providers in rural or high-poverty communities as new initiatives are developed for HBCC providers specifically or the larger ECE community (Magnuson & Waldfogel, 2005; Maher et al., 2008).

As a whole, these results suggest that providing a range of supports to HBCC providers may help ensure quality improvements initiatives meet providers' needs and are of interest to them. HBCC providers may find different supports relevant depending on how formalized their practices are (Porter et al., 2010). Both the content of professional supports and the mechanism by which they are delivered are important to consider (Bromer & Korfmacher, 2016). For example, while quality improvement

initiatives that primarily target center-based providers may be relevant to HBCC providers in the Formal/Educational profile, providers whose practices are less formalized may not see these initiatives as relevant to them. Services that are more similar to home visiting may better meet the needs of providers with informal practices (McCabe & Cochran, 2008). Additionally, content related to curriculum implementation and lesson planning may not be effective in shaping the educational practices of Informal providers, who may not see these activities as relevant to their work. However, shaping the content to focus more generally on positive provider-child interactions or children's learning and development may achieve a similar goal while also being relevant to providers.

An additional hypothesis is that these differences in providers' practices may point less to their interest in specific types of quality improvement supports and more to their current levels of access to services and support. It may be that through increasing providers' access to a variety professional engagement opportunities, providers would increase their levels of educational practices with children which may in turn lead to improved children's outcomes.

It is important to continue to study and invest in HBCC providers in order to better understand their beliefs and practices and tailor supports that are relevant to them and meet their needs and strengths. HBCC providers are serving many children birth to five, including many children at risk. Helping these providers improve their practices may be an important step in supporting positive child development and educational outcomes.

Chapter 3

STUDY 2: IDENTIFYING PROFILES OF HOME-BASED CHILD CARE PROVIDERS IN DELAWARE

Study 2 extends the results of Study 1 by continuing to explore the context of HBCC, where many children attend child care but where there has been relatively little research attention. Challenges in describing and understanding HBCC providers include the range of terms used to describe this form of care and the variation in licensing policies from state to state (NACCRRA, 2012). Recent national attention to the prevalence of HBCC and the benefits of high-quality early educational experiences have led to an increased focus on improving the quality of children's experiences in HBCC. Initiatives like QRIS and the reauthorization of CCDBG have drawn attention to the need to identify effective strategies for supporting quality improvement among HBCC providers.

Specifically, this study focuses on the characteristics of HBCC providers in Delaware. In Delaware, HBCC providers are required to be licensed if they care for one or more unrelated children, which is a more stringent licensing threshold than is present in most states (NACCRA, 2012). The study examines a statewide sample of licensed FCC and unlicensed relationship-based providers who receive child care subsidy in order to better understand their beliefs and practices related to caring for and educating children and working with families.

The purpose of this study is to identify profiles of providers in Delaware using the same variables used in Study 1 in order to determine if similar profiles emerge

within a different sample. Repeating the Study 1 profile analysis with a state-specific sample also allows for the examination of additional characteristics of HBCC providers and whether they differ by profile. Because the Study 2 respondents can be matched to administrative data sources, additional provider characteristics related to enrollment, licensing status, and QRIS participation are available for this sample that could not be examined in Study 1. Therefore, this study has the potential to confirm the profile structure identified in Study 1 and to provide a more comprehensive description of how profiles differ by provider characteristics that have not yet been examined.

Literature Review

Among HBCC providers, research suggests there are important provider characteristics that contribute to the quality of children's experiences in HBCC. These areas include providers' caregiving beliefs, their educational practices with children, their professional engagement, and their practices around supporting families. Research around each of these areas is described in Study 1, including why each area is important to children's experiences and how HBCC vary in their beliefs and practices. Findings of Study 1 suggest that while profiles of HBCC providers differ across many areas of their beliefs and practices, the greatest differences relate to their educational practices with children.

Results of Study 1 suggest that provider education, the poverty density of the provider's community, and the urban density of the location predict profile membership. Other demographic characteristics did not significantly predict profile membership, including enrollment, years of experience, provider age, and household income. However, findings from previous research indicate that additional

characteristics may predict profile membership. These include licensing status, QRIS participation, the percentage of children enrolled with disabilities, and the percentage of children receiving subsidy (Burchinal et al., 2002; Raikes et al., 2005; Tout et al., 2011).

As described in Study 1, provider education (Elicker et al., 2005; Norris, 2001; NSECE, 2015a) and poverty density (Bassok, Fitzpatrick, & Lobe, 2012; Gordon & Chase-Lansdale, 2001) are both related to quality in HBCC, and both vary among HBCC providers. Subsidy receipt is another characteristic that varies among providers. HBCC providers serve many children on subsidy nationally and in Delaware specifically, including both licensed and unlicensed providers (Child Care Bureau, 2011). Subsidy plays an important role for HBCC providers. Many providers report that it makes it financially possible for them to care for children (Bromer, 2005; Porter et al., 2003). There is also evidence that subsidy receipt is negatively related to quality in HBCC (Raikes et al., 2005). Because 2014 reauthorization of CCDBG introduced increased training requirements for HBCC providers who receive subsidy, gaining a better understanding of HBCC providers in Delaware and nationally is timely and may help states support engagement and quality improvement among providers receiving subsidy.

There are also differences between providers who care for related and unrelated children. While nonrelative providers are more likely to attend training, related providers tend to display more responsiveness and nurturing behaviors (Layzer & Goodson, 2006; Porter et al., 2006). Previous research suggests that FFN providers who typically care for children with whom they have a prior relationship are less likely to view themselves as professionals, may be less interested in participating in

formal training, and often provide care for the purpose of helping a family member (Porter 1998; Porter et al., 2010; Snyder et al., 2008).

Another factor related to enrollment that may vary among HBCC providers is whether they serve children with disabilities. Recent data suggests that many children with disabilities receive some or all of their non-parental care in home-based settings, although this is a setting that has traditionally not received much attention as an intervention context (Hallam & Hooper, 2016). Previous research has found that HBCC providers are more likely to care for children with disabilities when they have had personal experiences with individuals with disabilities (Buell, Gamel-McCormick, & Hallam, 1999; Dinnebeil, McInerney, Fox, & Juchartz-Pendry, 1998). There may be other provider characteristics that relate to the likelihood of serving children with disabilities, and having that information may be useful when considering how to build providers' capacity to care to for children with disabilities.

Quality Rating and Improvement Systems (QRIS) are currently operating in approximately 38 states (The Build Initiative & Child Trends, 2015). The majority of these QRIS include licensed FCC providers, and although many states are interested in increasing FCC provider participation, states where QRIS participation is voluntary have lower rates of participation from FCC programs compared to center-based programs (Tout et al., 2011). QRIS may be one effective strategy for engaging home-based providers—specifically licensed providers—in quality improvement and professional growth. There may also be differences in the characteristics of providers who choose to participate in initiatives like QRIS, and participation in a QRIS may positively affect a provider's practices with children and families.

Licensing status may be related to differences in providers' beliefs and practices with children and families and related to professional engagement, although requirements for who must be licensed vary widely from state to state. National studies have found that licensed FCC providers tend to score higher on measures of global quality than FFN providers (Burchinal, Howes, & Kontos, 2002; Forry et al., 2012; Kontos et al., 1995; Raikes et al., 2005). Licensed providers also seem more likely to view themselves as professionals, although the overall percentage of FCC providers who report that they are interested in a career working with children is low (Norris, 2001). There also may be differences in opportunities to participate in PD by licensing status. While FFN providers generally report that they are interested in receiving training, they also report few opportunities to do so (Drake et al., 2006; Edwards et al., 2002). Unlicensed FFN providers also report higher levels of isolation and less contact with others caring for children (Brown-Lyons et al., 2001). These findings suggest that unlicensed FFN providers may have lower levels of professional engagement than licensed FCC providers.

The study explores these research questions: 1) What is the predicted profile membership of Delaware HBCC based on the profiles identified in Study 1?, 2) How do home-based providers in Delaware group into profiles based on key characteristics related to their beliefs and practices?, 2) How are provider and program characteristics related to profile membership?

Methods

State Context

In Delaware, licensed FCC providers can serve one to six children from birth to five, plus three additional school-age children, and must provide care in their primary place of residence. Licensed large FCC programs serve seven to twelve children plus two additional school-age children in a primary place of residence or another location. Providers who care for only related children are exempt from licensing or registration with the state. However, unlicensed providers who receive child care subsidy are required to attend a series of trainings related to health, safety, and child development, known as the Relative Care Certificate Program.

Sample

A list of licensed small and large FCC providers was obtained through the state's Office of Child Care Licensing. This included 671 small FCC providers and 72 large FCC providers. A list of providers who were actively participating or had previously participated in the Relative Care Certificate program was obtained by the organization that administers the training. Because enrollment data was not available to determine who was actively caring for children five or under and who may no longer be caring for children, a decision was made to distribute the survey to anyone on the Relative Care list who had been active in attending a class within the last five years. This included 192 providers. In total, the survey was mailed to 935 providers. Of those, 252 responded, which represents a response rate of 27.0%. Compared to the population of HBCC providers who received the survey, respondents were significantly more likely to be licensed, $\chi^2 = 4.113$, $df = 1$, $p < .05$, and more likely to participate in the QRIS, $\chi^2 = 28.596$, $df = 1$, $p < .001$.

Both an exploratory and confirmatory LPA were conducted, and they had different analytic samples in order to address their respective research questions. A total of 234 were included in the analytic sample for the exploratory LPA. Eighteen providers were excluded because they were not currently caring for any children or were caring for only school-age children. The analytic sample for the confirmatory LPA additionally excluded the relationship-based providers (n =28) and providers who cared for children in a non-residential setting (n = 5). This was done to mirror the characteristics of the sample for Study 1, which did not include relationship-based providers and only included those who care for children in a home. Data from a total of 201 providers were analyzed in the confirmatory LPA.

Measures

Beliefs and Practices

Providers' beliefs and practices related to their work with children and families and their own professional engagement were measured using a statewide survey. The survey was developed based on questions from a recent national study of HBCC, the NSECE (NSECE Project Team, 2013). Questions from the NSECE home-based provider questionnaire were selected to gather information about the four constructs of interest: providers' educational practices, caregiving beliefs, professional engagement, and family supportive practices. The survey contained the same questions used for the profile analysis in Study 1. See Study 1 for a description of the variables measured through the survey and for more detail about the NSECE sampling and data collection. Questions in the paper survey were worded the same way as in the NSECE. The

NSECE survey questions went through extensive field testing to ensure they were easily understood by a range of HBCC providers, and the language used to describe providers' activities and program enrollment was selected very intentionally (NSECE Project Team, 2013). Using the same questions from the NSECE also makes it possible to compare the responses of Delaware providers to those of the national sample of listed providers in the NSECE.

Demographic Characteristics

A range of demographic characteristics related to the HBCC provider, their program, and the children in their care were also collected through the survey. These include self-report of the provider's highest level of education, their total enrollment, and the number of children enrolled with disabilities and related to the provider. Additional demographic characteristics were collected from state administrative data, including the list of licensed FCC programs from the Office of Child Care Licensing, QRIS participation data for licensed FCC programs, and number of children receiving subsidy for all licensed FCC and unlicensed Relative Care providers from Delaware Health and Human Services. All data was from May 2016. Finally, data was gathered about the poverty density of the provider's neighborhood using the census tract of their program and 2010 US Census Data.

Procedures

The survey was mailed in a postage-paid return envelope in April and May 2016. Two mailings were completed approximately six weeks apart to try to increase the sample size following recommendations from Dillman (2000). The decision was made to use a paper survey rather than an online survey because email contact

information was not available for all providers and because it has been found through previous projects that many HBCC providers in the state do not use email or change email addresses frequently. Additionally, other states who have surveyed home-based providers have had a higher response rate when using mailed surveys compared to web-based surveys (Rous et al., 2013). Mailing information for the providers was obtained using data from the Delaware Office of Child Care Licensing and Relative Care Certificate Program gathering in April 2016. The goal of the survey was to obtain at least a 25% response rate, which is approximately the response rate obtained in another recent survey of licensed FCC providers in two states (Bargreen et al., 2015). Survey respondents were entered into a drawing to receive a gift card or a basket of children's books.

Each survey contained a unique identification number. Each respondent's unique identification number was matched to the provider's site identification number, which all licensed and Relative Care providers have, in order to match the survey responses with administrative data. The site identification number was used to match the survey responses to data from the Office of Child Care Licensing and the state's QRIS and to obtain the census tract in which the provider is located in order to match the provider's location to census data on the poverty density of the location.

Analytic Plan

Data from the survey respondents was first analyzed descriptively, and correlations between the variables were examined. The survey responses were then analyzed through both confirmatory and exploratory LPA using Mplus 7.4 (Muthén & Muthén, 2012) to determine profiles based on beliefs and practices.

Confirmatory Latent Profile Analysis

Following the exploratory LPA, a confirmatory LPA was completed in Mplus based upon the LPA results from Study 1. As opposed to exploratory LPA, which was used to identify the profiles in Study 1, confirmatory LPA allows for the incorporation of specific hypotheses about the number and composition of latent classes in the data (Finch & Bronk, 2011). The means and frequencies of the variables for each profile in Study 1 were expressed using equality parameter constraints in the confirmatory LPA model (McCutcheon, 2002). Based on the results, each survey respondent was assigned to their most likely profile, either Formal/Educational, Somewhat Formal, or Informal.

Exploratory Latent Profile Analysis

Following the confirmatory LPA, an exploratory LPA was conducted in which no constraints were placed on the profiles. A range of model fit indices were considered in order to determine the best profile solution, including the AIC, BIC, aBIC, and LMR-LRT, and entropy. More detail about the model fit indices is included in Study 1. Because it is not uncommon for the different fit indices to support multiple model solutions, the interpretability of each solution was also considered. The goal was to select the most parsimonious and most theoretically sound model. This was done through examining fit indices, class separation, and interpretation together (Geiser, Okun, & Grano, 2014; Muthen, 2014; Nylund et al., 2007). Four potential models were evaluated in this study. Missing data was handled for the variables used in the LPA with Mplus's full information maximum likelihood (FIML) algorithm (Acock, 2012; Enders & Bandalos, 2001). The amount of missing data ranged from 0%-11.5%, with hours of PD per month having the most missing data.

Demographic characteristics of providers in each profile were examined using descriptive and inferential statistics. Because of the small sample sizes within some of the identified profiles and the limited variation within profiles on certain demographic variables, it was not possible to use the R3STEP approach in Mplus to conduct multinomial logistic regression to examine predictors of profile membership. Instead, univariate analysis of variance (ANOVA) and Chi-square analysis with post-hoc follow-up tests were used to examine how profiles differed in provider and program demographic characteristics (Jung & Wickrama, 2008). ANOVA was used for continuous variables, and chi-square analysis was used for categorical variables. Because only 2% of cases had missing data on predictors, listwise deletion was employed for missing data.

Results

Demographic characteristics of the survey respondents in the full analytic sample are displayed in Table 7, and descriptive statistics for the variables used to form the profiles are shown in Table 8. Additionally, correlations between the profile variables are presented in Table 9. The correlation table shows low correlations between profile variables, similar to what was found in Study 1.

Table 7 Descriptive Statistics for Survey Respondents

Variable	Frequency	*N*
Time licensed		230
Unlicensed	12.2%	28
Up to 10 years	18.3%	42
10 to 20 years	34.3%	79
More than 20 years	35.2%	81
Children enrolled		232
Less than 5	25.4%	59
5 to 8	47.0%	109
9 to 12	23.3%	54
More than 12	4.3%	10
QRIS participation		234
Not eligible (unlicensed)	12.0%	28
Not participating	51.7%	121
Star Level 1	3.8%	9
Star Level 2	10.7%	25
Star Level 3	7.7%	18
Star Level 4	8.5%	20
Star Level 5	5.6%	13
Provider education		231
High school diploma or less	39.5%	92
Some college credits	30.0%	70
Associate's degree	12.9%	30
Bachelor's degree or higher	17.6%	41
Provider race and ethnicity		230
White, non-Hispanic	56.1%	129
African-American, non-Hispanic	33.0%	76
Hispanic or Latino	6.5%	15
Other	4.3%	10

Note: $N = 234$

Table 8 Descriptive Statistics for Profile Variables for the Full Survey Analytic Sample

Variable	%	*M* (SD)	*N*
Non-standard Hours	17.2%		232
Varying Pay	46.0%		226
Referring Families		36.2% (34.7)	234
Family Support	55.9%		229
Learning Activities		4.4 (1.2)	229
Hours of Planning Time		4.8 (4.4)	221
Curriculum Use	75.4%		232
Meeting with Others	48.3%		234
Professional Association	16.8%		232
Coaching	27.5%		233
Coursework	37.7%		231
Hours PD		1.3 (1.9)	207
Progressive		18.3 (2.9)	233
Traditional		15.8 (3.8)	233

Table 9 Pearson Correlations of Profile Variables for Survey Respondents

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Non-standard hours	-													
2. Varying pay and scheduling	.165*	-												
3. Referring families	.172**	.126	-											
4. Family support	.021	.036	.253**	-										
5. Learning activities	-.025*	.142*	.090	.104	-									
6. Planning time	.089	.046	.229**	.210*	.056	-								
7. Curriculum use	-.050	.034	.232**	.208*	.250**	.190**	-							
8. Meeting with others	-.073	-.159*	.083	.073	-.035*	-.012	.009	-						
9. Professional association	0	.076	.158*	.158*	.105**	.085**	.232**	.135*	-					
10. Participate in coaching	.115	.053	.141*	.242**	.056	.107	.132**	.011	.088**	-				
11. Taken a course	.029	.039	.219*	.185**	.074	.238	.238**	.058	.111**	.212**	-			
12. Time spent in PD	.012	.081	.194*	.213**	.049	.146**	.201**	-.007	.094**	.162*	.278**	-		
13. Progressive beliefs	-.062	.049	-.039	.118	.081**	.061	.026	-.023	.011	-.013	.014	.114	-	
14. Traditional beliefs	-.012	-.040	-.125**	.157*	-.047**	-.093	.147*	.016	-.096**	-.066	.215**	.105	-.081	-

* $p < .05$. ** $p < .01$

Confirmatory and Exploratory Latent Profile Analysis Results

Results of the confirmatory LPA reveal that of the 201 providers included in the analysis, 3.5% fall into the Informal profile (n = 8), 8.6% in the Somewhat Formal profile (n = 17), and 88.0% in the Formal/Educational profile (n = 176). This model had an entropy value of 0.996 and a LMR-LRT p value of $p < .001$. These results suggest that within the Delaware sample, more providers fall into the Formal/Educational profile than in the national sample of providers.

To answer the second and third research questions, an exploratory LPA of the full analytic sample was run with two through five classes to determine the best model fit. Model fit indices for the exploratory models are shown in Table 10. In addition to considering the model fit indices, the mean scores on each variable and the percentage of providers in each profile were also considered for the different models to ensure that the profiles were meaningfully different. This combination of examining model fit and interpretability led to the decision to select the four-profile solution. The LMR test results pointed to this as the best solution, and this solution had the highest entropy value as well as the best interpretability.

Table 10 Model Fit Indices for Study 2 Exploratory LPA

Number of Classes	AIC	BIC	Sample Size Adjusted BIC	Relative Entropy	P_{LMR}	Percentage in smallest class
5	7117.85	7394.28	7140.71	.856	.350	5.5%
4	7158.93	7383.52	7177.50	.989	.001	5.2%
3	7343.78	7516.54	7358.07	.979	.004	5.6%
2	7535.84	7656.77	7545.84	.985	.019	5.9%

Three of the four profiles had very similar values to the profiles identified in Study 1. Therefore, they were given the same names as the Study 1 profiles. The majority of providers fall into the Formal/Educational profile (79.1%, *n*=185). This profile is characterized by high scores on variables related to educational practices and professional engagement. The other providers fell into the Somewhat Formal (10.3%, *n*=24) and Informal (5.1%, *n*=12) profiles. The final profile identified did not emerge in Study 1. This profile was named Highly Engaged and contained 5.6% of the providers (*n*=13). Figure 3 represents the mean standardized scores on the profile variables for the four profiles of HBCC providers. Table 11 shows the unstandardized descriptive statistics for each profile for the variables used to determine profile membership.

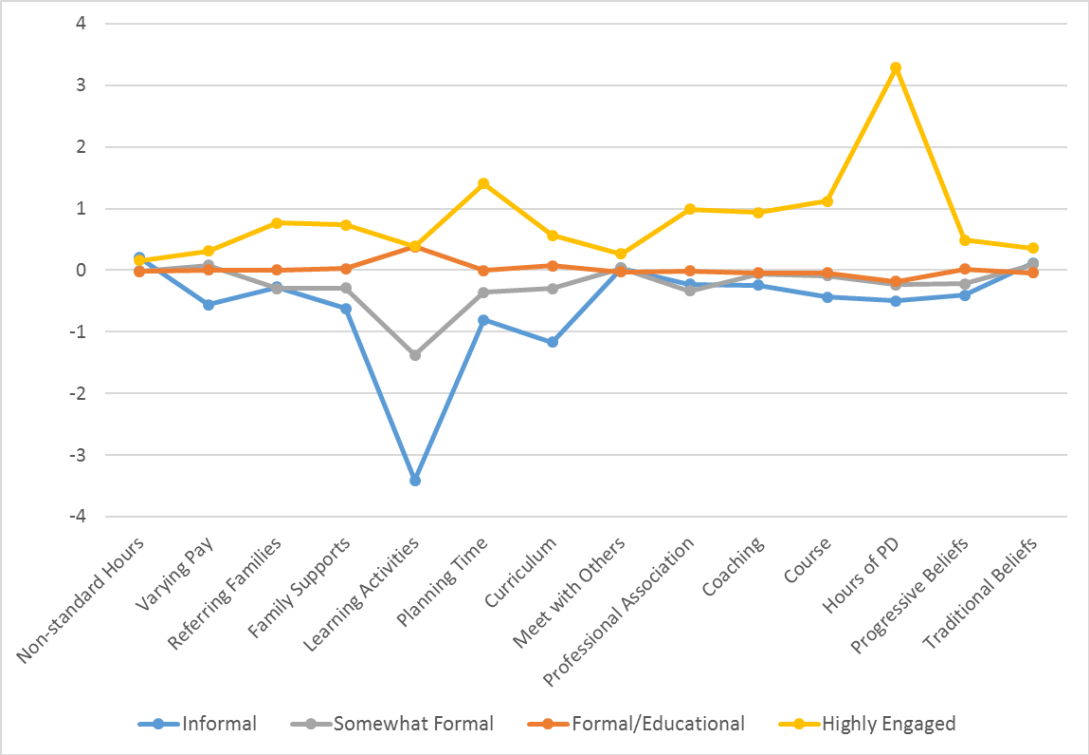

Figure 3 Standardized Results for Delaware Exploratory Profiles

The Highly Engaged providers were similar to those in the Formal/Educational profile in that both groups report doing a planned learning activity approximately daily. However, the Highly Engaged group had higher values on all of the other profile variables, excluding serving children during non-standard hours. They had statistically significantly higher values on their rate of referring families, access to a family support resource, time spent planning, curriculum use, belonging to a professional association, participating in coaching and coursework, time spent in PD, and progressive beliefs. Notably, all of the Highly Engaged providers reported that they use a curriculum.

