Quality in Home-Based Child Care:
A Review of Selected Literature

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QUALITY IN HOME-BASED CHILD CARE: A REVIEW OF SELECTED LITERATURE

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OVERVIEW

Introduction

Millions of American families rely on home-based child care (HBCC), which is child care offered in a provider's home or the child's home. It is the most common form of nonparental child care for infants and toddlers and for children living in poverty.

HBCC encompasses providers who offer regulated family child care (FCC) and those who offer unregulated family, friend, and neighbor (FFN) care. Many HBCC providers face substantial challenges in providing high quality and sustainable care and in accessing resources and supports. Yet the research literature on child care quality focuses primarily on center-based care.

This report summarizes findings from a review of existing literature on the features of quality in HBCC settings and the provider and neighborhood characteristics that may influence these features.

Primary research questions

The literature review addressed five broad research questions:

1. How is HBCC defined in the research literature?
2. What are the features of quality in HBCC? In what ways do quality features in HBCC differ from quality features in other early care and education (ECE) settings?
3. In what ways do quality features vary by type of HBCC setting?
4. How do quality features of HBCC support positive provider, child, and family outcomes? What are the mechanisms that link quality to outcomes?
5. How do provider and neighborhood characteristics influence quality features in HBCC?

Purpose

This review is one component of the HBCC Supply and Quality project, funded by the Office of Planning, Research, and Evaluation in the Administration for Children and Families. This project is summarizing what is known about HBCC supply and quality; developing a research agenda to fill gaps in what we know; and conducting new research to answer important questions. The findings from this review will guide how the project team understands and approaches quality in its work on other project components, including a conceptual framework for HBCC quality, a review of quality measures in HBCC, development of new quality measures, and a research agenda.

Key findings and highlights

- *How is HBCC defined in the research literature?* The literature revealed wide variation in and a lack of consensus on descriptions and definitions of HBCC. The research broadly defined HBCC as nonparental child care that takes place in the provider's home or the child's home. Some research defined HBCC according to its regulatory status—that is, whether providers were licensed, registered, or listed (FCC) or unregulated or unlisted (FFN). Other research focused more narrowly on relative caregivers, most commonly grandparents.
- *What are the features of quality in HBCC? In what ways do quality features in HBCC differ from quality features in other ECE settings?* The review identified four broad components of quality in HBCC: (1) home setting and learning environments; (2) provider-child relationships; (3) provider-family relationships and family supports; and (4) conditions for operations and sustainability. Each of these four components has several quality features. Several quality features may be more likely to occur in HBCC settings, or to be implemented differently there than in other ECE settings such as center-based care. For example, some HBCC providers offer care for children of mixed ages and offer care during nontraditional hours like evenings and weekends. Many qualitative studies described continuity of care, close-knit relationships, and logistical supports to families as common in HBCC settings. These studies hypothesized that these features are important aspects of HBCC that may support children's social and emotional development as well as parents' well-being.
- *In what ways do quality features vary by type of HBCC setting?* Most research concentrated on FCC providers. Few studies examined quality components and related features in FFN settings, although there is more research on care by relatives (mostly grandparents) than on care from friends or neighbors.
- *How do quality features of HBCC support positive provider, child, and family outcomes? What are the mechanisms that link quality to outcomes?* There is more evidence in the research literature on quality features that are found across ECE settings than on quality features that may be more likely to occur or to be implemented differently in HBCC settings. These gaps in evidence are critical because they might explain results from prior research that had found lower quality of care in HBCC than in other ECE settings. Across studies, there is more evidence of links between quality features and child outcomes than evidence of links to family or provider outcomes.
- *How do provider and neighborhood characteristics influence quality features in HBCC?* Ample evidence detailed how provider characteristics interact with quality components and features in HBCC. Literature described the importance of neighborhood context in parenting and children's developmental outcomes. Although the literature on neighborhood context did not specifically examine HBCC settings, findings about how it contributes to parenting practices have implications for HBCC caregiving practices.