The Informal and Somewhat Formal profiles reported fewer planned learning activities with children, spent less time planning children's activities, were less likely to use a curriculum, and were less likely to participate in coaching or coursework. The Informal profile has the lowest frequency of planned learning activities, the least amount of planning time, and the lowest frequency of curriculum use. Wald tests of parameter constraints were used to identify where differences between the profiles were statistically significant. Significant differences are noted in Table 11. There were no significant differences between profiles on serving children during non-standard hours or meeting regularly with other providers.

Demographic Differences by Profile

Demographic characteristics of providers in each profile were then examined, including provider education, licensing status, QRIS participation, number of children enrolled, percentage of children cared for receiving child care subsidy, percentage with a disability, percentage of children related to the provider, and poverty density of the provider's neighborhood. Table 12 presents the descriptive statistics and ANOVA and Chi-square results for these demographic characteristics by profile.

Table 11 Descriptive Statistics by Profile for Study 2 Exploratory LPA

	Informal (n=12)		Somewhat Formal (n=24)		Formal/ Educational (n=185)		Highly Engaged (n=12)	
	M (SD)	%	*M* (SD)	%	*M* (SD)	%	*M* (SD)	%
Non-standard hours		25.0%[a]		16.7%[a]		16.4%[a]		23.1%[a]
Varying payment/ scheduling		18.2%[b]		50.0%[b, c]		46.1%[b, c]		61.5%[c]
Rate of referring families	0.3 (0.4)[f]		0.3 (0.3)[f]		0.4 (0.3)[f]		0.6 (0.3)	
Family support resource		25.0%[d]		41.7%[d, e]		57.2%[e]		92.3%
Planned learning activities	0.3 (0.5)		2.8 (0.4)		4.9 (3.9)[g]		4.9 (0.3)[g]	
Planning time	1.3 (1.2)		3.2 (2.3)		4.8 (3.9)		11.0 (8.2)	
Uses a curriculum		25.0%		62.5%[h]		78.7%[h]		100%
Meets with other providers		50.0%[k]		50.0%[k]		47.0%[k]		61.5%[k]
Belongs to an association		8.3%[l]		4.2%[l]		16.4%[l]		53.8%
Participated in coaching		16.7%[i]		25.0%[i]		25.5%[i]		69.2%
Took a relevant course		16.7%[j]		33.3%[j]		35.7%[j]		92.3%
Hours of PD	2.0 (0.4)[m]		0.9 (1.0)[m, n]		1.0 (1.0)[n]		7.7 (2.3)	
Progressive beliefs	17.2 (3.4)[o]		17.7 (2.5)[o]		18.4 (2.9)[o]		19.8 (2.2)	
Traditional beliefs	16.3 (3.3)[p]		16.2 (4.1)[p]		15.6 (3.8)[p]		17.2 (4.3)[p]	

Note: Classes differed at $p < .05$ unless noted. Matching superscripts indicate which differences were not significant at $p < .05$.

Table 12 Descriptive Statistics and Comparisons of Demographic Characteristics by Profile

	Informal (n=12)	Somewhat Formal (n=24)	Formal/ Educational (n=185)	Highly Engaged (n=12)	ANOVA or Chi Square	Post-hoc Comparisons ($p < .05$)
Number of children enrolled	5.9 (4.0)	5.0 (3.3)	6.9 (3.2)	7.6 (3.4)	$F = 3.01^{*}$	F > SF
Percentage receiving subsidy	25.2% (25.2)	42.6% (46.5)	30.4% (36.1)	55.3% (41.8)	$F = 2.51$	None
Percentage of children with disabilities	22.4% (29.1)	1.5% (5.0)	8.2% (14.5)	11.5% (26.5)	$F = 4.82^{**}$; Welch = 7.90^{**}	F > SF
Percentage of children related to provider	66.9% (22.4)	46.9% (42.6)	29.8% (34.5)	22.8% (30.6)	$F = 5.45^{**}$ Welch = 4.48^{*}	I > F, I > HE
Poverty density	6.7% (3.4)	10.7% (7.6)	8.8% (8.3)	14.1% (8.7)	$F = 2.32$	None
Licensed	58.3% (51.5)	70.8% (46.4)	91.4% (28.2)	100% (0)	$\chi^2 = 20.49^{**}$	F > I, F > SF
QRIS participation					$\chi^2 = 9.29$	None
Not participating	75.0%	79.1%	62.7%	38.4%		
Level 1 or 2	16.7%	4.2%	15.7%	15.4%		
Level 3, 4, or 5	8.3%	16.7%	21.6%	46.2%		
Provider Education					$\chi^2 = 11.6$	None
HS diploma or less	25.0%	50.5%	40.2%	23.1%		
Some college	33.3%	20.8%	28.8%	61.5%		
Associate's degree	8.3%	12.5%	13.0%	15.4%		
Bachelor's degree or higher	33.3%	16.7%	17.9%	0%		

* $p < .05$, ** $p < .01$

Note: Means and standard deviations are presented for continuous variables, and frequencies are presented for categorical variables; Games-Howell post-hoc comparisons were used for ANOVA for percentage of children receiving subsidy, percentage with disabilities, and percentage related to provider; Hochberg GT2 comparisons were used for number of children enrolled; Bonferroni corrections were used to compare categorical variables; I = Informal, SF = Somewhat Formal, F = Formal/Education, HE = Highly Engaged

All of the providers in the Highly Engaged group were licensed, as well as over 90% of those in the Formal/Educational profile. Those in the Highly Engaged profile also had the highest rate of serving children receiving subsidy and participating in the QRIS with a higher rating. Providers in the Informal profile reported serving the most children with disabilities and children to whom they had a prior relationship, and those in the Informal and Somewhat Formal profile had the lowest rates of QRIS participation. Interestingly, none of the providers in the Highly Engaged profile had a bachelor's degree, compared to one-third of the Informal providers. Those in the Somewhat Formal profile had the lowest overall level of education, with half having a high school diploma or less, although differences in education were not statistically significant.

Chi square analyses and ANOVAs were conducted to identify where statistically significant differences exist between profiles on demographic characteristics. The chi square results show a statistically-significant difference between profiles by licensing status, $\chi^2 = 20.489$, $df = 3$, $p < .001$. Post hoc comparisons with Bonferroni corrections indicate that providers in the Formal/Educational profile are more likely to be licensed (91.4%) than providers in both the Somewhat Formal (70.8%) and Informal (58.3%). This represents a medium-to-large effect size (Cohen, 1988; $d = 0.620$). Chi square results indicated that there was not a statistically significant difference between providers in QRIS participation, $\chi^2 = 9.286$, $df = 6$, $p = .158$, or highest level of education, $\chi^2 = 11.591$, $df = 9$, $p = .237$.

ANOVA was used to identify significant differences in enrollment characteristics and poverty density by profile. Preliminary comparisons revealed that the homogeneity of variance assumption was met for both the poverty density variable

(Levene statistic = 1.393, *df* [3, 227], *p* = .246) and total enrollment variable (Levene statistic = 0.833, *df* [3, 230], *p* = .477). The overall ANOVA did not show a statistically significant difference between groups on poverty density of the program location (*F* = 2.319, *df* [2, 227], *p* = .076). There was a significant difference between groups on the total number of children enrolled (*F* = 3.280, *df* [3, 230], *p* = .022). Hochberg GT2 post-hoc comparisons were used to account for the unequal sample sizes between profiles (Day & Quinn, 1989). Results suggest that providers in the Formal/Educational profile serve significantly more children than those in the Somewhat Formal profile. This represents a medium-to-large effect size (Cohen, 1988; *d* = 0.60).

The assumption of homogeneity of variance was violated for the ANOVAs for percentage of children with disabilities (Levene statistic = 14.702, *df* [3, 225], *p* = .001) and percentage of children related to the provider (Levene statistic = 2.726, *df* [3, 228], *p* = .045). In these analyses, the Welch Statistic was considered, both because Levene's test was statistically significant and because of the unequal sizes of the profiles (Brown & Forsythe, 1978). The Welch Statistic for these variables is reported along with the F test in Table 10. Additionally, Games-Howell post-hoc comparisons were used in these analyses because they are robust to violations of the homogeneity assumption (Toothaker, 1993). Results suggest that providers in the Formal/Educational profile enroll a significantly higher percentage of children with disabilities than providers in the Somewhat Formal profile. These results represent a small-to-medium effect size (*d* = 0.485). Additionally, providers in the Informal profile serve a greater percentage of children to whom they are related than providers

in the Formal/Educational or Highly Engaged profiles, both with a large effect size, *d* = 1.069 and *d* = 1.293 respectively (Cohen, 1988).

Discussion

The goal of this study was to examine the beliefs and practices of Delaware HBCC providers using a person-centered approach for the purpose of categorizing providers to better understand how HBCC providers may align into distinct groups and how these groups may be similar to or different than those found in Study 1. Using both a confirmatory and an exploratory approach, it was possible to match Delaware providers to the Study 1 profiles and to determine the unique profile structure of the Delaware providers.

Profiles of Home-Based Providers in Delaware

Results of the confirmatory analysis suggest that a greater percentage of providers in Delaware fall into the Formal/Educational profile than was found in Study 1 with the national sample. Further, in the exploratory analysis where profiles were not constrained in any way, this large Formal/Educational profile split into two profiles, a large profile similar to the Formal/Educational Study 1 profile and the unique Highly Engaged profile.

Similar to Study 1, the four profiles identified through the exploratory analyses are largely driven by providers' educational practices with children and, to a lesser degree, their professional engagement. The profile analysis results show that providers' self-report of their educational practices varies widely among providers in the state. These findings serve to confirm the Study 1 finding that there are significant differences among HBCC providers in educational practices as measured by the

NSECE questionnaire. This suggests that there is some level of formalization in many providers' educational practices with children. Therefore, quality improvement efforts for the ECE workforce like QRIS may be relevant to them and effective in supporting them in their work with children.

Although the profiles identified were largely similar to those found in Study 1, one additional group emerged in the exploratory LPA, the Highly Engaged profile. Providers in this group the highest values of most of the profile variables. Highly Engaged providers had very high rates of accessing a family support resource, taking coursework, and spending time attending PD and planning children's activities. Additionally, all of the Highly Engaged providers reported using a curriculum. They also had significantly higher rates of belonging to a professional association and referring families to outside resources compared to providers in the other profiles.

It is possible that this additional group of providers emerged in this state-specific sample because of the recent focus on engaging licensed FCC providers in the QRIS and the resources available to these providers through the Race to the Top Early Learning Challenge grant. These include free curricula and developmental screening, free or low-cost PD, access to technical assistance, and opportunities to network with other providers. Another explanation for the emergence of the additional profile is the time difference between when the NSECE data was collected and the statewide survey was administered. In the four years since the NSECE was conducted, the early learning landscape nationally continues to change, including an increased focus on supporting HBCC providers. Therefore, it is possible the difference in timing between the two samples may be influencing the findings.

The Somewhat Formal profile was significantly different from the Informal and Formal/Educational profiles only in their educational practices. The Informal profile less frequently had access to a family support resource than Formal/Educational and Highly Engaged providers. Overall, these findings reinforce what was found in Study 1, that while there are significant differences in providers' educational practices, they are similar across profiles in their family supportive practices and their caregiving beliefs. However, this study found fewer differences in professional engagement between profiles, with the exception of very high levels of professional engagement for Highly Engaged providers.

Differences in Provider Characteristics by Profile

One of the purposes for this study was to examine additional provider characteristics that may vary by profile that were not available in the NSECE dataset. Descriptive statistics suggest that providers in different profiles are serving somewhat different populations and have different program characteristics. The finding that those in the Informal profile report serving the highest percentage of children with disabilities along with their lower levels of professional engagement suggests that these providers may benefit from more support or training about working with children with disabilities and their families (Hallam & Hooper, 2016). However, this difference was not statistically significant, likely due to the small sample size in the Informal profile.

Providers' highest level of education does not predict profile membership within this sample. While the Highly Engaged profile has the highest rates of participation in PD activities, none of these providers hold a bachelor's degree, while one-third of the Informal providers do. The education variable does not specify

whether the highest level of education is in ECE or a related field. This is different from Study 1, where education predicted profile membership. Together with the findings that those in the Informal profile serve the most related children and are the least likely to be licensed, it may be that providers in the Informal profile have less of a professional identity as a child care provider even though their level of education is similar to that of other providers (Gerstenblatt, Faulkner, Lee, Doan, & Travis, 2014; Norris, 2001; Porter, 1998). For example, they may be providing care mostly to grandchildren in order to support parents' work.

The providers in the Highly Engaged profile report a high frequency of PD activities, and many report that they have participated in coursework in the last year related to child development. It may be that these providers are currently pursuing an ECE-related degree but have not yet completed it. Similarly, the highest percentage of Highly Engaged providers participate in the QRIS at a high level, even though this difference was not statistically significant from the other profiles. They likely have access to PD through the QRIS, like onsite coaching and workshops, that may provide them with support despite their lack of a completed degree (Bromer et al., 2009; Gable & Halliburton, 2003).

The lower rates of licensing among Informal and Somewhat Formal providers suggests that licensing status may be related to increased professionalization and more educational practices among HBCC providers (Norris, 2001). This reinforces differences between licensed FCC and unlicensed FFN providers identified in previous studies (Brown-Lyons et al., 2001; Coley et al., 2001; Edwards et al., 2002). The structural requirements of licensing may be driving licensed providers to increase their educational practices to meet certain standards, such as planning different types

of activities for children and attending PD. It is notable that this finding emerged in Delaware, where the licensing threshold is more stringent than in most states, with providers required to be licensed when they care for one unrelated child. Therefore, similar or even stronger results may emerge with providers in states that have higher thresholds for licensing.

Although the Formal/Educational and Somewhat Formal profiles have some similarities, the characteristics of providers in Formal/Educational profile seem to differ from those the Somewhat Formal profile in potentially important ways. Providers in the Formal/Educational profile serve more children, a greater percentage of children with disabilities, and are more likely to be licensed. Because Somewhat Formal providers seem to be engaging in some educational activities with children, such as occasionally planning learning activities and spending some time planning, it is possible that Somewhat Formal providers could move into the Formal/Educational profile given some intervention or if they became licensed. Therefore, it may be appropriate to provide targeted support to providers in the Somewhat Formal group to increase their educational practices and professional engagement.

These additional differences in provider characteristics by profile that were not identified in Study 1 provide additional insight into the typical characteristics of HBCC providers in each profile and reinforce previous findings that licensed providers generally have more formalized practices than unlicensed providers (Coley et al., 2001). This is likely due at least somewhat to structural requirements imposed through licensed requirements. However, the emergence of four distinct profiles highlights that licensing status on its own is not sufficient for categorizing HBCC providers.

Limitations

Although this study provides insight into the variation among home-based providers in one specific state, there are several limitations. The somewhat low response rate, although typical for survey research with HBCC providers, may limit the representativeness of the sample. Additionally, providers who responded to the survey were more likely to be licensed and to participate in the QRIS, so they are not fully representative of the population of HBCC providers in Delaware.

One general limitation of person-centered analyses is that profiles can be affected by the sample size and characteristics (Masyn, 2013). The profiles in this study are based on providers' self-report about their beliefs and practices. Additional research that includes other data sources, such as observational data to confirm providers' educational practices or administrative data related to their professional engagement would strengthen these findings. Because this study did not include unlicensed providers who do not receive subsidy, it is not possible to generalize findings to this group. Finally, because of the small sample sizes of the Informal, Somewhat Formal, and Highly Engaged profiles, the power to detect statistically significant differences in demographic characteristics is very limited.

Directions for Future Research

Although the results suggest that many providers report planning learning activities regularly, more research into the types and quality of learning activities providers are planning and implementing, as well as how they use curricula, would provide more information about their educational practices. Additionally, future research with HBCC providers outside Delaware would be helpful to see if providers in states with different licensing contexts or without QRIS that include HBCC

providers seem to align into the similar profiles and with the same proportion of providers in each profile.

More research is needed to better understand the HBCC providers in the Highly Engaged profile, especially given their low levels of formal education. This could be done through interviewing these providers or assessing other areas, such as their motivation or self-efficacy, in order to better understand their beliefs and practices. Specifically, research could examine whether providers are offering higher-quality care than other providers and whether children cared for by these providers have better academic and social emotional outcomes.

Examining beliefs and practices using a variable-centered analysis could also be useful for better understanding how profile variables, such as those related to educational practices and those related to professional engagement or caregiving beliefs, relate to one another. Beyond this, additional research could examine whether profile membership is related to program quality and children's outcomes and could explore additional demographic characteristics that may predict profile membership like ECE-specific education. It would also be possible to study the stability of profile membership and whether providers may change and formalize their beliefs and practices given increased PD or through participating in QRIS or pursuing licensing.

Implications for Practice

These findings reinforce that HBCC providers, specifically providers in Delaware, are a heterogeneous group, and traditional distinctions based on licensing status may not adequately capture the diversity in their practices with children and families. When considering how to engage Delaware HBCC providers in quality improvement initiatives, these findings suggest that it would be helpful to provide a

range of options to provide relevant options for support to providers in each profile. Providers whose practices are more formalized may be interested in participating in programs like QRIS that also serve center-based providers, while providers in the Informal profile may find services that are similar to home visiting or parent education programs more relevant to their work (McCabe & Cochran, 2008).

There is much more to learn about HBCC providers and their beliefs and practices related to working with children and families in order to support their quality improvement and ensure the children in their care have high-quality early educational experiences. Because many young children, especially young children facing risk factors, spend time in HBCC, it is important to continue to learn about this form of child care and how to engage and support HBCC providers.

Chapter 4

STUDY 3: HOME-BASED PROVIDERS' ROLE PERCEPTIONS AND QUALITY OF CARE: EXPLORING DIFFERENCES AMONG PROFILES

Because HBCC is a widely used form of non-parental child care, it is important to learn more about the HBCC providers working with children. Learning about how they perceive their work and the quality of experiences they are providing to children and families may make it possible to better connect them to resources and support their quality improvement. Studies 1 and 2 identified profiles of providers based on their self-report of their beliefs and practices. The purpose of Study 3 is to examine these profiles in depth using a mixed methods approach and multiple data sources with a specific focus on how HBCC providers view their role, the quality of care they provide, and how these areas relate to profile membership.

Home-based providers balance many competing roles as they care for children (Bromer & Henley, 2004; Gerstenblatt et al., 2014). These roles can come into conflict with one another (Hecht, 2001), and HBCC providers may prioritize some roles over others. Because HBCC providers are a heterogeneous group, there are likely differences in how they view their role and which of their roles they see as the most important (Porter et al., 2010). How providers view their role may reveal important clues about how to best engage them in quality improvement initiatives and which strategies will be most effective in supporting them in their work (Bromer & Korfmacher, 2016). Additionally, the quality of children's experiences in HBCC is an area of interest. Previous research suggests quality, especially as measured by widely-

used global measures, is lower than in center-based care (Dowsett et al., 2008) and that children attending HBCC may be exposed to less enriching educational opportunities than children in center-based care (Bassok et al., 2016).

This study examines a sample of 15 HBCC providers in Delaware, including both licensed and unlicensed providers, with the goal of better understanding how they view and manage their roles, the quality of care they provide, and the relationship between role perception and quality. The study also seeks to extend the findings of Study 1 and Study 2 through using case studies to better understand HBCC providers in the profiles previously identified.

Literature Review

Role Theory

One framework for understanding the complex factors associated with how home-based providers construct and navigate their identity is role theory. A role is defined as a set of expectations associated with a social position in a specific setting (Biddle, 1979). Roles provide individuals with identity within groups and access to social support. Each person may have multiple roles which make up their role-set, and each role can have various sub-roles, which compromise the different activities which each role involves (Merton, 1957). Because individuals are bi-directionally influenced by their environments, gaining a better understanding of how HBCC providers view their roles is important. How they perceive their role may influence how they interact with the children and families they serve. This, in turn, can influence children's developmental outcomes.

Each role that an individual adopts may have some elements that are discordant, and each role requires time and commitment. Therefore, people have to adapt and negotiate their role definitions (Goode, 1960; Merton, 1957). When individuals are unable to meet their perceived role demands, it can lead to role strain (Goode, 1960). Role strain can be caused by role overload, when there are too many role demands, role conflict, when roles interfere with one another, or role ambiguity, when role expectations are unclear (Coverman, 1989; Hecht, 2001). All individuals do not experience role strain, however, and social support and continued education can act as protective factors in balancing multiple role demands.

Role theory has been used extensively to study caregivers of aging parents and grandparents providing custodial care to grandchildren, with some research extending to grandparents providing child care to their grandchildren (Strom & Strom, 2000). This theory is useful for understanding the experiences of other HBCC providers as well. Previous research suggests that HBCC providers often report wanting to be like a mother to children in their care (Nelson, 1990) and focus on the nurturing aspects of their role (Austin, Lindauer, Rodriguez, Norton, & Nelson, 1997).

Home-based providers often adopt multiple roles. They are typically the only adult present in the environment and therefore are responsible for a range of tasks, including direct work with children as a teacher and caregiver, administrative tasks related to their business, and maintaining positive relationships with families. This puts them at risk for role strain. Sometimes these multiple roles can come into conflict. For instance, if families ask providers to care for children for additional hours outside of their stated hours of operation, providers may be torn between their role as a family supporter and their role as a business owner (Bromer & Henly, 2009; Gerstenblatt et

al., 2014). One strategy home-based providers may use to cope with their multiple roles is to identify with and prioritize one role more strongly than others. Role theory suggests that individuals put the most efforts into the roles with which they identify most (Katz & Kahn, 1996).

Role perceptions may be influenced by aspects of the environment that are proximal to providers, including how they interact with children, families, and other providers. For example, providers may be less likely to identify professional roles in part because they believe parents and their community do not view them as professionals (Buell, Pfister, & McCormick, 2002; Tuominen, 2003). Their role perceptions may also be influenced by aspects that are more distal, including their experiences with outside systems like the subsidy system, licensing, or QRIS. These outside systems have the opportunity to positively shape role perceptions and broaden how home-based providers currently view their roles if providers have positive experiences interacting with these outside systems. It is important that initiatives to support HBCC providers account for the multiple roles and competing expectations that providers often experience. Understanding how a provider views his or her role may help quality improvement initiatives better meet the needs of HBCC providers and provide support that is meaningful and relevant to them.

Role theory and bioecological theory, described in Chapter 1, are both suited to studying the unique context of HBCC, which represents an important microsystem in which children's development occurs. It is also an important microsystem in shaping providers' role perceptions. However, like children's development, providers' perceptions about their roles are influenced by their interactions with all levels of their environment. These include the interactions between their work and family life as well

as macrosystem-level influences such as state policy related to licensing and training requirements (Buell et al., 2002; Forry et al., 2013).

Role Perceptions of Home-Based Providers

Because HBCC providers are a heterogeneous group, there are likely differences in how they view their role and which of their roles they see as the most important. These differences may relate to what providers do with children in their care and the quality of learning experiences they provide. Although little research has focused specifically on how HBCC providers view their role, research that has explored some aspect of role or motivation suggests that how providers perceive their role varies. FFN providers as a group often express little interest in child care as their career and therefore may not be interested in participating in formal training (Porter, 1998; Porter et al., 2010). Previous research suggests that many FFN providers began caring for children to help a family member, friend, or neighbor for a limited amount of time, or they may be caring for children to supplement household income (Snyder et al., 2008). Snyder et al. (2008) conducted focus groups with FFN providers receiving subsidy to explore how the providers thought of themselves and the care they provided. The authors found that the main reasons the providers were providing child care were to help the children's parents so they could work and afford care, to stay home with their own children, to keep child care within the family for related children, and to assist a family temporarily during a challenging time. Generally, these reasons focused more on the parents than on the children. The researchers also asked the providers about their intentions to continue providing child care and found that these, like their reasons for providing care, varied greatly. Some providers were actively working to become licensed in order to be able to care for more children,

either to earn more money or to help more families, while others did not express a desire to be licensed or to care for children long-term.

FCC providers may be more likely than FFN providers to view their role as a professional who cares for and educates children, but this does not seem to be the primary way in which FCC providers view their role. For instance, Norris (2001) found in her study of 70 FCC providers that only 30% said they were in business because they were interested in a career caring for children. As a whole, previous research has found that home-based providers are motivated to provide care because they enjoy caring for children and because it makes it possible for them to be at home while earning income (Layzer & Goodson, 2006; Marshall et al., 2003).

Tuominen's (2003) qualitative study of licensed and unlicensed HBCC providers found that they showed pride in their work despite low pay and challenging work conditions. They cited their conflicted professional identity as a source of stress; they felt pressure to provide high-quality care but faced low social status and were often viewed as babysitters. A more recent qualitative study by Gerstenblatt et al. (2014) specifically examined sources of stress among FCC providers. Providers in this study reported lower stress when they viewed themselves as professionals, and providers who projected a more professional identity had more success in maintaining high enrollment and therefore faced less financial stress. However, it was a challenge for the providers in the study to incorporate both their business owner identity and their caregiver identity into a professional identity. HBCC providers, especially those who are licensed, may feel that they need to select either a professional role or a family supportive role (Gerstenblatt et al., 2014). Licensed FCC providers specifically may be unsure to what extent they are able to support families due to professional

guidelines and structural constraints from licensing regulations (Bromer & Henly, 2009).

Because of the wide variation in provider characteristics coupled with the unclear categories and definitions of home-based providers, it is unlikely that one service or approach to quality improvement can meet all providers' needs. The difference in role perceptions may be a meaningful distinction among HBCC providers that may ultimately relate to the quality of the care they provide as well as the kinds of quality improvement supports that may be most effective for them. Just as there appear to be differences in role perception by licensing status, there may also be differences based on profile membership as identified in Study 1 and Study 2.

Quality of Home-Based Child Care

High-quality ECE experiences are important for children's later academic success as well as later life outcomes (Campbell et al., 2012; Schweinhart et al., 2005). Therefore, there has been increased investment in improving access to high-quality child care at the state and national level. This includes focusing on structural aspects of quality like ratios, group sizes, and teacher education, as well as process aspects like sensitive caregiving, cognitive stimulation, and enriching learning opportunities (Dowsett et al., 2008).

Research suggests that the quality of HBCC varies widely. Much of this research has focused on licensed FCC. National studies have found that licensed FCC is typically of lower quality than center-based care, and unlicensed FFN care tends to be of a lower quality than licensed FCC (Coley et al., 2001; Elicker et al., 2005; Kontos et al., 1995; NICHD, 2004; Whitebook et al., 2004). For example, Kontos et al. (1995) identified that only 10% of FCC providers meet thresholds for high-quality

care. However, because this and many other studies rely on multi-state samples, findings related to the quality differences between licensed and unlicensed providers are unclear due to variation in state regulations for licensing.

The measures used may have large implications for findings related to the quality of home-based care. Global measures of quality often measure both structural and process features, including safe and enriching indoor and outdoor space and materials as well as the presence of nurturing interactions between the provider and children. The most frequently used measure of global quality for licensed FCC is the Family Child Care Environment Rating Scale-Revised (FCCERS-R; Harms, Cryer, & Clifford, 2007), and some have suggested that this measure illuminates the less positive aspects of HBCC without highlighting the positives (Porter et al., 2010). Additionally, the FCCERS-R utilizes a somewhat narrow definition of quality that may be more appropriate for center-based care (Porter & Kearns, 2005a). For example, the philosophical approach of the FCCERS-R is that in a high-quality setting, children have access to a wide variety of materials and activities. This may disadvantage home-based providers with more limited materials or those who use more of an adult-controlled approach in selecting which materials children will be able to use. Another challenge of the FCCERS-R is that providers who do not receive a positive score on lower-level indicators, like those related to the presence of adequate materials, do not receive a score on the higher-level indicators which relate to providers' interactions and use of educational strategies. Previous research has identified ways in which the traditional scoring method used in the Environment Rating Scale tools, including important indicators being given too little weight, can negatively influence a program's total score (Hofer, 2010; Layzer & Goodson, 2006).

This may be especially true in HBCC settings, where providers may have fewer materials for children or may not display them in a way that meets the indicators of the FCCERS-R due to environmental constraints, even though they may be implementing the learning practices outlined in higher-level indictors.

When using measures with a greater focus on provider interactions with children, such as the Quality of Early Childhood Caregiving: Caregiver Rating Scale (Layzer & Goodson, 2006), Child Care Assessment Tool for Relatives (CCAT-R; Porter, Rice, & Rivera, 2006), and Observational Record of the Caregiving Environment (NICHD, 2004), FFN care tends to score higher than FCC on provider responsiveness and nurturing behavior. This may be in part due to the providers' previous relationships with children and smaller group sizes. These measures still identify some areas of concern related to the quality of home-based care, including little time spent in learning activities, infrequent complex talk, and frequent television use (Fuller & Kagan, 2000; Layzer & Goodson, 2006; Tout & Zaslow, 2006).

Many factors, some which are able to be regulated and others than are not, seem to influence the quality of HBCC. Some research has specifically focused on providers serving children receiving subsidy or compared providers who receive subsidy with those who do not (Layzer & Goodson, 2006; Maxwell & Kraus, 2005). Raikes et al. (2005) found that programs serving fewer children on subsidy tend to have higher quality. This corresponds with the general finding that across types of child care settings, low-income children are more likely to be in care that is of a lower quality (Coley et al., 2001; Vortruba-Drazl, Coley, & Chase-Lansdale, 2004). Additionally, research suggests that licensing is positively related to global quality (Burchinal, Howes, & Kontos, 2002; Kontos et al., 1995; Raikes et al., 2005).

Previous studies have also found a positive relationship between the quality of care and providers' training and education (Elicker et al., 2005; Norris, 2001). Children who are cared for by FCC providers with more training and education tend to score higher on measures of cognitive development (Clarke-Stewart et al., 2002). Providers with more education also tend to provide more enriching learning environments and have more responsive caregiving practices (Clarke-Stewart et al., 2002; Raikes et al., 2005; Whitebook et al., 2004). One study by Forry et al. (2012) considered differences in quality across a sample of licensed and unlicensed home-based providers. They examined whether the providers grouped into profiles based on their scores on three different quality measures: the Family Day Care Rating Scale (Harms & Clifford, 1989), the literacy subscale of the Early Childhood Environment Rating Scale–Extension (ECERS-E; Sylva, Siraj-Blatchford, & Taggart, 2003), and the sensitivity subscale of the Caregiver Interaction Scale (Arnett, 1989). These tools were selected because they measure different dimensions of quality. They identified three groups of providers: those who scored high, medium, and low respectively on the range of quality measures. Based on these results, the authors suggest that quality levels are consistent across different dimensions of quality in HBCC. They found that licensed providers and those with more child-centered beliefs were most likely to be in the highest quality profile (Forry et al., 2012).

The study explores these research questions: 1) How do HBCC providers view and balance the roles in their role set?, 2) What is the quality of HBCC providers' practices with children and families?, and 3) How do role perception and quality differ by membership in the profiles identified in Studies 1 and 2?

Methods

Research Design

This study serves as the final phase of the larger multiphase mixed methods study. This component employs a multiple case study approach, which is appropriate for building understanding from the ground up (Yin, 2013) and can be used to study how interacting contextual factors influence the participants. Specifically, this study utilizes a convergent parallel mixed methods design, in which quantitative and qualitative data are collected and analyzed concurrently within the same sample and merged during interpretation. The purpose of this design is to examine multiple aspects of a phenomenon using complementary data (Creswell & Plano Clark, 2011; Creswell & Zhang, 2006). In this study, qualitative interview and field notes data will be used to explore HBCC providers' role perceptions and gain a better understanding of their educational practices, and quantitative survey and observation data will be used to describe quality and demographic characteristics of providers. Collecting both quantitative and qualitative data will allow for a deeper exploration of HBCC providers' beliefs and practices than was possible in the previous studies.

Sample Selection

Sampling for this study was directly informed by results from Study 1 and Study 2 with the goal of identifying the 15 HBCC providers representing the different profiles using random selection. The sample was selected from the population of Delaware HBCC providers who responded to the survey in Study 2, informed by the results of both the exploratory LPA of Delaware providers and confirmatory LPA matching Delaware providers to the Study 1 profiles. Originally, the sample of providers for this study were going to be selected from only the confirmatory LPA

from Study 1. However, the additional profile of Highly Engaged providers emerged in the Study 2 exploratory LPA. This group of approximately 6% of the sample emerged from the Formal/Educational profile as a separate group in each profile solution that was tested, from two to five profiles. This seemed like a distinct profile that was important to explore through case studies. Therefore, the decision was made to sample providers from the Highly Engaged profile, as well as the three profiles identified in Study 1. Additionally, relationship-based providers were excluded from the Study 1 analysis because of the NSECE design. Therefore, the relationship-based providers who responded to the Study 2 survey were also sampled as a separate group. This resulted in five groups from which providers were sampled: the three profiles identified in Study 1, Formal/Educational, Somewhat Formal, and Informal; the additional Highly Engaged profile identified in the Study 2 exploratory LPA; and the relationship-based providers who responded to the Study 2 survey. All of the 27 providers in the Relationship-Based profile were unlicensed providers receiving subsidy, and all of the remaining providers were licensed.

Once survey respondents were placed into the five groups described above, the respondents within each group were stratified based on the poverty density of the program's location based on 2010 US Census data. Poverty density was used as a stratifying variable because previous research has suggested that there may be key differences in practices and access to services among child care providers serving higher- and lower-income families (Hatfield et al., 2015). Providers within each strata were randomly selected to participate in case studies, with the goal of three providers per group, two living in low-poverty census tracts (less than 13.9% of families living in poverty) and one living in a moderate- or high-poverty census tract (13.9% or more

families living in poverty). Because 81.9% of Study 2 survey respondents live in census tracts classified as low poverty, stratifying the sample in this way ensured one provider who was not living in a low-poverty community would be included in the sample for each of the five groups. The low, moderate, and high poverty categories were identified using the same criteria used in the NSECE.

Fifteen providers were selected to participate in the study. The final sample consisted of three Relationship-Based providers, two providers in the Informal profile, three in the Somewhat Formal profile, three in the Highly Engaged profile, and four in the Formal/Educational profile. Because only two of the seven providers in the Informal profile agreed to participate, the decision was made to add an additional provider from the Formal/Educational group because of this profile's large size. Demographic characteristics of participating providers are displayed in Table 13. Education data was missing for one Relationship-Based provider.

Table 13 Descriptive Statistics for Demographic Characteristics of Study 3 Participants

Variable	Frequency	n
Time licensed		15
Unlicensed	20.0%	
Up to 10 years	33.3%	
10 to 20 years	33.3%	
More than 20 years	13.3%	
Children enrolled		15
Less than 5	26.7%	
5 to 7	40.0%	
8 or more	33.3%	
QRIS participation		15
Not eligible (unlicensed)	20.0%	
Not participating	13.3%	
Star Level 1 or 2	26.7%	
Star Level 3 or 4	40.0%	
Highest level of education		14
High school diploma/GED or less	20.0%	
Some college credits	40.0%	
Associate's degree	6.7%	
Bachelor's degree or higher	26.7%	
Provider race and ethnicity		15
White, non-Hispanic	40.0%	
African-American, non-Hispanic	53.3%	
Hispanic or Latino	6.7%	

Measures

Child Care Assessment Tool for Relative Care

Observational data was collected using the Child Care Assessment Tool for Relative Care (CCAT-R; Porter et al., 2006), which was designed to measure quality specifically with FFN providers who care for children under age six, although it can be

used across licensed and unlicensed home-based settings (Forry et al., 2011; Paulsell et al., 2006; Porter & Vuong, 2008). The CCAT-R observation measures practices in four factors: bi-directional communication, uni-directional communication, nurturing, and engagement. Each of these factors is rated as good, acceptable, or poor based on norms determined in field testing (Porter et al., 2006). Providers receive higher scores based on the frequency and proportion of interactions recorded. The measure has five components: the Action/Communication Snapshot, Summary Behavior Checklist, Health and Safety Checklist, Materials Checklist, and Caregiver Interview. The Caregiver Interview was not used in this study.

Using time sampling, the Action/Communication Snapshot and Summary Behavior Checklist measure the frequency of interactions and behaviors between a caregiver and a randomly selected focal child. Each time sampling interval contains 20 seconds of observation followed by 20 seconds of coding. The observer scores the items on the Action/Communication Snapshot during each interval. One cycle consists of ten time sampling intervals and lasts six minutes and 40 seconds. At the end of each cycle, the Summary Behavior Checklist is scored once. A full observation consists of six cycles, meaning the Action/Communication Snapshot items are scored 60 times and the Summary Behavior Checklist is scored six times.

Between each cycle, the observer rests for approximately 10-15 minutes, and during this time they can gather information to use in scoring the Health and Safety and Materials checklists. These checklists are completed once during each observation and scored separately. They are used to record the presence or absence of specific behaviors and materials in the environment. Items on the checklist are scored “not applicable” if they cannot be scored during the observation. In this study, these were

most commonly the items related to child sleeping arrangements, food preparation, and outdoor play. Each provider is given a percentage score on each checklist based on the number of items scored yes divided by the total number of items scored, excluding those that were not applicable. A full CCAT-R observation last between 90 minutes and 2 hours.

Although the CCAT-R has not yet been widely used, there is evidence that it is a reliable and valid measure. The measure's authors suggest that the CCAT-R has strong content validity and concurrent validity with the Family Day Care Rating Scale (Harms & Clifford, 1989), and the four factors of the measure were confirmed using confirmatory factor analysis (Porter et al., 2006). The CCAT-R has been field tested and used with diverse cultures (Porter et al., 2006; Porter & Vuong, 2008). Additionally, it has been used in a number of evaluations of initiatives for FFN providers (Pausell et al., 2006; Porter & Vuong, 2008) and licensed FCC providers (Forry et al., 2011).

Family and Provider/Teacher Relationship Quality

The quality of the providers' relationships with the families of the children in their care was measured by the Family and Provider/Teacher Relationship Quality measure (FPTRQ; Kim et al., 2014). This tool was designed to measure the quality of family and provider/teacher relationships in ECE settings that serve children from birth to five. There are five separate measures within the FPTRQ: a director measure, a provider/teacher measure, a parent measure, a family services staff measure for family services staff working within Head Start and Early Head Start, and a family services staff parent measure for parents to complete about their work with family services staff. These measures were designed to be used across a broad range of

settings, including both center-based and home-based child care, and they have been tested with racially and ethnically diverse populations across socioeconomic status (Kim et al., 2014).

For this study, the provider/teacher measure was used. Providers reported about their work with parents, specifically focused on their knowledge about families, practices with families, and attitudes towards families. The measure includes 51 closed-ended items in 3 constructs: 12 items about family-specific knowledge, 23 items about practices, including subscales related to collaboration, responsiveness, and communication, and 16 items about attitudes, with subscales about commitment, openness to change, and respect for families. It also includes demographic questions. Most items are scored on a four-point Likert scale, with some additional items scored yes or no. Construct, subscale, and total scores are calculated by adding individual items after reverse-scoring negatively worded items as indicated in the scoring manual. The authors do not define thresholds for high or low subscale or total scores but provide mean and quartile scores from the center-based and home-based providers in the field study used to validate the measure. The measure has high item response rates, and Cronbach's alphas for each subscale were at the acceptable level (0.6) or higher (Kline, 2000) in the field test. Alphas were not calculated for this study due to the small sample size.

Provider Survey

Another data source for this study was the survey providers completed in Study 2 related to their beliefs and practices. A description of the survey questions is included in Study 1. The questions related to Educational Practices, Professional Engagement, and Family Support were analyzed.

Interview

A semi-structured interview protocol was developed to learn more about how the providers in each profile view their roles and their responsibilities in caring for children. The protocol included 12 questions and accompanying prompts related to role perception, motivation for providing care, relationships with children and families, challenges they face, and experiences engaging with outside systems. Providers were also asked to describe their educational practices with children in order to more fully explore the variation in educational practices identified in Study 1 and Study 2. The interviewer asked providers how they decide what they are going to do with children each day, and then prompted them to describe a recent learning activity they had implemented, if and how they use curricula, and when they plan. The interview protocol is included in Appendix B. The interview questions were piloted with a newly licensed HBCC provider who was not eligible for the sample, and minor adjustments were made to the questions after the pilot to improve clarity.

Field Notes

Qualitative field notes were recorded during the program observation. These were used to supplement the information gathered through the CCAT-R. Because the CCAT-R is a focal child measure, the field notes provided additional contextual information and descriptions of the other children's experiences. They also served to capture the observer's impressions about the provider, children, and environment (Kleinman & Coop, 1993). These field notes helped the researcher connect the CCAT-R item frequencies for the focal child and provider with the provider's interview and survey responses (Merriam, 1988). Field notes followed a semi-structured protocol, which is included in Appendix E.

Data Collection Procedures

Each provider selected to participate was contacted by telephone and invited to participate in the study. Providers who consented scheduled two visits with a data collector. The lead author and a graduate research assistant conducted all recruitment and data collection for the study. If a provider declined to participate, the researchers contacted the next provider on the list within that profile. Researchers attempted to contact a total of 60 providers. Of those, 15 agreed to participate, which represents a participation rate of 25%. Among the remaining 45 providers, 15 were not interested, 17 could not be reached, and 13 were not eligible because they were no longer caring for children. The lowest participation rate was among unlicensed relationship-based providers. The data collectors attempted to contact 26 relationship-based providers, but 12 had non-working phone numbers and 10 were no longer caring for children from birth to five. One relationship-based provider declined participation, and the remaining three participated.

The author and a graduate research assistant served as data collectors. Each participating provider received two visits from a data collector. These visits were scheduled at a time convenient for the provider during the initial telephone contact. The first visit occurred while the provider was not responsible for supervising children, typically at nap time or in the evening. During this visit, the provider completed the consent form and participated in the interview, which was audiorecorded. The data collector left the FPTRQ for the provider to complete before the next visit, which was scheduled approximately one week later.

The second visit lasted approximately two hours and occurred while the provider was caring for children. This visit typically occurred in the morning. However, two relationship-based providers cared for children only in the afternoon

and evening, and therefore, their observation occurred in the afternoon. The data collector first randomly selected the focal child from the children present using a random number generator application. She then completed the CCAT-R observation, including six cycles of time sampling for the Action/Communication Snapshot and Summary Behavior Checklist, as well as the Health and Safety and Materials checklist. The data collector closely followed the focal child and caregiver both indoors and outdoors to hear their interactions and observe their behavior. If the focal child and caregiver split up, the data collector stayed with the focal child. The data collector recorded field notes between each CCAT-R cycle and at the end of the observation. Participating providers received a $50 gift card and three children's books as an incentive for participation. One relationship-based provider did not complete the second visit because she stopped caring for children unexpectedly. Therefore, 15 providers have interview data, and 14 have FPTRQ and CCAT-R data.

The author and graduate research assistant received training to reliability on the CCAT-R from the first author of the measure, beginning with coding a series of videos and then completing two live observations. They were trained to the recommended inter-rater reliability standard for the measure of 80% exact match with the first author of the measure for all items across six observation cycles prior to the start of data collection (Porter et al., 2006). Additionally, the data collectors double-coded one observation at the midpoint of data collection to check inter-rater reliability and met the reliability standard.

Analysis

Quantitative data from the CCAT-R was analyzed descriptively to determine mean scores for providers in each profile using the factor scoring guidelines from the

measure. Overall frequencies of individual items were also calculated, and composite variables were created for the frequency of any caregiver talk to the focal child and any focal child talk. This is similar to the analytic approach used with the CCAT-R in the Early Head Start Home Visiting Pilot Evaluation (Paulsell et al., 2006). A percentage score was also calculated for the Materials and Health and Safety checklists based on the percentage of items scored yes.

Audio recordings of qualitative interviews were transcribed verbatim, and each participant was assigned a pseudonym. Transcripts were double-checked for accuracy and imported into NVivo 11 qualitative software for analysis (QRS International, 2015). The transcripts were read and analyzed separately by the primary author and a research assistant experienced in conducting research with HBCC providers. All transcripts were first read without coding in order to gain familiarity with each providers' responses and to begin identifying the process or organizing key ideas (Creswell, 2013).

Data analysis was guided by principles from grounded theory (Glaser & Strauss, 1967). Transcripts were first examined using an inductive method of open coding to identify codes from participants' responses (Strauss & Corbin, 1990), specifically focusing on the data related to how providers identify and describe their roles and data related to the survey questions providers responded to in Study 2. The three procedural steps outlined by Gibbs (2007) were followed to ensure the data was coded reliably (Creswell, 2013). These include double-checking all coded transcripts in order to identify any mistakes in codes, frequently comparing coded data with the original definitions for codes to avoid drift, and cross-checking coding with a second coder to ensure agreement. The coders followed an iterative process of identifying

initial codes separately, discussing and defining those codes together, revising codes, and recoding transcripts. They met to discuss any differences in coding and reached consensus (Creswell, 2013). As new codes were identified, they were applied to all transcripts (Corbin & Strauss, 2015).

To ensure the validity of the qualitative analysis, including the credibility and trustworthiness of the findings (Lincoln & Guba, 1985), several of the procedures suggested by Creswell (2003) were used, including triangulation, the use of rich, thick descriptions, and peer debriefing. Triangulation of multiple data sources was used to limit researcher bias (Creswell, 2013; Patton, 2002). In order to reduce bias from the researcher and aid transferability, direct quotes from the participants were used in the analysis and detailed case studies descriptions were written (Creswell, 2013).

Coding related to how providers view and manage their roles resulted in 35 codes applied across the 15 interview transcripts. The codes were then aggregated into 11 categories. The categories were compared across the five profiles to examine similarities and differences in role perception by profile. Additionally, 12 codes were created related to the survey questions specifically focused on educational practices and professional engagement. Because a limitation of the profiles in Study 1 and Study 2 is that they were developed based only upon providers' self-report of their practices using closed-ended questions, providers' responses to interview questions related to their educational practices were coded based on the frequency of the practices and the degree to which the activities providers described seemed to focus on learning and represent prior planning. These codes were developed after reading the transcripts and focused on curriculum use, implementation of learning activities, and time spent planning. Based upon their interview responses, each participant was coded

as 1) implementing or not implementing a curriculum, 2) not implementing planned learning activities, occasionally implementing planned activities that may or may not have a learning focus, or regularly implementing learning activities, and 3) no time spent planning, irregular or occasional time spent planning, or regular time spent planning.

Mixed methods analyses were performed within and across the profiles, similar to within-case and across-case approaches that are commonly used in qualitative analysis (Stake, 1995). Qualitative interview data and quantitative data from the provider survey, CCAT-R, and FPTRQ were merged using a matrix to examine the relationship between providers' role perceptions and the quality of care they provide to children and families (Creswell & Plano Clark, 2011).

From the 15 providers, one or two providers from each profile were selected based upon their survey and interview responses because they seemed to represent the average responses of providers in that profile or to highlight divergent responses within a profile (Yin, 2013). Two case studies from both the Informal and Somewhat Formal profiles are included because of the variation among providers in these groups. A case study of seven providers in total was written, integrating information from the survey, interview, CCAT-R, FPTRQ, and field notes.

Results

Qualitative results regarding providers' role perceptions are presented first, followed by quantitative results of the FPTRQ and CCAT-R measures. Finally, mixed methods analyses are presented to explore how role perception, quality, and educational practices differ by profile.

How Providers View Their Roles

The providers interviewed were all able to identify various roles that they held. Table 14 shows the 11 separate roles providers identified in response to this interview question: “It’s often said that home child care providers wear many hats or have many roles. What are some of the different roles you have?” The table shows how many participants identified each role, the definition coders developed, and a representative quote that illustrates each the role.

Table 14 Categories of Roles Identified by Providers

Role	Number of Participants	Definition	Provider Quote
Cook	13	Providing meals and supporting nutrition	“In-home family day care providers, we have to cook all the meals and serve them ourselves. Where at the centers, they have someone else cooking.”
Extension of the Child’s Family	11	Acting as a parent figure or extended family member, treating children as their own	“A lot of it I feel like is similar to being a stay-at-home mom. I'm just a stay-at-home mom to six, and I happen to send some of them home at the end of the day.”
Nurturer	10	Showing children love and affection, supporting their social emotional development	“I think if you nurture a child, then they just automatically learn from you because they're comfortable with you.”
Teacher	10	Formally teaching children	“I would say that I'm a teacher, unofficially.”
Nurse	10	Supporting children’s health and providing care when sick	“You have to be a doctor when they get sick. …Sometimes I can notice more things than the parents, like when they're wheezing or when they're just not themselves.”

Table 14 continued

Janitor	9	Cleaning and maintaining the indoor and outdoor spaces children use	“When you have the young ones, you're constantly cleaning. The cleaning during daycare and the cleaning after daycare, it just takes so much of your energy, and so much time.”
Support to Parents	7	Supporting parents through providing additional services and emotional support	“Most of the time when I see families that struggle, I try to get help for them. I had a family last year, they were struggling with food and clothing and I searched for churches around that can help her with food.”
Administrator/ Business Owner	6	Running the business, handling administrative tasks, supervising staff	“I'm the administrator, I have to keep the books up.”
Taxi	6	Transporting children	“Just from waking up, some kids I will have to pick up from their home, bring them back there, then you have to put children on the bus to go to Head Start, children on the bus to go to elementary school, come back.”
Custodial Caregiver	6	Keeping children safe and providing custodial care	“To keep a steady eye on a child, on her. That's the most important.”
Disciplinarian	5	Ensuring children follow rules and learn about good behavior	“I'm the enforcer, I enforce. I'm the rule giver.”
Activity Coordinator	3	Providing activities and materials for children not specifically related to education	“It's a lot. I'm the planner, I'm the activities person. I plan trips.”

In addition to coding providers' responses to the interview question specifically asking them to identify their roles, coders examined the entire interview transcript for evidence of the roles described above. A category called "Functional Roles" was created from the following codes: Cook, Disciplinarian, Janitor, Nurse, Taxi, and Functional Caregiver. Fourteen providers identified at least one functional role they held, and cook was the most commonly mentioned functional role. Providing home-cooked meals was something that the providers saw as important to their work, seven though they also discussed how this could be challenging to manage with their other roles. For example, one provider said, "I have had a lot of parents say that they like the menus that are done here because more of the food is homemade, it's not processed."

Thirteen providers described being an extension of the child's family at some point during the interview. One provider said, "Especially if they're doing it in their home, you got to look at the kids as your own. Because if you're just looking at them as clients or day care kids, you're not going to have quite the connection with them than you are as if you're looking at them as they're your own kid." They often discussed this role as something that made them unique compared to center-based providers.

All providers identified with the administrator or business owner role in some way during the interview, but no providers labeled this as their most important role. They discussed keeping up with their expenses and budget, collecting payment from parents, managing their attendance records, and supervising paid assistants. The unlicensed relationship-based providers talked about completing paperwork to ensure they received subsidy payments.

Ten providers discussed their role as that of a nurturer for the children, and many identified this as the most important of their multiple roles. Being a nurturer was often mentioned in the context of other roles, for example, “If you don't clean up, they still need to be nurtured. If you don't cook, they still need to be nurtured. If you don't enforce anything, they still need to be nurtured.”

Providing Support to Parents

Although seven providers directly identified Support to Parents as one of their roles, all fifteen of the providers described ways in which they provide support to parents. They seem to do this in a variety of ways. Nine providers talked about connecting families to resources. These include resources to help the child, like developmental screening, as well as resources to help the parent, like connecting parents to employment opportunities. They discussed giving parents information about community resources as well as going with the parent to the physical location of resource in the community. One provider shared, “They have an association for parents with kids of ADD. It's a resource, and I don't know how I heard about it. I took one of my parents.” Providers almost always discussed providing resources on an individual basis based on what the provider knows about the family and their needs rather than offering the same resource to all families. For example, one provider said:

> I provide different resources if I notice that a child could benefit. For instance, one of the little girls I take care of, she's four. She'll be going to kindergarten next year. There's a program where they can go in the evenings and learn and feel a little bit more comfortable in a school environment. So I've given her mom information about that so that she can, if she decides that she wants to do that. It all depends on an individual basis like what type of resources I will suggest.

Providers also identified with the role of parent educator. Six providers discussed ways they try to educate parents, both to help them learn more about child development and to help them navigate outside systems, such as public education, the health care system, and higher education. For example, one provider discussed sharing information about how to select an elementary school: “The parents, they always come to me and ask me what do I think is the best next move for their child. Because I am in school and I'm constantly learning about the field, I think I'm able to give them some pretty accurate answers.” Six providers also saw it as their role to act as a counselor or therapist for the parents. One provider said, “A lot of parents come in and they confide in me. I almost feel like I'm an adult counselor as well because I give them my opinion.” They described listening to parents share frustrations without judgement and sometimes becoming involved in both sides of a family’s conflict or acting as a marriage counselor.

Providers described providing financial help to families, caring for children outside of their normal work schedule, and transporting children as other aspects of their role as a family supporter. Five providers discussed reducing fees or not charging families when they were going through challenging financial circumstances, even though this took away from their income or their own family did not approve. For example, one provider said, “I should maybe not do this, but at times when they need financial help, sometimes I'm that too. Can't tell my husband that though, but I do do it.” Another shared, “I give them money. It's just like, I'm not a good business person. It seems like everything I make, I give it away." They also shared about giving families food or clothing: “I had to go buy the supplies for her to take home, because they didn't have the supplies. I just went.” This occurred with families that were and

were not related to the provider. Six providers discussed changing their schedule to meet families' needs, including caring for children earlier or later than typical, staying open when sick so parents could still work, and caring for children overnight and on weekends. There did not seem to be notable differences in how providers support parents across profiles.

Managing Multiple Roles

In additional the roles providers identified, they also discussed strategies they use to manage their multiple roles and the ways in which managing their roles can be challenging. Eleven providers discussed the challenges of managing roles. They shared that managing roles can be challenging because they are the only adult present, because managing roles is coupled with the added challenges of working with multi-age children, and because their work is emotionally draining. The most common challenge mentioned was balancing the long hours and multiple responsibilities of running a HBCC with their own family and personal life. For example, "Sometimes it's challenging especially with my own family, trying to transition from one to the other and making sure that I have that balance between the two so no one feels left out or one's taking over the other, so to speak. So it can be challenging doing it."

Providers also shared the strategies they use to effectively manage their roles. The most commonly mentioned strategy was getting extra help, either through a paid assistant or a family member. Five providers talked about this. One provider shared how she relied on her husband to provide her with short breaks: "Some days I would just call him and ask him to come home on lunch, because I just needed a ten-minute walk around the block. Then I could come back and the afternoon was great, but if I didn't get that I was going to lose my mind." Another described how having a paid

assistant made her feel less isolated in addition to helping her manage multiple roles: “I know a lot of the times when I was just at the home daycare, especially before I had help, it gets kind of lonely because you don't have much adult interaction.”

Additional strategies for managing roles included seeking PD in areas where they wanted to improve, having a network of peers for support, and preparing outside of work hours, though providers acknowledged that this took away from their personal time. For example, one provider shared how preparing outside work hours allowed her to focus on her role as a teacher, saying, “I’m trying to plan ahead and prepare as much stuff ahead of time, maybe after hours, so that when I’m here during the day, those kids are the focus.” Overall though, the concept of balancing multiple roles seemed fairly second-nature to the providers. Five providers made comments like, “It goes with the territory. That's home daycare,” and “It's a way of life to me.”

Quality Among Home-Based Providers

Quality in HBCC was measured using the FPTRQ, which focuses on the quality of relationships with families, and the CCAT-R, which focuses on the interactions and environment that the child experiences in the HBCC setting.

Relationships with Families

The FPTRQ is a recent measure, and the authors have not defined thresholds for high and low scores. However, the total and subscale scores among this sample are comparable to the mean scores among the 94 providers sampled in the FPTRQ field test (Kim et al., 2015). The average total score for this sample was 169.9, and the average score for licensed FCC providers in the field test was 165.3. Descriptive

statistics for the total and subscale scores on the FPTRQ are shown in Table 15, and descriptive statistics for the individual FPRTQ items are presented in Table 16.

Table 15 Descriptive Statistics for Total and Subscale Scores on the FPTRQ

	Mean	SD	Min	Max
Total Score	169.9	11.8	148	189
Construct: Knowledge	38.4	6.3	23	48
Construct: Practices	77.0	8.5	63	91
Subscale: Collaboration	51.7	6.1	42	60
Subscale: Responsiveness	13.0	1.8	10	16
Subscale: Communication	12.3	3.2	6	16
Construct: Attitudes	54.5	3.9	48	62
Subscale: Commitment	14.4	1.9	11	16
Subscale: Openness to Change	28.8	2.4	24	32
Subscale: Respect	11.4	2.7	7	15

Note: $N = 14$

Table 16 Descriptive Statistics for FPTRQ Items

Item Description	Mean	SD
1. Since September, how often have you met with or talked to parents about the following regarding *their child*?		
a. Child's experiences in the education and care setting	3.93	0.27
b. Parents about their child's abilities	3.57	0.65
c. Parents about their child's learning	3.71	0.61
d. Problems their child is having in the education and care setting	3.29	0.91
e. What to expect at each stage of their child's development	3.14	0.86
f. How their child is progressing towards developmental milestones	3.50	0.65
g. Goals parents have for their child	3.00	1.04
h. How their child is progressing towards the parents' goals	3.07	1.14
2. Since September, how often have you met with or talked to parents about the following regarding *the education and care their children receive*?		

Table 16 continued

Item Description	Mean	SD
a. Your expectations for the children in your care	3.57	0.51
b. Rules you have for children in your care	3.21	0.80
c. How you feel about the education and care you provide	3.32	0.77
3. For how many children and their families do you know the following?		
a. Children have siblings	3.86	0.53
b. Other adult relatives living in their households	3.50	0.94
c. Parents' schedules	3.36	0.63
d. Marital status of children's parents	3.43	1.02
e. Parenting styles of children's parents	3.14	1.03
f. Employment status of children's parents	3.71	0.83
g. Financial situation	2.36	1.01
h. Role that faith and religion play in children's household	3.07	0.92
i. Culture and values	3.14	0.77
j. Encourage their children's learning outside education and care	2.93	0.73
k. How parents discipline their child	3.07	0.83
l. Changes happening at home	2.79	0.80
4. Since September, how often have you been able to do the following?		
a. Share information with parents about their children's day	3.93	0.27
b. Offer parents books and materials on parenting	2.71	0.91
c. Suggest activities for parents and children to do together	3.00	0.88
5. How often are you able to do the following?		
a. Answer parent's questions when they come up	3.93	0.27
b. Support their child's learning and development at home	3.50	0.65
c. Set goals with parents for their child	3.31	0.85
d. Offer parents ideas or suggestions about parenting	3.07	1.07
e. Receive feedback about your performance	3.36	0.74
6. Please indicate how much you agree or disagree with each of these statements.		
a. New and better ways to teach and care for children	3.71	0.47
b. Feedback on my care and teaching practices	3.64	0.50
c. Make decisions about their children's education and care	3.71	0.47
d. Ultimate decision makers for the care and education of children	3.79	0.43
7. When planning activities for children in your program, how often are you able to take into account the following?		
a. Take into account information parents share about their children	3.57	0.65

Table 16 continued

Item Description	Mean	SD
b. Take into account families' varies and cultures	3.32	0.72
8. Please indicate how much you agree or disagree with each of these statements.		
a. Support the way parents raise their children	2.21	0.97
b. Support the way parents discipline their children	2.57	0.76
c. Support the goals parents have for their children	1.93	0.73
d. Work with parents who do not share my beliefs	1.86	0.66
9. Please indicate how much you agree or disagree with the following statements.		
a. Care for children because I enjoy it	3.79	0.43
b. See job as just a paycheck	1.50	0.65
c. Care for children because I like being around children	3.71	0.47
d. If found something else to do to make a living I would	1.64	0.93
10. Part of my job is to		
a. Help families get services available in the community	3.43	0.65
b. Offer parents information about community events	3.64	0.50
c. Respond to issues or questions outside of normal care hours	3.29	0.47
d. Change my work schedule in response to parents' work	2.64	0.93
e. Learn new ways to teach and care for children	3.86	0.36
f. Change activities offered to children in response to feedback	3.14	0.66
	Frequency	
11. In the last ten years, have you received training or coursework on how to recognize signs of:		
a. Developmental delays in children	92.9%	
b. Child abuse and neglect	100.0%	
c. Domestic violence	64.3%	
d. Substance abuse	57.1%	
e. Depression or mental health issues in parents	64.3%	
f. Hunger	64.3%	
12. Since September, have you personally helped families in any of the following ways:		
a. Encourage families to seek or receive services	57.1%	
b. Made appointments or arrangements for families	28.6%	
c. Helped families find services they need	57.1%	

Note: All item means have a maximum score of 4. For items 1, 2, 4, 5, and 7, 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Very often; for item 3, 1 = None, 2 = Some, 3 = Most, 4 = All; for items 6, 8, 9, and 10, 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree

Thirteen of the items were rated a three or four by all providers, including items about regularly sharing information with parents about children's activities and answering parents' questions as they came up. Results suggest that providers were least likely to talk to parents about their culture, values, and religion. One of the FPTRQ questions specifically asks providers to rate how much they believe a list of activities are part of their job on a scale of one (strongly disagree) to four (strongly agree). Providers agreed most that learning new ways to teach and care for children (M = 3.86) and offering parents information about community events (M = 3.64) were part of their job. They agreed less with statements about changing their schedule to meet parents' needs (M = 2.64) and changing activities they offer in response to parent feedback (M = 3.14).

Quality of Provider-Child Interactions

Both factor scores and frequencies were examined for the CCAT-R. The CCAT-R manual defines scoring thresholds as poor, acceptable, or good, and these thresholds are different depending on the factor and whether the focal child is under three or three and older. All providers scored below the acceptable score for the Nurturing factor (below 7 for children under 3 and below 3 for children 3 and older). This consists of three items from the Summary Behavior Checklist items relating to physical affection and one item about the caregiver doing an activity that excludes the focal child. On the Engagement factor, five providers scored in the poor range (less than 47 for children under 3 and less than 44 for children 3 and older), five in the acceptable range, and four in the good range (above 57 for children under 3 and above 56.5 for children under 3). In Bi-Directional communication, seven providers earned poor scores (below 79 for children under 3 and below 77 for children 3 and older), five

earned acceptable scores, and two had good scores (above 107.4 for children under 3 and above 108.5 for children 3 and older). In Uni-Directional Communication, six had poor scores (below 48.5 for children under 3 and below 39.5 for children 3 and older), six had acceptable scores, and two had high scores (above 68.5 for children under 3 and above 61 for children 3 and older). Two providers had high scores across the three factors (excluding nurturing), and five providers had poor scores in all factors. Descriptive statistics for the construct scores and checklist total scores, as well as the percentage of the sample scoring at the low, acceptable, and high levels, are displayed in Table 17.

Correlations between the FPTRQ total score and construct scores and CCAT-R measure components are displayed in Table 18. Scores on the nurturing factor were not significantly correlated with the other factors, likely due to their very low scores. The other factors were highly correlated with one another. One the reason for these high correlations is that some of the same items from the Action/Communication Snapshot and Summary Behavior Checklist contribute to all three of these factors.

Table 17 Descriptive Statistics for Construct and Checklist Scores on the CCAT-R

					Threshold Scores		
	Mean	SD	Min	Max	% Low	% Acceptable	% High
Caregiving Nurturing	0.4	1.4	-2.0	3.0	100%	0%	0%
Caregiver Engagement in Activity with Child	50.6	16.7	23.5	86.5	35.7%	35.7%	28.6%
Bidirectional Verbal Communication	67.1	27.5	28.5	118.5	50.0%	35.7%	14.3%
Unidirectional Verbal Communication	46.5	18.5	15.0	90.5	42.9%	42.9%	14.3%
Materials Checklist	75.5%	20.9	26.7%	73.3%			
Health and Safety Checklist	86.3%	11.9	63.2%	100%			

Note: $N = 14$

Table 18 Pearson Correlations for FPTRQ and CCAT-R Measure Components

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. FPTRQ Total Score	-									
2. FPTRQ Knowledge Construct	.602*	-								
3. FPTRQ Practices Construct	.841**	.207	-							
4. FPTRQ Attitudes Construct	.212	-.252	.023	-						
5. CCAT-R Safety Checklist	.039	-.190	.189	.013	-					
6. CCAT-R Materials Checklist	-.414	-.412	-.197	-.155	.575*	-				
7. CCAT-R Nurturing	-.118	-.309	-.033	.216	.438	.213	-			
8. CCAT-R Engagement	.257	.033	.400	-.151	.357	.181	.102	-		
9. CCAT-R Bi-directional Communication	.062	-.156	.270	-.149	.143	.017	.216	.890**	-	
10. CCAT-R Uni-directional Communication	.110	-.011	.196	-.076	.135	.069	.124	.876**	.928**	-

Note: $N = 14$; $^{*}p < .05$, $^{**}p < .01$

The frequency of items scored yes in the Health and Safety and Materials checklists were also examined. Scores on the Health and Safety checklist ranged from 63.2%-100%, and scores on the Materials checklist ranged from 26.7%-100%. The scores on the checklists were moderately correlated with one another. All providers had a booster or high chair if an infant was present and at least one type of fine motor material. Over 90% had adult-sized seating, a place for children to be alone, an art material, and books. The materials that were least often present include a mobile over a crib or playpen, materials for sand and water play, toys that let children work their muscles, and toys with wheels on which children can ride. On the Health and Safety checklist, all providers had a clean and safe indoor space, a smoke detector, no peeling paint, enough light by which to read, a comfortable temperature, a quiet area for use when children are sick, and extra clothes. The only item with a mean below 50% related to handwashing before food preparation (M = 25%), although this was only scored in eight observations. It was scored "not applicable" in the remaining six observations.

In addition to examining construct scores and thresholds, the frequency of observation items and composite items from the Action/Communication Snapshot related to caregiver and child talk, engagement, and caregiver nurturing behaviors were also examined. Descriptive statistics are presented in Table 19. Item frequencies are compared to those reported in the evaluation of Early Head Start Enhanced Home Visiting Pilot (EHSEHVP) Evaluation (Paulsell et al., 2006) to provide some reference for the magnitude of these frequencies. In this study, 74 HBCC providers were observed using the CCAT-R. The age of the focal children varied, although more focal children were under age three than in the sample for the current study. Most of the 74

providers were unlicensed and caring for related children, although some were licensed, and approximately one-third cared for only one child, with some caring for more than eight children. Therefore, there are some notable differences between the samples for this study and the EHSEHVP evaluation sample.

Table 19 Descriptive Statistics for CCAT-R Action/Communication Snapshot

Item	*M* (SD)	Range	EHSEHVP *M* (SD)
Caregiver Language			
Any Caregiver Talk to Child	47.3% (20.0)	20.0-88.3	69.2 (23.5)
Responds to Child Language or Vocalization	28.6% (21.9)	2.8-66.7	29.3 (21.8)
Requests Child Language	25.0% (17.0)	2.8-63.9	Not reported
Verbally Directs Child	13.9% (10.3)	2.8-41.7	22.9 (14.9)
Repeats or Builds on What Child Says	8.75% (10.3)	0-36.1	9.8 (8.7)
Names or Labels	5.0% (6.6)	0-25.0	14.9 (13.0)
Other Talk	36.1% (18.5)	5.6-69.4	47.1 (23.8)
Child Language			
Any Child Talk or Vocalization	60.5% (21.0)	25.0-88.3	59.5 (21.9)
Talk to Caregiver	35.3% (24.2)	2.8-83.3	46.7 (25.2)
Self-Talk	15.9% (13.0)	0-41.7	10.6 (9.2)
Talk to Other Children or Adults	13.5% (12.9)	0-44.4	11.0 (12.6)
Caregiver Engagement			
Caregiver Does Activity with Child	54.4% (21.2)	19.4-88.9	Not reported
Caregiver Does Not Attend to Child	52.8% (22.2)	13.9-86.1	Not reported
Focal Child Attention			
Child Attends to Caregiver	59.9% (19.5)	16.7-91.7	75.1 (22.9)
Child Attends to Materials	79.0% (22.2)	13.9-100	84.4 (17.0)
Child Attends to TV	6.2% (15.2)	0-47.2	8.4 (14.7)
Child Attends to Other Children	39.3% (19.5)	5.6-75.0	19.2 (26.4)
Child Attends to Other Adults	5.2% (8.8)	0-27.8	13.5 (21.2)

Note: $N = 14$

Results show that HBCC providers talked to the focal children during 47.3% of the intervals. This ranged from 20.0% of the intervals in one observation to 88.3% in another. The mean and standard deviation in the EHSEHVP were 69.2% and 23.5%. “Other talk,” which is talk that did not fall into any of the identified language categories, and requesting child language were the most common form of talk observed. According to the CCAT-R manual, statements like, “Good job,” “Be careful,” and “Your mom will be coming soon,” are examples of other talk (Porter et al., 2006). Naming or labeling objects was the least common.

The focal child (FC) talked during 60.5% of the intervals; this included self-talk, talk to the provider or another adult, and talk to a peer. This was comparable to the amount of child talk observed in the EHSEHVP. Caregivers did an activity with the focal child during 54.4% of the intervals. This varied widely across programs, however, from 19.4% of intervals to 88.9%. Across the 14 HBCC programs, the FC were frequently engaged with materials (79.0%), and television use was not widespread (6.2%). FC in this study were less frequently engaged with the caregiver than in the EHSEHVP.

Data from the Summary Behavior Checklist were also summarized, and these results are presented in Table 20. These items were scored six times in each program. The predominant caregiver tone was engaged less than half of the time, and there were low frequencies of provider irritation or withdrawn demeanor toward the FC in most programs. However, in one HBCC program, the provider was irritated or withdrawn 66.7% of the time. Providers engaged in a range of activities, most frequently encouraging concept learning (M = 32.1%). There were no instances of providers encouraging experimentation and very few of providers doing a musical or rhythmic

activity (*M* = 2.4%). As indicated by the Nurturing construct scores, providers infrequently engaged in behaviors like kissing, hugging, holding, and comforting the FC. The Summary Behavior Checklist also includes some negative caregiver behaviors. These were infrequently observed on average, but this varied from 0-50% of the cycles, with two providers having a mean of 50%.

Table 20 Descriptive Statistics for CCAT-R Summary Behavior Checklist

Item	Sample		EHSEHVP
	M (SD)	Range	*M* (SD)
Caregiver Engagement			
Predominant Caregiver Tone is Engaged	42.9% (33.8)	0-100	85.3 (22.7)
Predominant Caregiver Tone is Not Engaged	52.4% (34.5)	0-100	12.8 (21.6)
Predominant Caregiver Tone is Withdrawn	4.7% (17.8)	0-66.7	Not reported
Caregiver Activities			
Encourages Concept Learning	32.1% (33.6)	0-100	40.6 (33.6)
Encourages Experimentation with Object	0%		34.4 (35.2)
Encourages Independence or Autonomy	21.4% (28.1)	0-83.3	31.6 (29.6)
Explains/Demonstrates Something	14.3% (23.4)	0-66.7	32.8 (29.4)
Uses Routines as Learning Opportunities	7.1% (15.6)	0-50.0	9.6 (16.2)
Tells Stories, Rhymes, Sings	21.4% (20.1)	0-66.7	11.6 (19.8)
Interacts with Books or Print Materials	15.5% (10.3)	0-33.3	15.3 (19.9)
Music or Rhythmic Activity	2.4% (6.1)	0-16.7	8.9 (17.2)
Does Own Activities Excluding Child	8.3% (14.2)	0-50.0	16.9 (25.7)
Caregiver Interactions			
Engages in Nurturing Behavior	11.9% (19.0)	0-66.7	50.5 (35.3)
Kisses or Hugs Child	2.4% (6.1)	0-16.7	12.9 (20.3)
Holds, Pats, or Touches Child	9.5% (19.3)	0-66.7	49.7 (35.6)
Comforts Child	1.2% (4.5)	0-16.7	10.3 (21.6)
Engages in Negative or Harsh Behavior	9.5% (19.3)	0-50	5.3 (13.9)
Restrains Child	4.8% (12.1)	0-50	0.7 (4.3)
Threatens, Criticizes, or Shames Child	4.8% (13.8)	0-50	0.5 (3.9)

Interpreting the item means in relation to the means from the EHSEHVP study indicate some clear areas of differences. HBCC providers in this sample spent less time engaged with the FC, did not name or label objects as frequently, engaged in fewer nurturing behaviors, and did not engage children in experimentation with objects than providers in the EHSEHVP evaluation study. Taken together, these findings suggest the quality of providers' interactions within this sample was low on average.

Roles and Quality in Each Profile

To answer the third research question, the data about providers' roles and quality, as well as the Study 2 survey responses, were analyzed by providers' most likely profile. Results on the FPTRQ and CCAT-R measures are presented first, followed by qualitative results about providers' role perceptions and educational practices.

Quality by Profile

Figure 4 displays FPTRQ construct and total scores by profile. Relationship-Based providers had the highest total FPTRQ scores, and Informal providers had slightly lower scores than providers in the other profiles. Generally, however, scores were fairly similar across profiles, suggesting HBCC providers do not differ in their communication and relationships with families by profile.

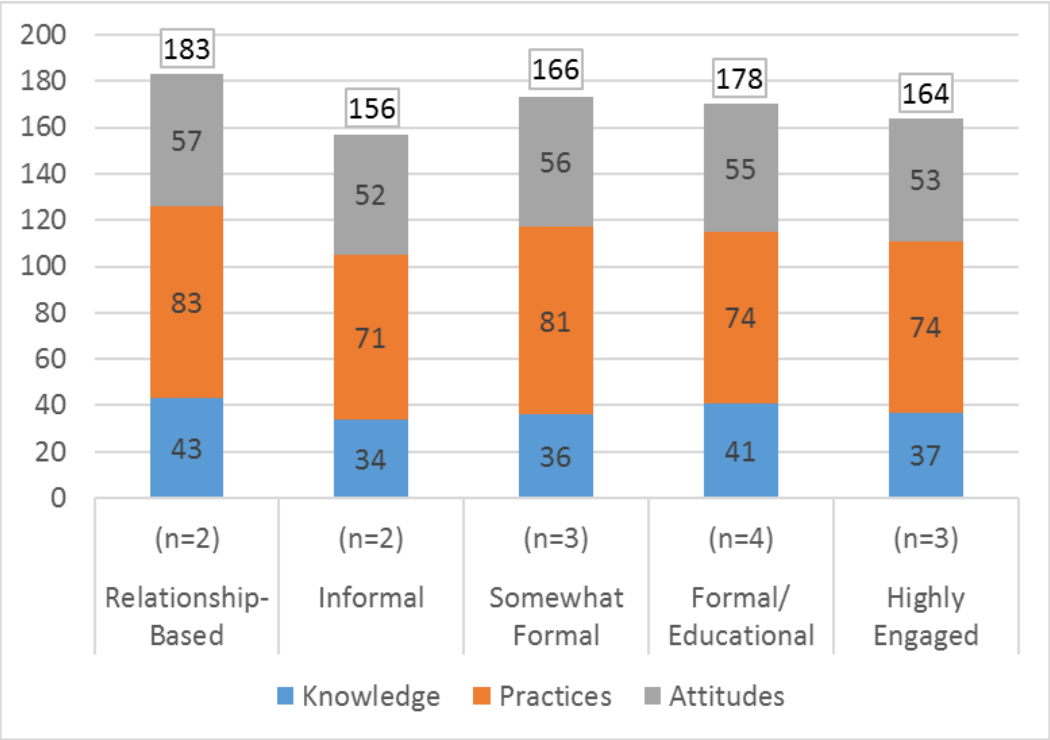

Figure 4 Family Provider/Teacher Relationship Quality Subscale and Total Scores by Profile

Table 21 displays scores on the components of the CCAT-R measure by profile, including the Health and Safety and Materials checklists and factor scores. Relationship-Based providers had the lowest scores on the CCAT-R Health and Safety and Materials checklists. CCAT-R factor scores were similar across profiles, although providers in the Somewhat Formal group had the lowest scores, excluding the Nurturing construct on which all groups had low scores. Highly Engaged providers had the highest scores in Engagement and Uni-Directional Communication.

Table 21 Descriptive Statistics for the CCAT-R Scores by Profile

	Relationship-Based (*n*=2)		Informal (*n*=2)		Somewhat Formal (*n*=3)		Formal/ Educational (*n*=4)		Highly Engaged (*n*=3)	
	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Health and Safety	70.5%	10.3	76.6%	16.4	95.7%	7.5	90.3%	4.2	88.5%	11.8
Materials	33.3%	9.4	83.3%	14.1	79.0%	12.4	76.7%	7.4	93.3%	11.5
Nurturing Factor	-1.0	1.4	0	0	0.7	1.2	1.0	2.3	0.3	0.6
Engagement Factor	48.5	4.2	47.3	33.6	38.8	11.6	53.9	2.8	61.5	26.1
Bi-Directional Communication Factor	75.0	34.6	81.3	52.7	50.8	31.6	73.9	17.1	59.5	25.7
Uni-Directional Communication Factor	41.8	18.0	46.0	24.0	33.7	16.8	50.5	5.8	57.3	31.0

In addition to examining scores on the CCAT-R, item frequencies by profile were also examined. These reveal additional differences between profiles. Figure 5 shows data from item frequencies related to caregiver actions. Negative interactions with the FC were the most prevalent in the Relationship-Based and Informal profiles. Highly Engaged providers engaged children in concept learning most frequently, and this was least common among Relationship-Based providers. Relationship-Based providers also had the highest rates of engaging in their own activities that excluded the FC. Providers in the Highly Engaged and Formal/Educational profiles most frequently demonstrated for children. Figure 6 shows item frequencies related to caregiver talk by profile. While Highly Engaged providers had similar rates of caregiver talk with other profiles, they had the highest rates of asking questions, labeling, and repeating, while Informal providers had the highest rates of other talk. Figure 7 shows item frequencies for FC behaviors. FC with Highly Engaged providers had the highest rates of engagement with materials. Children with Relationship-Based providers were the only ones who used television during the observation. Children with Informal providers had the lowest rates of engagement as well as the lowest frequencies of using materials.

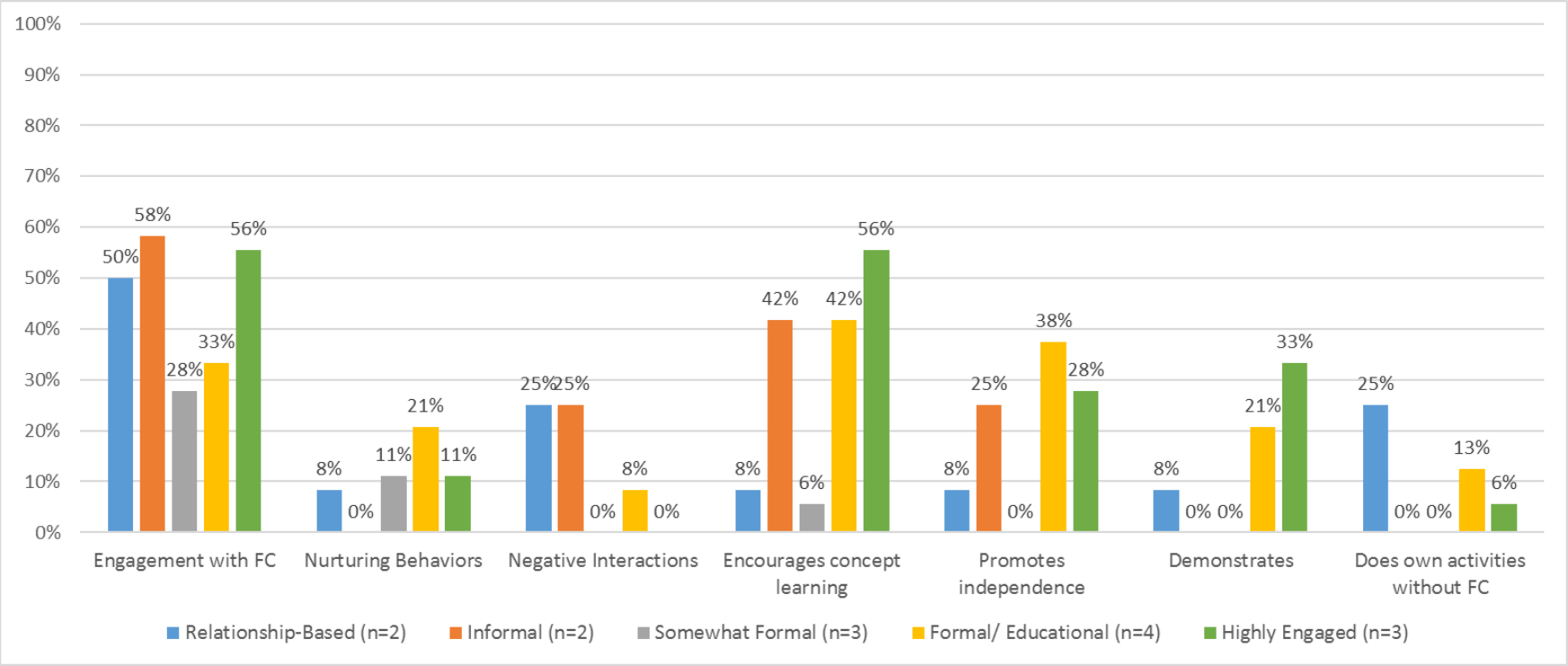

Figure 5 CCAT-R Item Frequencies by Profile for Caregiver Behaviors

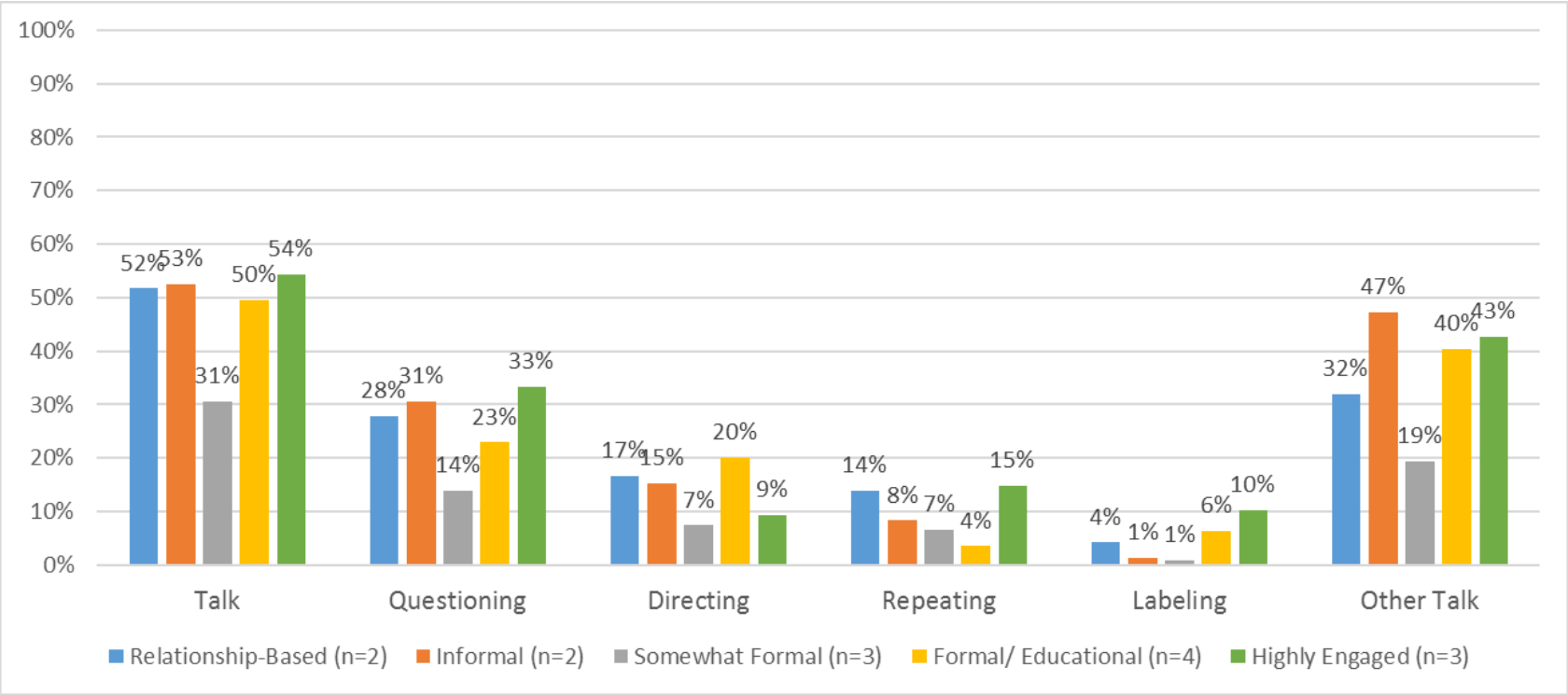

Figure 6 CCAT-R Item Frequencies by Profile for Types of Caregiver Talk

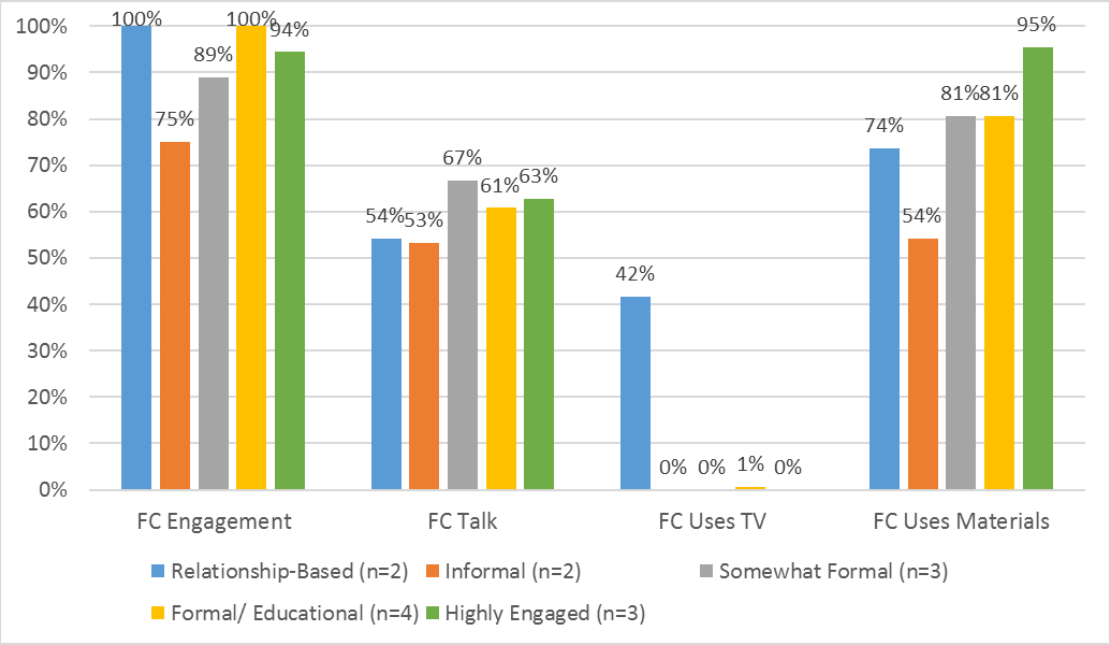

Figure 7 CCAT-R Item Frequencies by Profile for Focal Child Behaviors

Roles Identified by Profile

In order to examine provider roles by profile, roles were coded as present or not present in each interview. Table 22 shows the number of providers and Figure 8 show the percentage in each profile who identified with each role or role category. Providers in the Formal/Educational and Highly Engaged profiles identified as an administrator most frequently, and all of these providers also identified with the Nurturer role. Providers in the Relationship-Based and Informal groups had the lowest frequencies of identifying as a teacher and the highest frequencies of identifying with the role of a custodial caregiver who keeps children safe.

Table 22 Frequency of Roles Identified by Profile

	Relationship-Based (*n*=3)	Informal (*n*=2)	Somewhat Formal (*n*=3)	Formal/ Educational (*n*=4)	Highly Engaged (*n*=3)
Administrator/ Business Owner	0 of 3	1 of 2	1 of 3	2 of 4	2 of 3
Teacher	1 of 3	0 of 2	3 of 3	3 of 4	3 of 3
Activity Coordinator	0 of 3	1 of 2	2 of 3	0 of 4	0 of 3
Extension of the Family	2 of 3	1 of 2	3 of 3	2 of 4	3 of 3
Support to Parents	1 of 3	1 of 2	2 of 3	2 of 4	1 of 3
Nurturer	1 of 3	1 of 2	1 of 3	4 of 4	3 of 3
Custodial Caregiver	2 of 3	2 of 2	1 of 3	1 of 4	0 of 3
Functional Role	3 of 3	2 of 2	2 of 3	4 of 4	3 of 3

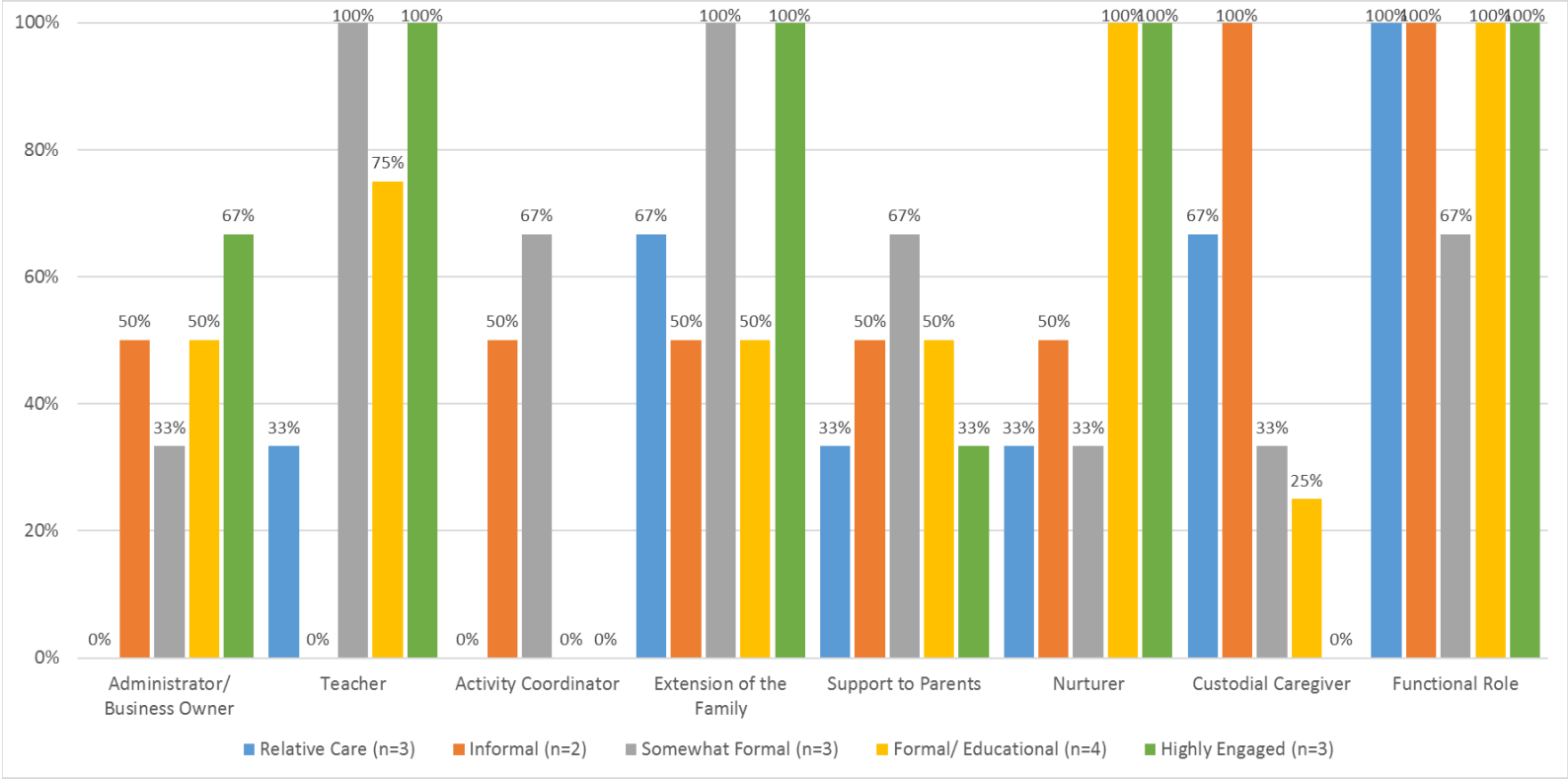

Figure 8 Role Identification by Profile

In total, providers identified between three and twelve roles. Providers in the more formalized profiles identified slightly more total roles than providers in the Relationship-Based (*M* = 6.0) and Informal profiles (*M* = 6.5), with Highly Engaged and Somewhat Formal providers identifying an average of 7.7 roles and Formal/Educational providers identifying 8.3 roles. There were also differences by profile as to whether providers identified a strategy they used to manage their multiple roles. All of the Formal/Educational providers and two of the three Highly Engaged providers identified a specific strategy, compared to one of three Somewhat Formal providers, one of two Informal providers, and none of the Relationship-Based providers.

Educational Practices by Profile

Providers' interview responses were coded for the intentionality and frequency of their educational practices, specifically related to curriculum, implementing learning activities, and planning time. Five providers reported not using a curriculum in the survey, but eight providers reported not using a curriculum in the interview. Providers who reported not using a curriculum made comments like, "I'm pretty unstructured, and I kind of like go by, I follow the kids," and, "Curriculums are ridiculously expensive, so that's not feasible for me."

In regards to implementing planned learning activities, six providers showed no evidence of doing this based on their interview responses and made comments like, "I don't ever know what I'm going to do until they get here." Three providers showed limited evidence of implementing learning activities. For example, they might do this irregularly or they might plan activities that do not have a clear learning objective. One provider in this category said, "Last week, I went on [a website] and I seen the

leaves. It was an easy craft… I've had the kids put different colored leaves on paper, and put eyes on them and the little soft puffs. What's it called? Pom-poms." This comment illustrates that the provider is implementing planned activities but does not appear to be intentionally focusing on how those activities will promote children's development. The remaining six providers were categorized as regularly implementing intentional learning activities. One provider in this category shared:

> Last week we did apples and orchards. We tasted different apples, we had four different kinds of apples. Before we cut them up, they looked at the apples, smelled the apples, felt the apples. We talked about sensory things. We cut them up so they could taste them and chart whether, who had what favorites…All along with apples, we did, like you roll a dice, for the math activity you roll a little dice and then you color in the matching number and it was like an apple tree with the different numbers.

This comment highlights that the provider spent time thinking about and planning an activity to do with children. In this specific example, the provider integrated one concept across multiple activities and included different content areas.

Four providers showed no evidence of spending time planning, seven providers reported regular designated time for planning activities, and four providers showed evidence of irregular planning time. For example, one provider said:

> It's not always a formal two-hour sit-down or anything. Some of it is just, I'll just get an idea driving, or in the shower, or whatever. I'll come up with it. Sometimes I will sit down and try to figure out, for a bigger project or something, I'll figure out what I need for supplies and stuff. Sometimes I'll do it at nap time.

In contrast, a provider coded as having regular planning time responded to when she usually plans by saying, "Nap time. On a regular day, 45 minutes."

These codes were used to examine the level of educational practices by profile, which are displayed in Table 23. The Relationship-Based and Informal providers do

not use a curriculum, show no evidence of implementing planned learning activities, and have no planning time or irregular planning time. The Somewhat Formal and Formal/Educational profiles had very similar educational practices based on their interview responses. Three of the four providers in the Formal/Educational profile were rated as having some evidence of implementing planned learning activities, while all of the Highly Engaged providers were rated as regularly implementing planned learning activities.

Table 23 Providers' Level of Educational Practices by Profile

	Relationship-Based (n=3)	Informal (n=2)	Somewhat Formal (n=3)	Formal/ Educational (n=4)	Highly Engaged (n=3)
Implementing Curriculum	0 of 3	0 of 2	2 of 3	2 of 4	3 of 3
Planned Learning Activities					
No evidence	3 of 3	2 of 2	1 of 3	0 of 4	0 of 3
Some	0 of 3	0 of 2	0 of 3	3 of 4	0 of 3
Regularly	0 of 3	0 of 2	2 of 3	1 of 4	3 of 3
Planning Time					
No evidence	2 of 3	1 of 2	1 of 3	0 of 4	0 of 3
Irregular	1 of 3	1 of 2	0 of 3	2 of 4	0 of 3
Regularly	0 of 3	0 of 2	2 of 3	2 of 4	3 of 3

Case Studies

To highlight the characteristics of providers in each profile, one or two providers from each profile were selected to represent their profile based upon their survey responses, as well as the interview and observation.

Relationship-Based

Sonja is an African American unlicensed provider that participates in the Relative Care project for unlicensed providers who receive child care subsidy. Sonja has some college credits in ECE. She cares for four children who are related to her, and two of them currently receive subsidy. She lives in an urban community with moderate poverty. Sonja does not use a curriculum or spend time planning children's activities, but she does try to incorporate some educational experiences for children: "We got certain times when we do colors and we point to things and we sound out things."

She describes her role as an extension of the family, a support to parents, a cook, a janitor, and a nurse. She sees her work supporting the parents of the children in her care as the most important part of her role. She works to educate the parents about how to care for their children. She talks about helping parents learn to discipline their children: "No, don't tell him he's bad. You're going to fix that in his head that he's bad. He's not bad. Tell him he's acting bad. I said, 'There's a different way to phrase things to let them know what you mean without saying it. Don't call him stupid.'"

Sonja provides extra meals to the children in her care and regularly cares for them overnight and on weekends. She is determined that none of the children in her extended family will attend center-based child care:

> It's not really about the money. It's just that I don't want to see my grandkids in a daycare center where I got to worry about them getting abused, where I got to worry about them getting hit, where I got to worry about the people that's supposed to be watching them is not watching them because I went through that.

Sonja received a 176 on the FPTRQ, which was in the third quartile for the sample. She reported that she does not talk to parents about the parents' goals for the children

or how children are progressing towards developmental milestones. She frequently talks to parents about her rules and expectations and knows about all of the families' culture, religion, and parenting styles.

In the CCAT-R, Sonja received moderate scores on Engagement, Uni-Directional Communication, and Bi-Directional Communication. She got a 63.2% on the Materials checklist and 26.7% on the Health and Safety checklist. Sonja was engaged with the focal child during 83.3% of the observation cycles and talked with the focal child during 70.0% of cycles. She had at least one negative interaction with the focal child during three of the six cycles, including threats to send the child to time out and tell his parent about misbehavior.

Four children were present during the observation. The children used television for much of the observation and were occasionally unsupervised, including outdoors. During the observation, a provider-directed reading time, free play, and snack occurred. She uses two rooms on the main floor of the house for child care. One room has a couch and television and two small chairs. The other room has some materials for children but no seating. Sonja was hands-on with the children for most of the observation and talked with them regularly.

Sonja seems to represent a typical Relationship-Based provider in many ways. She does not seem to view herself as a professional, and her educational practices with children are very informal. Her motivation for providing care relates to supporting her relatives, specifically the parents of the children in her care.

Informal

Two informal providers participated in the study, and although both met the criteria for the Informal profile, they had many differences. Both Karen and Joy are profiled below.

Karen

Karen is an African American FCC provider who has been licensed for eight years. She lives in a low-poverty community near an urban area. Before working in HBCC, she was a teacher at a child care center and worked in social work. She says she started caring for child in her home because, “My passion was to always have my own business, and it was with the children, because I felt that there was a need for good quality child care. I wanted to stay within a reasonable price range for the parents that wasn't able to afford child care.” She plans to retire in the next few years. She cares for six children, and she has a prior relationship with three of them. Two receive Purchase of Care (POC), Delaware’s child care subsidy. Karen is enrolled in the QRIS at a Level 2. She has been at Level 2 for four and a half years, and she says the materials and training she has received through the QRIS help her in her work with children. She does not meet with other providers.

She views her role as a custodial caregiver with a focus on keeping children safe. When asked to describe a challenge related to her roles, she describes her challenges managing behavior: “Yeah, trying to manage my projects with the older ones and trying to keep the babies settled and quiet; trying to keep them, basically trying to keep her from bothering them when they're doing their project time.”

Karen does not use a curriculum and reports that she does not plan activities or implement learning activities. She describes her process by saying, “I’m a hands on

person. If we want to paint, if [the idea to] paint come to me, we'll paint. If we want to go outside to collect leaves, we'll go do that. I just do. I just do." She sometimes uses the internet to get ideas about what to do with the children, but these do not seem to be intentionally focused on children's learning and development. For example, "I have an idea now that I would like to do with them, but I just can't find the right size marshmallows. The popsicle sticks that you stick on them, and the icing to let them stick it down into the icing with the different colors, that would be a paintbrush with the paint on it."

Karen describes having a good rapport with the families and referring families to outside services: "I talk to them about the children, and I try to help them if it's anything they need, like directing them to Purchase the Care if don't know anything about it…I had a paper maybe a month ago where the Red Cross was giving free smoke detectors. I try to keep them up to date with information as I get it. I share it with them." Her total score on the FPTRQ was a 148. This was in the lowest quartile for the sample. Based on her FPTRQ responses, Karen does not suggest activities for parents and children to do together, help parents set goals for their children, or offer parents materials or suggestions on parenting. She regularly shares information about children's days, answers parents questions, and talks to parents about her rules and expectations for children, as well as how they feel about the care she provides.

Karen received low scores in all of the CCAT-R constructs. She received a 65% on the Health and Safety checklist and a 73.3% on the Materials checklist. Items missed on the Health and Safety checklist included not covering outlets or securing electrical cords, not washing her hands before food preparation, containing a child for over half of the observation period, and being out of sight and hearing range of

children. During the observation, she was engaged with the focal child during 44.4% of the intervals and talked to the focal child during 41.7% of the intervals, most commonly with “other talk.” There were no instances of her repeating or extending what the focal child said or naming or labeling objects. She displayed negative behaviors and a withdrawn demeanor toward the focal child in half of the cycles, including using threats and restricting the child’s movement. The focal child showed low levels of engagement. He talked to himself, Karen, or other children during 26.7% of intervals and used materials during 13.9% of intervals.

A whole group circle time occurred for most of the observation followed by free play for some children and a required small group activity for other children. Five children were present: one infant, one toddler, and three preschoolers. The infant was confined in a crib throughout the whole observation. Karen uses a designated room on the bottom level of her home for child care that has a separate entrance. There are limited materials accessible to the children.

Joy

Joy is an African American FCC provider who has been licensed for 13 years. Joy has a bachelor’s degree in a field unrelated to ECE. She began caring for children after getting laid off:

> How I first started, because I hated my job. The commute just was really getting to me. One day I just happened to be riding on the road, and I saw a sign that says "[Name]’s Daycare" on my way to work. I'm like, "That's what I can do." I always loved kids. I had been doing foster care at the time, and I wanted to do more of it, and I needed to be available…It took me about ten years, planning and saving, trying to figure out what's the best time to leave…It turned out I was fortunate enough to get laid off. It was the perfect timing, and perfect opportunity. Since I had been planning it, I had to do it.

She plans to retire in five to ten years. Currently, she has six children enrolled. Two of them have a prior relationship to her, and five receive subsidy. She lives in a low-poverty suburban community. She participates in the QRIS at a Level 3. She enjoys the QRIS and specifically the one-on-one support she receives from her technical assistant:

> I love my former TA. Although me and her, we fought over certain things. I mean I could disagree, and she could disagree and tell me the reason why. It took her a while to get me to do different things. I'm like, "Oh okay, now I understand." I told her what my weaknesses are, my curriculum is my weakness. She's going to help me with the layout of the room, I said I'm going to redo the room. I really wasn't into centers, setting up little centers, because my kids are wild, and they like to flip and everything. I understand the reason for it. She's going to help me with that, and then set up my backyard.

Joy does not use a curriculum or plan children's activities. She says, "I don't really believe in curriculum…If they're interested in this, I don't want to have to say, 'Oh well, we're doing this today.' There's just so much that just happens in a moment, that I want to enjoy the moment, and have them enjoy the moment." Referencing her assessment for the QRIS, she says, "I didn't get graded very well on that. I have to do that."

She communicates frequently with parents verbally and through text message throughout the day and regularly shares resources. She specifically describes sharing employment opportunities, offering parent education, providing information about developmental screening, and giving financial assistance to families in need. For example, Joy says:

> I buy the kids clothes. I provide their wardrobes, some of them. I have homeless kids, parents who are homeless, they come in. They come and have holiday dinners with me, Thanksgiving dinners, and Christmas. Yeah, I mean you're involved, it's your life, it's like they're your own.

> Families become your relatives, and they look at you like that. I give them money.

She scored a 164 on the FPTRQ, which is in the second quartile for the sample. According to her responses, she has knowledge about all of the families in her care, including their family composition and parents' schedules, but she does not know about all of the parents' financial situations or culture and values. She also reports that she regularly works with parents to develop strategies they can use at home to support children's learning. Joy strongly agrees that she is open to learning new and better ways to teach and to receive feedback from parents about her care.

Joy views herself as a support to parents, nurturer to children, janitor, cook, and business manager, and she views supporting parents as her most important role. She describes trying to enforce policies with parents, balancing her roles as business manager, nurturer to children, and support to parents, as challenging:

> I think one of the challenges, the major challenges that I had…it's more dealing with the parents, and their issues. It's just hard. Because I have a policy, like no cell phones when you're coming to pick up your kids…You know, you don't have to do that, and your kid is sitting there like, "Mommy, mommy!"…First I asked them, and they weren't, then I had the sign up, then they don't pay attention to that. Then I might tell the kid, "Say hi to mommy, say 'Mommy can we talk?'"…It's difficult with the parents being rough, and not recognizing their kids.

She received an 88.2% on the Health and Safety checklist and a 93.3% on the Materials checklist. She received high scores in the CCAT-R constructs of Engagement, Bi-Directional Communication, and Uni-Directional Communication. She was engaged with the focal child during 83.3% of the intervals and talked to the focal child during 66.7% of the intervals. She asked a question to the focal child in 50% of intervals. The focal child was engaged with materials during 94.4% of intervals to talked to himself, the caregiver, or other children in 80.0% of intervals.

Joy engaged the focal child in concept learning in five of the six cycles and promoted the child's independence and used routines as learning opportunities in three cycles.

Three children were present during the observation, and they participated in free play and mealtime. The children used a room that was designated for child care. Joy was energetic and responsive with the children and used a positive tone. She talked with the children about a variety of topics and offered assistance when they needed it.

Joy and Karen both have informal practices related to their work with children. However, the observation and their interview responses show few other similarities between them. This is especially apparent in the warmth of their interactions and engagement with children.

Somewhat Formal

Two providers from the Somewhat Formal profile are described below to illustrate the range of beliefs and practices of providers in this profile.

Amy

Amy is a Caucasian licensed FCC provider who has been licensed for two years. She has an associate's degree in general education but is new to ECE. Amy opened her FCC after she had her own child, and she is considering closing her program once her youngest child is in school. When asked what she thinks she will be doing in five years, she said, "I don't know, maybe I'll just keep doing it. I've still got a little while to figure that out, but I'm like do I really want to keep up with all the tiny little details that I had to do between Delaware Stars and the state? Not to mention

remembering to do my own business side of it which I have not done the whole year—I've got so many receipts I've got to go through."

She moved from a neighboring state with lower licensing thresholds and stated that she would not have become licensed if it were not a requirement. She describes the decision to begin caring for children after her family moved, saying:

> We started talking, and at that point I was working as a secretary, and we found the house over here and [my husband's] like, 'Well you're not going to want to commute all the way over there for the little bit of money you're making.' I was just like, 'I'll open a day care and stay home.' I missed out on [daughter's] years working all the time at a bank and stuff…I didn't really get to see them too much and I didn't really like that. I wanted more to be able to stay home with this one more. When we found the house over here and it took me about a year after we moved in to finally finish the licensing because that's a lengthy freaking process.

Amy lives in a low-poverty suburban community. Currently, she is caring for five children, and two of them are her own. None of the children receive subsidy. She describes her decision to not participate in the Purchase of Care (POC) program: "I looked at the POC when I first started and I was like, 'That just seems too much of a hassle.' I had a lot of people who do take POC tell me it is a lot of a hassle. It's really not all that worth it." She participates in the QRIS at a Level 2. She has considered quitting the QRIS because of expectations she finds unreasonable but has decided to remain in for now because of her relationship with her Technical Assistant. She says:

> I'm doing Delaware Stars, and I wasn't actually going to continue with it until I got [TA]. Because my original TA didn't do anything. I mean she would literally come here and I'd be like, 'Oh I haven't done anything.' 'Okay, yeah no problem.' She left, and I got [TA] and it's a lot better now. Because she actually, she'll work with me. I haven't minded sticking with Delaware Stars, even though with a lot of their stuff I'm like, 'Really?' I'm like the block thing, really? The wooden blocks are not counted as blocks. The A, B, C blocks that you have, the wooden stackable? Yeah, they're like this big or something like that and

> they're like, ‘Oh no that's fine motor skills, those aren’t blocks.’ I’m like ‘No I'm sorry, this is a block.’

Amy views herself as a mother to all of the children, a disciplinarian, playmate, activity coordinator, and cook. Describing her most important role, she says, “Goofball, playing with the kids. Because the more you play with them the more they relate to you better. The more they trust you and the more they're happier to be here.” However, she describes her challenges balancing the roles of playmate and disciplinarian: “Yeah, having to go from the goofball to disciplinarian is the hardest one to go from because you're having fun, we're playing. Okay, now I got to stop that and have a talk with you because you hit Johnny. You threw a toy at his head. You knocked him down, tackled him.”

Amy does not use a curriculum, and she does not spend time planning children’s activities. However, she is looking to start using a curriculum in the near future to fulfill QRIS requirements. On the survey, she reported that she implements learning activities a few times a week, but when asked to describe an activity she had done recently, she said, “I mean it's really hard to since it's all really just free play. That's something that I'm planning on changing, having an activity, doing schoolwork type of thing, incorporating it a little bit better that way. It's mostly free play so it's kind of hard to say a certain activity.”

Amy did not have a relationship with most of the families of the children enrolled before she started caring for them. She describes having open verbal communication with the families, but otherwise, their relationships are not close. She says, “I don't really do anything with their families too much.” She describes most of her communication with families as related to children’s behavior, payment, and scheduling. She does not refer families to any outside services or offer care during

non-standard hours. Amy does not meet with other child care providers. When asked about if that is something she would be interested in doing, she says:

> I don't know, because I always find… I've noticed this when you go to the classes and stuff, everybody tries to one-up each other: ‘You should be doing it this way, you should be doing it that way.’ It's like, I'm not going to listen. I don't want to sit around and listen to that, like ‘Oh, well you're doing this wrong, you should be this, you need to do it this way, you need to have this kind of structure.’ No. You don't know my kids. I get kind of offended when it comes to that.

Her scores on the constructs of the CCAT-R all fell into the low category. She received a 64.7% on the Materials checklist and an 87.0% on the Health and Safety checklist. She talked to the focal child during 20% of the observation intervals and was engaged in an activity with the focal child during 27.8% of intervals. She did not encourage concept learning, promote independence, or use routines as a learning opportunity, but she did use books with the focal child.

Amy uses her living room as the primary child care space. There are play materials accessible to children, but they are not neatly displayed. During the observation, indoor free play, an informal read-aloud, and snack occurred. Five children were present during the observation. They spent most of the time in unstructured gross motor play, such as climbing across the sectional sofa and running around the room. Generally, Amy’s affect was not warm. She sometimes raised her voice and made sarcastic comments and threats. Other times, she seemed to enjoy being with the children and was very engaged in their play.

Elaine

Elaine is an African American licensed family child care provider. She has been licensed for six years, but relicensed her program as a large family child care one

year ago. Therefore, she can serve up to twelve children with an assistant. She employs two part-time assistants, one who works in the morning and one who works in the afternoon. Elaine has a bachelor's degree in computer science. She opened her FCC after being laid off. She says:

> After being in technology for over 25 years, I was trying to stay in the technology field. That wasn't working after the big boom. I was just really thinking about what I really wanted to do. I've always been helpful in the community. The community has always been a big part of my life, even when I was very young…When the idea came across for family child care, it wasn't like I said, "Oh yeah, I love children. I just want to do this." It was not that at all. When I started moving forward with it, I said, "Okay, I can do that." I went to licensing and got the license and all that. I just felt like the process was extremely easy. Within months they were like, "Here's your license." I was like, okay, I don't even feel like I'm fully equipped.

She aspires to open a small center within the next five to ten years, with the goal of maintaining a multi-age, home-like environment. Elaine lives in a low-poverty suburban community. She is currently caring for seven children from birth to five and no school-aged children. None of the children have a prior relationship to her, and all of them receive POC.

Elaine participates in the QRIS at a Level 5. She is also active within the state's FCC Ambassador program and with a local organization that provides business training to new business owners. She cites the benefits of participation in outside systems: "Overall I think that I would not be where I am today without those programs being involved in the business, without a shadow of a doubt, period… I just feel like I haven't been in the business that long, but I'm giving a high quality. They give me that advantage."

Elaine views herself as a support to parents, an extension of the family, and a teacher, with providing support to parents as her most important role. She says this is

most important, “Because after you encourage them and make them feel good, then they will do better. They will do better to work towards the children and all that.” She supports parents through acting as a coach, counselor, and friend and sharing resources. She describes her work with parents as follows:

> When I find something that needs to be addressed, I am on it. Whether it's from the assessment, the screenings, whether it's from seeing a need that the child has and addressing it, getting a workshop so that all the parents are dealing with it, or can be able to be on one page with it whether it's motivating some of my parents to go back to school, stay in school. A lot of them are in college, out of college. They just sort of flip flop back and forth. I'm one of the ones that say, "You're going to have to get your ball rolling, get back into school now. There are dates and deadlines," and all of those different things so that they can continue on with their career and their education.

She describes relying on her family for support in balancing her roles. Her daughter and husband both assist in the program regularly. Elaine received a score of 172 on the FPTRQ, which is in the third quartile for this sample. She reports that she frequently answers parents’ questions, offers ideas and suggestions, and talks to them about their children’s learning and progression towards developmental milestones.

Within her program, Elaine delegates many of the responsibilities for planning activities to her staff. She uses a comprehensive curriculum and supplemental curricula focused on handwriting, Bible, and Spanish. She describes adding the supplemental curricula to meet the needs of families. On the survey, Elaine reported that she implements learning activities three times per week. From her interview responses it appears that planned learning activities occur daily, but that much of this work is delegated to her assistants.

Although Elaine did not mention being an administrator as one of her roles, she seems to act in ways similar to an administrator in many aspects of her program.

For example, she and her two paid assistants have staff meetings twice a month, and she provides training to her staff:

> At the team meetings we say these are the things that we're doing. These are the words I want them to look up in Spanish and sign language so that they will know it so that I'm not looking up everything. They have their assignments. We have evaluation forms where we watch videos…One was about meal time. I assign a video for the week. They have a week to look at it, and then I have these forms that they created in order to what it is we need to look for, whether it's something pertaining to the meal time or something they did, that they wanna do or whatever. Then we just review it. We come back and we talk about it. Then if there's something that we want to implement, then there's the implementation form that we have. They fill that out, and then we add that in.

During the program observation, Elaine spent most of the morning one-on-one with an infant who was new to the program, and her assistant primarily had responsibility for supervising the rest of the children. Therefore, Elaine was not frequently engaged with the focal child. This resulted in low scores in each of the CCAT-R constructs. The focal child was engaged during 100% of the cycles, but Elaine was only with the focal child during 16.7% of the cycles and talked to the focal child during 20% of the observation intervals. The CCAT-R does not capture how frequently an additional adult is engaged with the focal child, but field notes indicate that this occurred frequently throughout the observation.

She scored an 85.7% on the Materials checklist and a 100% on the Health and Safety checklist. She uses has two rooms on the main floor of her home that are designated for child care. In both rooms there are many materials accessible to the children. During the observation, indoor free play, an informal group time, and lunch occurred. Nine children were present, ranging from an infant to preschoolers.

Together, Amy and Joy represent the characteristics of providers in the Somewhat Formal profile. Amy represents one type of Somewhat Formal providers. She does not view herself as a professional and would prefer to be unlicensed if that was an option. While her educational practices are currently informal, she expresses interest in continuing to work with her Technical Assistant to begin planning and implementing learning activities. Elaine represents a different type of Somewhat Formal provider. She focuses on empowering the families of the children in her program. Her practices are formalized, and she takes a somewhat hands-off approach with daily program tasks, which she is able to do because of her two paid staff. She is very interested in participating in outside services and learning more about ECE. Interestingly, the third provider sampled from the Somewhat Formal profile is similar to Elaine in many ways, including her utilization of a paid staff member, active participation in outside systems, formalized educational practices, emphasis on supporting and empowering families, and entrance to child care after being laid off in a position unrelated to ECE.

Formal/Educational

Jasmine is an African American FCC provider who has been licensed for ten years. She lives in a low-poverty community near an urban area and has an associate's degree that is not in ECE or a related field. Jasmine starting caring for children because she wanted to stay home with her own children but needed supplemental income. She plans to continuing caring for children for the next ten years. She says:

> Some people ask me if I want to go outside of my house, and I really don't, because I don't want the additional overhead. And I like the homey feeling of home child care versus, I'm not saying that this is 100% true, but in my opinion, when you go to a center you're more or

> less a number than an individual…I don't know if I will move to a large family level, where I can get someone to come in and help because the older you get, the more tiresome it becomes.

Jasmine currently cares for eight children ranging from toddlers to school-age, none of whom have a prior relationship to her. One child receives subsidy.

She participates in the QRIS at a Level 4. She sometimes gets frustrated with the QRIS requirements: “I beat myself up because I'm trying to uphold Delaware Stars standards, realizing that some of their standards are not geared towards in-home family and they’re for centers, and here I am trying to be a one-man band trying to do everything.” She describes how she feels about the QRIS, saying:

> Stars helped me to a certain degree. They helped me because some people are now looking daycares who participate in Stars, so they help me in that regard. It helps me setting the bar for myself and following that. But if I didn't have Stars, I wouldn't cry…The benefit was to get the POC reimbursement, but I haven't seen a check from them in months.” She regularly networks with a small group of other providers and finds this beneficial: “We do things together all of the time. It's better when you have more, and too, it's adult conversation for me as well…I have a core group, because some people unfortunately, they don't mean you any good. I talk to those that I can trust to give me good information.

Jasmine uses a comprehensive curriculum for FCC programs and implements planned learning activities daily. She describes planning activities based on assessment results, and she regularly spends time planning, although she has recently tried to reduce that time:

> Before I used too much time in planning and where my husband started complaining, "Like look, this is our time. You're doing too much." Now, I try to do it during nap time, sometimes on the weekend when my husband is not here. It's finding times to do it where it's not interfering in my personal life. I would say quiet time during daycare is the best time for me to do it.

Jasmine describes having close relationships and open communication with families. She says, “We're all family. We're really honest with each other. We have open communication. I think that if you were to pick any name of a parent that there would, actually, I just did my surveys, my parent surveys, and there was not a bad mark from anyone. That's the time they could be brutally honest, but we're all like family.” She provides financial support to families if they are in need and refers them to outside resources. She scored a 170 on the FPTRQ, which is in the third quartile among the sample. She had especially high scores in the area of Family Knowledge.

She sees her role as a nurturer to the children, an extension of the family, an administrator, a support to parents, a cook, a nurse, and a janitor. She says, “It's just everything you could possibly think of, I have to do it because I'm by myself. Even if I can't think of it now, if there is a role, I do it.” One strategy she uses to balance her multiple roles is to plan ahead for when she could use extra help:

> If it's something like an experiment or something, trying to think about, ‘How am I going to work this out with the number of kids I have?’ Because this one may get into the glue while I'm doing this.…If it's something that I need to do where I can't figure it out, my grandmother is down for a substitute, so I ask her to come and help me that day.

She scored a 90.9% on the Health and Safety checklist and a 68.8% on the Materials checklist. She did not have sand or water toys or a space for children to be alone. Jasmine had low-to-moderate scores on the CCAT-R constructs. During the observation, she talked to the focal child during 36.7% of the intervals and asked questions during 25% of intervals. She was engaged with the focal child during 61.1% of intervals, and the focal child was engaged during 100% of the cycles. She promoted concept learning during five of the six cycles and sang or rhymed with the focal child in three cycles. She did not engage in any negative interactions during the observation.

Her child care space is a converted garage where she has many accessible materials arranged in interest areas. Three children were present, and they participated in free play for most of the observation, along with some brief time in routines and transitions. Jasmine's interactions with the children were warm, calm, and positive.

Jasmine represents the typical provider in the Formal/Educational profile. She has formalized educational practices with children and regularly participates in professional engagement activities. She seems to have relatively high-quality interactions with children, even though she was not always engaged with the focal child during the observation. Her relationships with families are close, and she provides outside resources to them.

Highly Engaged

Marilyn is a Caucasian licensed FCC provider with some college credits. She's been licensed for 21 years and lives in a low-poverty suburban community. She currently cares for eight children. One is related to her and none of them receive subsidy. She started caring for children when her own children were young so she could stay home. She says, "We still needed an income. There were different families who were in need of someone watching their kids and that's just how it all got started. I had the best of both worlds." She plans to remain in child care for at least the next ten years and plans to continue to improve her program: "I'll be doing it better. I will, because I'm with Delaware Stars now and just trying to get up to speed and get everything integrated and working properly. The saying, 'You can't teach an old dog new tricks?' You can, it just takes a little while."

She sees her role as a teacher, administrator, nurturer, support to parents, extension of the family, cook, nurse, janitor, and chauffer. When asked about how she

balances these roles, she says, “Sometimes it's challenging, but I've been a mom for 28 years, so you learn how to juggle and do things, multitask a lot.” She says it can be challenging to balance her business with her own family: “Sometimes it's challenging, especially with my own family, trying to transition from one to the other and making sure that I have that balance between the two so no one feels left out or one's taking over the other, so to speak. So it can be challenging doing it.”

She participates in the QRIS at a Level 3 and describes that as helpful:

> Like I said, it never occurred to me that there could be a better way. So yeah, I've really learned with that and just kind of helping me set up goals for myself, my program, helping me learn how to be more accountable for myself and the program as well and then just the support that I've been given. With the TA coming out so much, especially in the beginning, getting started and everything, they really see what you're going through…She gave me some pointers and some tips on how to handle a few things which was really nice.

She uses a curriculum and implements learning activities daily. She spends about six hours a week planning children’s activities. When asked to describe a recent activity, she shares:

> Last week we talked about G words, and one of the G words we came up with was garbage truck. The kids love to watch the garbage trucks…So anyway, they got to draw their own garbage truck, color it, decorate it, that type of thing…Then they were garbage men or women, and they had to decide if it was going to go in the recycling truck or the actual garbage truck. We talked about, it's a stinky job, but somebody has to do it. Even though somebody is doing a really stinky job, that they're still supposed to be respected and cared for.

She communicates frequently with families and plans educational and social activities for them: “The families know that if there is any type of an issue, rather it's directly related here or even if it's just an issue within their home, they feel comfortable that they come and talk to me about it. Whether it's just an ear that they

need or for us to just be on the same page in case the child needs extra help or whatever." She received a 173 on the FPTRQ, which was in the third quartile for the sample. She had an especially high score in Family Knowledge and a relatively low score in Attitudes.

On the CCAT-R, she received high scores on Uni-Directional Communication and Engagement and a moderate score on Bi-Directional Communication. She got an 88.9% on the Health and Safety checklist and an 80.0% on the Materials checklist. During the observation, she was engaged with the focal child during 88.9% of intervals and talked to the focal child in 88.3% of intervals. Her most frequent types of talk were other talk (69.4%) and asking questions (63.9%), and she also had a high rate of repeating the focal child's utterances compares to other providers in the sample (36.1%). The focal child was engaged with materials for 100% of the intervals.

One room on the main floor of her home is designated for child care, and it is somewhat crowded. During the observation, the two children present participated in free play, informal reading, and a small-group fine motor activity. Her interactions were calm and positive, and she participated in children's activities with them.

Marilyn represents a typical provider in the Highly Engaged profile. Her educational practices are formalized, and she frequently participates in professional engagement activities. Additionally, she maintains strong relationships with families, although she does not seem to provide as many services to families that providers in some of the other profiles provide.

Discussion

Role Perception

This research explores how HBCC providers view their role, the quality of the care they provide, and how roles and quality differ by profile. HBCC providers can readily identify multiple roles they hold, as well as describe the challenges of balancing these roles. They often have one or two roles with which they identify most strongly. There was variation in which roles providers identified and how many roles they identified. Some of these differences seemed to relate to profile membership, with Relationship-Based and Informal providers naming fewer roles total, and fewer roles relating to teaching or administration. They also identified more frequently with the role of a custodial caregiver. Conversely, none of the three Highly Engaged providers and one of four Formal/Educational providers identified as a custodial caregiver. Additionally, 14 of the 15 providers discussed one or more functional roles they held, including cook, janitor, nurse, and taxi. While no providers saw these as their most important roles, it was clear that they are salient in the daily lives of providers across profiles.

It is notable that although ten of the fifteen providers in the sample cited teacher as one of their roles, only one of the three Relationship-Based providers identified themselves as a teacher, and none of the three identified as an administrator. This corresponds to previous research that FFN providers are less likely to view themselves as professionals (Porter et al., 2010). Neither of the two Informal providers viewed themselves as a teacher, which is not surprising given their lack of formalized educational practices.

Thirteen of the fifteen providers described themselves as an extension of the family or fill-in parent to the children in their care. This highlights one of the unique features of HBCC, and it is clearly something that providers value. This did not seem to differ meaningfully by profile. The role of a supporter to parents was also common across profiles, and providers described many ways in which they support families (Bromer & Henly, 2009; Porter et al., 2010). They discussed providing financial support both directly, through lending money and helping with food and clothing, and indirectly, through offering flexible payment schedules and reducing fees based on families' circumstances. This varies somewhat from previous findings that unlicensed providers have closer relationships and offer more supports to families than licensed providers (Porter et al., 2003). Instead, it highlights that close, supportive relationships with families appear to exist across profiles and across licensed and unlicensed providers. Formal/Educational and Highly Engaged providers, even though they have the most formalized educational and professional practices, still describe supporting families financially and through connecting them to resources, as is illustrated in the case study of Jasmine.

While providers, especially those in the Formal/Educational and Highly Engaged profiles, identified some ways in which balancing professional and family supportive roles could be challenging (Gerstsenblatt et al., 2014), there was no indication that they felt the need to pick between the two. It appears they are working to succeed in both areas, even when they come into conflict with one another. One notable finding was that providers in the Formal/Educational and Highly Engaged profiles cited a specific strategy they use that help them effectively manage their multiple roles. In the case studies, Jasmine described planning ahead and identifying

times it would help her to have her substitute present. Other strategies seemed to come from working with outside agencies, such as through workshops or working with a technical assistant in the QRIS. Therefore, it is possible other HBCC providers may benefit personally and professionally from learning strategies for balancing multiple roles. When providers discussed balancing roles, the importance of their own family providing support, either through hands-on assistance with tasks related to child care or emotional support, was evident. All providers in the sample seemed to benefit from some level of support from their own families.

The case studies illustrate the variation in role perception among providers in both the Informal and Somewhat Formal profile. For example, while Karen and Joy both have practices that are consistent with the Informal profile, Karen perceives her role as a custodial caregiver and disciplinarian, while Joy lists five roles, including nurturer and support to parents. This suggests that providers with less formal practices can still view their work in a variety of ways and have a range of motivations for providing care (Kontos et al., 1995). Additionally, Sonja's case study highlights that as a Relationship-Based provider, although she does not seem to talk to families often about children's learning and developmental milestones, she does have strong knowledge of the families' cultural background. This highlights one of the key reasons families often select FFN care (Miller et al., 2014).

There were also differences by profile in the reasons providers began to work in HBCC, with Relationship-Based providers citing wanting to help family members, and many of the licensed FCC providers describing wanting to stay home with their own children and earn income. This is similar to what has been found in previous studies (Layzer & Goodson, 2006; Snyder et al., 2008).

Quality

Findings from the FPTRQ and CCAT-R suggest that while HBCC providers are generally strong in some areas, like their communication with families and the materials they have available for children, there are areas that could use improvement. Through using the FPTRQ, results confirm previous findings that HBCC providers have close relationships with families and often offer additional services to families (Porter et al., 2010). Although the FPTRQ was designed to be used with licensed providers, the unlicensed Relationship-Based providers in this sample had high scores on the measure and seemed to find the questions relevant to their work based on their interview responses. There is also evidence that providers may benefit from support and additional training to help them in their relationships with parents (Gerstenblatt et al., 2014). Many providers assume the role of an informal counselor and financial supporter for the families with whom they work, and some seem to question whether they are right to do this.

The CCAT-R was used to measure the quality of providers' practices with children because it is one of the few measures designed to be used with FFN providers, and it can also be used with licensed FCC providers. All providers had low scores on the Nurturing factor, which indicates that providers were very rarely showing physical affection to the focal child during the observation. There was wide variation in scores across the other factors, with roughly the same number of providers having high, medium, and low scores on Engagement. However, only two providers had high scores in Bi-Directional Communication and Uni-Directional Communication.

The average frequency of provider engagement with the focal child was low compared to the frequencies from the Early Head Start Home Visiting Pilot

Evaluation. However, providers also had low frequencies on the item relating to the caregiver engaging in their own activities excluding the focal child. One possible explanation is that the provider was engaging with other children present while the focal child engaged in a different activity or with another adult, which would not receive credit in the CCAT-R scoring. Therefore, this measure may work best in HBCC settings with fewer children present, and other measures may more effectively capture the quality of the environment and interactions in larger HBCC settings.

Overall, CCAT-R results suggest that there is room for improvement in the quality of providers' interactions with children, specifically related to using specific practices that support learning. These include labeling objects, repeating children's verbalizations, encouraging experimentation with objects, and using routines as learning activities. Rates of caregiver talk were similar across profiles. However, Highly Engaged providers more frequently engaged in types of talk that may more directly promote children's language development, such as labeling objects, repeating, and asking questions. Informal providers had higher rates of other talk, which is often more general and may be less enriching. Relationship-based providers were the only group where television was during the observation. The lack of television use among the other profiles is encouraging, given the concerns about frequent television use in HBCC raised in previous studies (Bassok et al., 2016; Layzer & Goodson, 2006).

Differences in Educational Practices by Profile Membership

One purpose of the study was to further explore providers' educational practices, specifically relating to the variables used to form provider profiles in Study 1 and Study 2. One limitation of the profiles is that they were based solely on providers' self-report of their practices. Additionally, the only data available in the

NSECE regarding implementing learning activities was providers' report of the number of days they implemented something they considered to be a planned learning activity in the last week. Directly asking the providers in this sample to describe how they decide what they do with children each day and to describe a recent activity they had planned and implemented yielded more depth of information about the quality and intentionality of these activities. However, the differences by profile were generally as expected based on the Study 1 and 2 results, with the providers in the Highly Engaged group showing the most consistent and intentional implementation of learning activities.

Providers' interview responses sometimes contradicted the survey responses, and this was most often true for the Relationship-Based providers. The three Relationship-Based providers in this sample reported on the survey that they implemented planned learning activities. However, when asked to give an example, it appeared they either did not do this or had a different definition than providers in other profiles. One possible explanation is that unlicensed providers and those with less formalized practices may be less familiar with vocabulary related to curriculum and planning activities and may define these terms differently than providers with more formalized practices. This highlights the importance of talking to providers about their practices and the potential problems of relying solely on HBCC providers' self-report of their practices.

Through the observation field notes and interview responses, it was apparent that for the HBCC providers in the sample who have an assistant, their assistant plays an active role in many areas of providers' work. While this seemed to be less true related to providers' work with families, assistants appeared to take on responsibility

for lesson planning, implementing activities, and assisting providers in supporting the needs of multi-age groups of children. Because two of the providers from the Somewhat Formal profile had paid assistants, this is one possible explanation for why their survey responses indicated that their practices were less formalized than they appeared in the interview and observation.

Limitations

The small sample size of this study is a limitation, specifically relating to interpreting the quantitative data from the CCAT-R and FPTRQ. Additionally, this is a sample from one state, and the sample is drawn from the population of survey respondents, so there is limited generalizability to the larger state or national population of HBCC providers. Although a strength of the CCAT-R measure is that it can be used across licensed and unlicensed HBCC settings, there is some evidence that it is more appropriate for HBCC settings with fewer children. Additionally, not all of the items are used in scoring the constructs, and there is little guidance for interpreting the item frequencies in regards to drawing conclusions about the quality of the setting.

An additional limitation of the CCAT-R and the survey questions used in Study 1 and Study 2 is that they primarily take into account the actions of the lead caregiver. When assistants were present, they seemed to positively contribute to the quality of children's experiences and to assist the provider in balancing roles and implementing learning activities, and these positive contributions were largely not captured through the CCAT-R and survey questions.

Because the CCAT-R is a focal child measure, it does not capture the experiences of multiple children, which may be especially important in multi-age HBCC settings. For example, field notes revealed that if an infant was present during

the observation, that child's experiences were often different from those of the focal child. An approach to measuring quality that focuses on the experiences of the group of children present and less on the primary caregiver may help overcome this limitation.

Directions for Future Research

Future research could consider using an additional quality measure with the CCAT-R. It may be that the CCAT-R is a better measure of quality in certain HBCC settings, which another measure would be more appropriate in larger settings. Future research could explore additional methods for capturing providers' role identification, such as through developing a quantitative survey. Research could also consider the relationship between role perception and other provider characteristics, like level of education, previous work experience, and reason for entering the field.

Because many providers in the sample participate in the QRIS, one question of interest to consider in future research is the relationship between QRIS participation and formalization of practice. It would be beneficial to know to what degree the QRIS attracts providers who have established administrative and educational practices or are already interested in formalizing those, as well as the role QRIS participation plays in providers increasing their educational practices and professional engagement. Additionally, it would be helpful to further explore the characteristics of providers in the Highly Engaged by interviewing and observing more providers in the profile and asking them additional questions to better understand their motivation.

Future research could use a similar approach to understanding profiles with a larger sample of HBCC providers in each profile. This would help to validate findings from this study and to add to findings about differences in beliefs and practices by

profile. Through continuing this research, it may be possible to streamline the approach to identifying profiles so that the most important and most highly variable factors are captured.

Implications for Policy and Practice

Because HBCC providers perceive their roles in a variety of ways, it could be beneficial moving forward to consider role perception when designing supports or interventions for providers. Specifically, policies and practices related to HBCC providers should acknowledge the functional roles that HBCC providers balance in addition to their other work with children and families. These seem to be time-consuming for providers, and this is a feature of HBCC providers that distinguishes them from others in the larger field of ECE. Findings suggest that HBCC providers may be interested in support to help them balance the multiple roles that make up their role set as a child care provider, as well as balancing those roles with their personal and family life. Some strategies to address this could include PD workshops, onsite coaching, and networking opportunities. Providers also may benefit from training and support specifically focused on their relationships with families, since many described acting as a counselor and advocate for families, but few seemed to have any formal training or experience in this area (Kossek et al., 2008).

Providers also described ways in which they felt isolated, and those who met regularly with other providers described how it benefited them both personally through reducing their feelings of isolation and professionally through learning from the experiences of other HBCC providers. This suggests that programs for HBCC providers should include a social support component, which corresponds to previous research that suggests networking opportunities are beneficial for home-based

providers (Bromer et al., 2009; Porter et al., 2016; McCabe & Cochran, 2008; Rusby, 2002).

HBCC providers may benefit from PD focused on enriching and nurturing verbal and non-verbal interactions with children (Dowsett et al., 2008). While scores on the Materials and Health and Safety checklists of the CCAT-R were moderately high, some of the caregiver language snapshot items and caregiver activity summary behavior checklist items occurred rarely with the focal child during the observation. This was especially true for providers in the Informal and Somewhat Formal profiles.

Overall, Study 3 confirms the profile structure identified in Study 1 and Study 2 and highlights additional ways in which the profiles differ, including in role perception and quality. The mixed methods approach and use of multiple data sources serve to add depth to the Study 1 and 2 findings and verify providers' self-report about their beliefs and practices.

Chapter 5

CONCLUSION

Given the large number of HBCC providers nationwide, the number of children attending HBCC, and concerns about low quality in this form of child care (Kontos et al., 1995; Bassok et al., 2016), there is growing interest in interventions that support HBCC providers to provide higher-quality experiences to children and families (Bromer & Korfmacher, 2016). Together, findings from these three studies suggest there are distinct profiles of HBCC providers based on their beliefs and practices. This has implications for the way services are designed and implemented in order to most effectively support quality improvement (Porter et al., 2010).

Study 1 and 2 identified profiles within both a national and state-specific sample. Both studies used an exploratory approach, and both had similar results, which suggests that HBCC providers group together in the same way in both samples. The Informal, Somewhat Formal, and Formal/Educational profiles emerged in both analyses and had similar item means and percentages of providers. The emergence of the additional profile in the Delaware sample suggests that there is a distinct group of providers in the state who are highly engaged in their educational practices and PD.

The Study 1 and 2 profiles provide insight into HBCC providers' beliefs and practices, which in turn can inform the design of quality improvement initiatives that aim to reach HBCC providers. Similar to previous research, these findings confirm that offering a range of supports to HBCC providers may be the most effective strategy for supporting the HBCC workforce (Bromer et al., 2009; Bromer &

Korfmacher, 2016; Raikes et al., 2006). Additionally, Informal providers may be more interested in programs that include a home visiting component (McCabe & Cochran, 2008), while providers in the Formal/Education profile may choose to participate in more formal onsite coaching with a focus on curriculum (Koh & Neuman, 2008; Rusby et al., 2016). However, an alternative approach is that providers in the Informal profile have had fewer opportunities to receive support in formalizing their practices because of limited access.

Study 3 findings further illuminate characteristics of providers in each profile through moving beyond self-report as was used in the previous studies and verifying practices through observation and interview. The interview and observation results sometimes contradicted providers' self-report in the Study 2 survey. This highlights the importance of using one or more kinds of verification to understand providers' practices rather than relying solely on self-report. Despite these contradictions, Study 3 confirmed the general structure of the profiles and further verified that there is a continuum of formality to providers' practices. This was especially highlighted in providers' interview responses about how they implement curriculum and the types of learning activities they do with children.

In line with the bioecological theoretical perspective that informed this project, the somewhat low frequencies of provider-child interactions observed in the CCAT-R suggest there is room for growth for HBCC providers in this area, which is a key mechanism through which children's development occurs (Bronfenbrenner & Morris, 1998). Additionally, findings suggest that HBCC providers may be positively contributing to children's development through the mesosystem, as the provider communicates and builds relationships with children's families.

One additional contribution of this study is the examination of how providers view their roles and how the roles perceived vary by profile. Understanding how providers view themselves and their work can help connect them with resources and programs that they will find relevant and therefore may be more likely to actively engage with (Gerstenblatt et al., 2014). For example, a provider who does not view herself as a teacher will likely not be interested in participating in a program that is presented as being for teachers, unless there are other incentives for participation. However, providers' responses to the interview questions suggest that providers may increase the formalization of their practices through participating in programs like QRIS, although it is not known whether through formalizing their practices they begin to see their role differently.

Study 3 results indicate that more research is needed to understand if the Somewhat Formal profile is truly a distinct group. This profile emerged in both Study 1 and Study 2, but the observation results and interview responses suggested that of the three providers sampled from this group, two were large family child care providers with a paid staff member who seemed to have formalized practices and a process by which their assistants implemented those practices. However, the third provider sampled seemed to characterize the average practices of a Somewhat Formal provider based on the quantitative results. Sampling more providers from each profile in future research could help determine whether the Somewhat Formal group is unique. An additional question about this profile is whether providers in this group may be open to increasing their educational practices and professional engagement given participation in quality improvement initiatives. In order to more fully answer

this question, it may be necessary to assess providers' openness to change in addition to gathering information about their current practices.

Thinking about the best way to identify profiles and to capture providers' beliefs and practices, more in-depth information is needed than the types of questions present in the NSECE. For example, the question of interest related to implementing planned learning activities is likely not related to how many days the provider did an activity. Gathering information about whether providers have received training on a curriculum (Fuligini et al., 2009), how much time they spend each day on learning activities (Dowsett et al., 2008), and the content areas on which they focus (Bassok et al., 2016) may present a more meaningful picture of providers' educational practices, and these are areas that could potentially be measured through a survey. However, because this is a topic about which there is little previous research, it is also important to continue to research how HBCC providers define learning activities and curriculum and their process for planning and implementing activities with multi-age children.

Results of these studies highlight the challenges of relying on providers' self-report, especially related to their educational practices with children. Therefore, in future research and in practice it is important to find methods to verify providers' practices. This could occur through interview, administrative data, document review, or observation. In Study 3, both interview and observation seemed to be effective for verifying providers' practices.

Findings across these studies have numerous implications for policy and practice. First, results confirm that different intervention approaches may be necessary to reach the heterogeneous population of HBCC providers (Bromer & Korfmacher, 2016). It is important to remember that within this series of studies, only licensed FCC

providers and listed FFN providers were studied. The much larger population of unlisted FFN providers was not included (NSECE Project Team, 2015a). Therefore, there is likely much wider variation about HBCC providers' beliefs and practices than was captured through the profiles and case studies.

This project highlights the work many HBCC providers are doing to support families and promote positive family functioning (Scott et al., 2005; Vortruba-Drzal et al., 2004), much of which falls outside what is typically considered the work of a child care provider and what it typically measured when trying to capture quality (Bromer & Henly, 2009). However, providers' contribution to family functioning may play an important role in supporting positive children's outcomes (Kossek et al., 2008). More research would be beneficial to better understand the relationship between HBCC providers' family relationships, family functioning, and children's outcomes. Interview responses also highlight the close relationships providers form with families after caring for children for multiple years. This continuity of care is a unique strength of HBCC that can be overlooked and is often not considered when measuring quality. Using the FPTRQ highlights the strong relationships HBCC providers have with families and the additional services they provide. The FPTRQ has strong potential for use in future research and practice. This project suggests that the FPTRQ may be able to be used with both licensed and unlicensed providers, although more research with a larger sample is needed.

The recent attention at the local, state, and national level to HBCC as an important and highly-used child care context is encouraging. A number of promising intervention approaches exist, and these provide a range of services to meet HBCC providers' needs (Bromer et al., 2012; Porter et al., 2009; Rusby et al., 2016). This

project serves to further identify how to connect providers to services. Findings suggest that even among licensed HBCC providers, there are providers with very informal practices in their work with children. Connecting these providers to resources that have been found to be effective in improving quality among FFN providers is one promising strategy for helping them improve their quality (Hatfield & Hoke, 2016).

Together, these studies suggest that applying the typology identified in Study 1 and Study 2 to future research can be useful for continuing to refine the profiles and how they are identified and for applying the profiles to new and existing initiatives aimed at improving quality in HBCC settings. As the profiles and the approach for matching providers to the best-fitting profile continue to be refined, they have potential to be used in practice to classify HBCC providers and connect them with services that they will find relevant and that can effectively support them in improving quality.

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Appendix A

UNIVERSITY OF DELAWARE IRB APPROVAL LETTER

UNIVERSITY OF DELAWARE

RESEARCH OFFICE

210 Hullihen Hall
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Newark, Delaware 19716-1551
Ph: 302/831-2136
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DATE:	February 24, 2016
TO:	Alison Hooper, M.S.
FROM:	University of Delaware IRB
STUDY TITLE:	[813449-1] Identifying and Exploring Profiles of Home-Based Child Care Providers
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	February 19, 2016
EXPIRATION DATE:	February 18, 2017
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # *(7)*

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Appendix B

STUDY 2 PROVIDER SURVEY

How many children do you currently care for in each of the following groups?

Under 3 years _____

3-5 years, not yet in kindergarten _____

School-age (kindergarten and up) _____

How would you describe the location where you look after children?	☐ My own home ☐ Someone else's home ☐ Not in a home
How many of the children that you look after are **related** to you?	_____
How many of the other (non-related) children that you currently look after did you have a **personal relationship** with before you started caring for them?	_____
How many of the children have an emotional, developmental or behavioral condition that affects the way you look after them?	_____
Do you receive payment for looking after all of the children you care for, not counting your own children? Include payments from parents and family members as well as from Purchase of Care.	☐ Yes ☐ No
Do you currently serve a child receiving Purchase of Care?	☐ Yes ☐ No
Do you care for any children other than your own between 7 pm and 6 am on weeknights or on weekends?	☐ Yes ☐ No
Do you permit parents to pay for and use varying numbers of hours of care each week?	☐ Yes ☐ No
In the past 12 months, have you had help from a home-visitor or coach?	☐ Yes ☐ No
In the past 12 months, have you taken a course about caring for children at a college or university which was offered for credit?	☐ Yes ☐ No

Are you a member of a professional association, such as a national family child care association?	☐ Yes ☐ No
How many days last week did you do a learning activity that you'd planned with children (such as learning letters, reading, numbers, or counting)?	_____ days
Do you use a curriculum or prepared set of learning and play activities?	☐ Yes ☐ No

Do you ever meet with other people who are looking after children?	☐ Yes, regularly ☐ Yes, but not regularly ☐ No
Do you have access to a family support resource or mental health consultant to help you with issues that parents raise?	☐ Yes ☐ No
About how many hours do you spend participating in education, training, or professional meetings **in a month?**	_____ hours
About how much time do you spend **each week** planning children's activities?	_____ hours

Please indicate how much you personally agree or disagree with the following statements by checking one box in each row.

	Strongly Disagree	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**
In my opinion, children should always obey their parents.	☐	☐	☐	☐	☐
In my opinion, children will not do the right thing unless they must.	☐	☐	☐	☐	☐
In my opinion, the most important thing to teach children is absolute obedience to whomever is the authority.	☐	☐	☐	☐	☐
In my opinion, a child's ideas should be considered in family decisions.	☐	☐	☐	☐	☐
In my opinion, children have a right to their own point of view and should be allowed to express it.	☐	☐	☐	☐	☐
In my opinion, children should be allowed to disagree with their parents if they feel their own ideas are better.	☐	☐	☐	☐	☐
In my opinion, children will be bad unless they are taught what is right.	☐	☐	☐	☐	☐

In my opinion, children should always obey the teacher.	☐	☐	☐	☐	☐
In my opinion, it is alright for a child to disagree with his or her own parents.	☐	☐	☐	☐	☐
In my opinion, parents should go along with the game when their child is pretending something.	☐	☐	☐	☐	☐

In the past 12 months, have you helped find any of the following kinds of help for children that you look after?

Health screening, such as for medical, dental, vision, hearing, or speech?	☐ Yes	☐ No
Development assessments (checking whether the child is on track with regard to their physical, emotional or social conditions)?	☐ Yes	☐ No
Services such as speech therapy, occupational therapy, or services for children with special needs available to children?	☐ Yes	☐ No
Counseling services for children or parents?	☐ Yes	☐ No
Social services to families such as housing assistance, food stamps, financial aid, or medical care?	☐ Yes	☐ No

Demographic Questions:

What is your gender?	☐ Female	☐ Male
Are you of Hispanic or Latino descent?	☐ Yes	☐ No
Which of the following describes your race? (Please select one or more)	☐ White ☐ Black or African American ☐ Asian	☐ American Indian or Alaska Native ☐ Native Hawaiian or Pacific Islander
What language do you feel most comfortable speaking? (Pick one)	☐ English ☐ Other: _____	☐ Spanish
What is the highest grade or level of schooling that you have ever completed?	☐ Some high school ☐ Some college credit ☐ Bachelor's degree	☐ High school or GED ☐ Associate degree☐ Graduate degree

Appendix C

HOME-BASED PROVIDER INTERVIEW PROTOCOL

1. Tell me about how you first started caring for children in your home.

    How long ago was that? Why did you start? What keeps you going?

2. Where do you see yourself in 5 years? In 10 years?

3. What are you most proud of about the work you do? Why?

    If someone was visiting your program/home for the first time, what would you want them to notice?

4. Is there anything you would like to change or improve in your program or in your own work?

5. In addition to caring for children, what else do you do as a provider in a typical week?

    Related to children? Related to families? Related to administration or running your business?

6. It's often said that home child care providers wear many hats or have many roles. What are some of the different roles you have? *(Write down the roles that they mention)*

    For each (if unclear): Tell me more about how you are a *(role)*.

    (Read back list of roles) Are there any roles you think we're missing? *(if so, add them to list)*

    Which of these roles is the most important to you? Why?

7. You mentioned some different roles. How do you manage all of these different roles? Is it ever challenging to balance them? How is it challenging?

8. Tell me about your relationships with the families of the children in your program.

    How would you describe those relationships? What types of things do you do for families?

9. Tell me about how you decide what you are going to do with the children each day.

    How do you come up with ideas for activities? Do you use a curriculum or any resources to help you plan? When do you usually plan? How much time do you spend planning? Can you give me an example of an activity you planned in the last week?

10. Tell me about opportunities you have to work with:

    Other providers? Programs in the community? Statewide programs (like Stars, Early Childhood Mental Health, Professional Development system)

    About each: Do you think these help you in your work? Why or why not?

11. If there was a new project or agency in Delaware that was trying to provide support to home-based child care providers, what could they do that you think would be helpful?

12. Families have different options for child care. Why do you think some families choose home-based child care?

13. What might you tell someone who was thinking about starting to care for children in their own that they may not know?

Appendix D

FAMILY PROVIDER/TEACHER RELATIONSHIP QUALITY QUESTIONNAIRE

1. Since September, how often have you met with or talked to parents about the following regarding *their child*?

[MARK ONE BOX IN EACH ROW.]

		Never	Rarely	Sometimes	Very often
a.	Their child's experiences in the education and care setting	☐	☐	☐	☐
b.	Their child's abilities	☐	☐	☐	☐
c.	Their child's learning	☐	☐	☐	☐
d.	Problems their child is having in the education and care setting	☐	☐	☐	☐
e.	What to expect at each stage of their child's development	☐	☐	☐	☐
f.	How their child is progressing towards developmental milestones	☐	☐	☐	☐
g.	Goals parents have for their child	☐	☐	☐	☐
h.	How their child is progressing towards the parents' goals	☐	☐	☐	☐

2. Since September, how often have you met with or talked to parents about the following regarding *the education and care their children receive*?

[MARK ONE BOX IN EACH ROW.]

		Never	Rarely	Sometimes	Very often
a.	Your expectations for the children in your care	☐	☐	☐	☐
b.	The rules you have for children in your care	☐	☐	☐	☐
c.	How they feel about the education and care you provide	☐	☐	☐	☐

3. Listed below are some things families may or may not share with you. Thinking about the children and families you serve, for how many children and their families do you know the following?

I know...

[MARK ONE BOX IN EACH ROW.]

		None	Some	Most	All
a.	If children have siblings	☐	☐	☐	☐
b.	If children have other adult relatives living in their households	☐	☐	☐	☐
c.	Their parents' schedules	☐	☐	☐	☐
d.	The marital status of children's parents	☐	☐	☐	☐
e.	The parenting styles of children's parents	☐	☐	☐	☐
f.	The employment status of children's parents	☐	☐	☐	☐
g.	Their financial situation	☐	☐	☐	☐
h.	The role that faith and religion play in children's households	☐	☐	☐	☐
i.	Their cultures and values	☐	☐	☐	☐
j.	What their families do outside of the education and care setting to encourage their children's learning	☐	☐	☐	☐
k.	How parents discipline their child	☐	☐	☐	☐
l.	Changes happening at home	☐	☐	☐	☐

4. Since September, how often have you been able to do the following?

[MARK ONE BOX IN EACH ROW.]

		Never	Rarely	Sometimes	Very often
a.	Share information with parents about their children's day	☐	☐	☐	☐
b.	Offer parents books and materials on parenting	☐	☐	☐	☐
c.	Suggest activities for parents and children to do together	☐	☐	☐	☐

5. We would like to learn about how you and the families of children in your program work together.

How often are you able to do the following?

[MARK ONE BOX IN EACH ROW.]

		Never	Rarely	Sometimes	Very often
a.	Answer parents' questions when they come up	☐	☐	☐	☐
b.	Work with parents to develop strategies they can use at home to support their child's learning and development	☐	☐	☐	☐
c.	Set goals with parents for their child	☐	☐	☐	☐
d.	Offer parents ideas or suggestions about parenting	☐	☐	☐	☐
e.	Provide parents the opportunity to give feedback about your performance	☐	☐	☐	☐

6. Please indicate how much you agree or disagree with each of these statements.

[MARK ONE BOX IN EACH ROW.]

		Strongly disagree	Disagree	Agree	Strongly agree
a.	I am open to using information on new and better ways to teach and care for children	☐	☐	☐	☐
b.	I encourage parents to provide feedback on my care and teaching practices	☐	☐	☐	☐
c.	I encourage parents to make decisions about their children's education and care	☐	☐	☐	☐
d.	Even though my professional or moral viewpoints may differ, I accept that parents are the ultimate decisionmakers for the care and education of their children	☐	☐	☐	☐

7. When planning activities for children in your program, how often are you able to take into account the following?

[MARK ONE BOX IN EACH ROW.]

		Never	Rarely	Sometimes	Very often
a.	Information parents share about their children	☐	☐	☐	☐
b.	Families' values and cultures	☐	☐	☐	☐

8. Please indicate how much you agree or disagree with each of these statements.

[MARK ONE BOX IN EACH ROW.]

		Strongly disagree	Disagree	Agree	Strongly agree
a.	Sometimes it is hard for me to support the way parents raise their children	☐	☐	☐	☐
b.	Sometimes it is hard for me to support the way parents discipline their children	☐	☐	☐	☐
c.	Sometimes it is hard for me to support the goals parents have for their children	☐	☐	☐	☐
d.	Sometimes it is hard for me to work with parents who do not share my beliefs	☐	☐	☐	☐

9. People work in care and education settings for many reasons. Please indicate how much you agree or disagree with the following statements:

[MARK ONE BOX IN EACH ROW.]

		Strongly disagree	Disagree	Agree	Strongly agree
a.	I teach and care for children because I enjoy it	☐	☐	☐	☐
b.	I see this job as *just* a paycheck	☐	☐	☐	☐
c.	I teach and care for children because I like being around children	☐	☐	☐	☐
d.	If I could find something else to do to make a living I would	☐	☐	☐	☐

10. People vary in what they consider part of their job. Please indicate how much you agree or disagree with the following statements.

Part of my job is to...

[MARK ONE BOX IN EACH ROW.]

		Strongly disagree	Disagree	Agree	Strongly agree
a.	Help families get services available in the community	☐	☐	☐	☐
b.	Offer parents information about community events	☐	☐	☐	☐
c.	Respond to issues or questions outside of normal care hours	☐	☐	☐	☐
d.	Change my work schedule in response to parents' work or school schedule	☐	☐	☐	☐
e.	Learn new ways to teach and care for children	☐	☐	☐	☐
f.	Change activities offered to children in response to families' feedback	☐	☐	☐	☐

11. In the last ten years, have you received training or coursework on how to recognize signs of:

[MARK ONE BOX IN EACH ROW.]

		Yes	No
a.	Developmental delays in children	☐	☐
b.	Child abuse and neglect	☐	☐
c.	Domestic violence	☐	☐
d.	Substance abuse	☐	☐
e.	Depression or mental health issues in parents	☐	☐
f.	Hunger	☐	☐

12. Since September, have you personally helped families in any of the following ways:

[MARK ONE BOX IN EACH ROW.]

		Yes	No
a.	Encouraged families to seek or receive services?	☐	☐
b.	Made appointments or arrangements for families to receive services they need?	☐	☐
c.	Helped families find services they need?	☐	☐

The next set of questions asks about your background.

13. Are you of Hispanic or Latino origin?

[MARK ONLY ONE BOX.]

☐ **Yes**
☐ **No**

14. What is your race?

[MARK ALL THAT APPLY.]

☐ White

☐ Black or African American

☐ American Indian or Alaska Native

☐ Asian Indian

☐ Chinese

☐ Filipino

☐ Japanese

☐ Korean

☐ Vietnamese

☐ Other Asian

☐ Native Hawaiian

☐ Guamanian or Chamorro

☐ Samoan

☐ Other Pacific Islander

15. Do you have a Child Development Associate (CDA) credential?

[MARK ONLY ONE BOX.]

☐ **Yes**

☐ **No**

16. What is the highest level of education you have completed?

[MARK ONLY ONE BOX.]

☐ Less than a high school diploma

☐ High school diploma or GED

☐ Some college, no degree

☐ Associate's degree

☐ Bachelor's degree

☐ Graduate school degree

Appendix E

FIELD NOTES RECORDING FORMS

Number present during the observation: _____ adults ____ children

Age of Focal Child: _____

Describe the environment (size of space used, arrangement of space and materials, display, etc.):

Generally, what types of activities occurred while you were present? (outdoor free play, group time, meal, etc.)

How do you think the focal child's experience compared to the rest of the children's experiences?

What were your overall impressions of the provider and program?

Were there any unusual circumstances during your visit? (ex. visitors, sick child, fire drill, etc.)

CYCLE _____ (complete after each CCAT-R cycle)

Time recording notes: _____

Write a brief description of what the provider was doing during this cycle.

What were the children doing? (Was the experience of the other children similar to that of the focal child?)

Describe the program climate (demeanor of children and provider, level of engagement and responsiveness, chaos/calm).

Any other notes:

Appendix F

FULL ROLE TABLE FOR STUDY 3 PARTICIPANTS

Name	Profile	Admini-strator	Teacher	Extension of the Family	Support to Parents	Nurturer	Activity Coordinator	Custodial Caregiver	Cook	Disciplin-arian	Janitor	Nurse	Taxi	Total Roles
Sonja	RB	0	0	1	1	0	0	0	1	0	1	1	0	5
Peggy	RB	0	0	0	0	1	0	1	1	0	0	0	1	4
Helen	RB	0	1	1	0	0	0	1	1	0	1	1	0	6
Joy	I	1	0	1	1	1	1	1	1	0	1	0	0	8
Karen	I	0	0	0	0	0	0	1	0	1	0	1	0	3
Amy	SF	0	1	1	0	1	1	0	1	1	0	1	0	7
Elaine	SF	0	1	1	1	0	0	0	0	0	0	0	0	3
Shirley	SF	1	1	1	1	0	1	1	1	1	1	1	1	11
Jasmine	F/E	1	1	1	1	1	0	0	1	1	1	1	0	9
Megan	F/E	0	1	1	0	1	0	0	1	0	1	0	1	6
Cynthia	F/E	0	1	0	0	1	0	1	1	1	1	1	0	8
Andrea	F/E	1	0	0	1	1	0	0	1	0	1	1	0	6
Marilyn	HE	1	1	1	1	1	0	0	1	0	1	1	1	9
Lauren	HE	1	1	1	0	1	0	0	1	0	0	0	1	6
Elizabeth	HE	0	1	1	0	1	0	0	1	0	0	1	0	5

Note: RB = Relationship-Based, I = Informal, SF = Somewhat Formal, F/E = Formal/Educational, HE = Highly Engaged