Methods

The review includes 29 literature reviews and 59 primary research articles, including peer-reviewed articles and grey literature. With a few exceptions, they were published after a 2010 review on HBCC quality (Porter et al. 2010). The review documents the types of evidence and types of HBCC settings described in these publications, along with evidence of the mechanisms that link features of quality to provider, child, and family outcomes.

Recommendations

Several gaps in the literature suggest directions for future research.

- Future research needs to more explicitly center on Black, Latinx, Indigenous, and other providers, families, and children from historically marginalized groups and should examine how HBCC settings contribute to equitable outcomes for children, including racial and ethnic identity and resilience for children of color and other marginalized groups.
- Future research is needed on school-age children and children with disabilities in HBCC settings.
- More research is needed on quality features in FFN settings.
- Future research is needed to examine how features of quality that may be implemented differently or more likely to occur in HBCC are associated with child, family, and provider outcomes.
- There is a need for research that (1) uses mixed methods like observation and qualitative interviews, (2) examines provider practices and outcomes over time, and (3) investigates HBCC quality features and how they directly and indirectly shape child and family outcomes using experimental research designs.

EXECUTIVE SUMMARY

Introduction

Millions of American families rely on home-based child care (HBCC), which is child care offered in a provider's home or the child's home. It is the most common form of nonparental child care for infants and toddlers and for children living in poverty (National Survey of Early Care and Education [NSECE] Project Team 2016).

HBCC encompasses providers who offer regulated family child care (FCC) and those who offer unregulated family, friend, and neighbor care (FFN). Many HBCC providers face substantial challenges in providing high quality and sustainable care and in accessing resources and supports (Porter et al. 2010). Yet the research literature on the quality of child care focuses on center-based care.

This report summarizes findings from a review of existing literature on the features of quality in HBCC settings and the provider and neighborhood characteristics that may influence these features.

Primary research questions

The literature review addressed five broad research questions:

1. How is HBCC defined in the research literature?
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5. How do provider and neighborhood characteristics influence quality features in HBCC?

Purpose

This review is one component of the HBCC Supply and Quality project. The Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families (ACF) contracted with Mathematica, Erikson Institute, and Toni Porter to conduct the project. The findings from this review will guide how the project team understands and approaches quality in its work on other project components, including a conceptual framework for HBCC quality, a review of quality measures in HBCC, development of new quality measures, and a research agenda.

The HBCC Supply and Quality project is:

- Summarizing what is known about HBCC supply and quality
- Analyzing existing data on HBCC supply and quality
- Developing a research agenda to fill gaps in what we know about HBCC supply and quality
- Conducting new research and developing measures to answer important questions

Methods

The review includes 29 literature reviews and 59 primary research articles, including peer-reviewed articles and grey literature. With a few exceptions, they were published after a 2010 review on HBCC quality (Porter et al. 2010). The review documents the types of evidence and types of HBCC settings described in these publications, along with evidence of the mechanisms that link features of quality to provider, child, and family outcomes.

The review unfolded in two stages: (1) reviewing existing literature reviews and (2) reviewing primary research articles. Before reviewing existing reviews or articles, the project team started with an initial set of quality features that had been hypothesized in a draft conceptual framework based on a previous conceptual framework for HBCC quality (Blasberg et al. 2019) and the team's knowledge of existing research and practice. If existing reviews had limited evidence about quality features, the team prioritized the identification of primary research on those features.

Key findings and highlights

1. *How is HBCC defined in the research literature?*

The literature revealed wide variation in and a lack of consensus on descriptions and definitions of HBCC. The research broadly defined HBCC as nonparental child care that takes place in the provider's home or the child's home. Some research defined HBCC according to its regulatory status—that is, whether providers were licensed, registered, or listed (FCC) or unregulated or unlisted (FFN). Other research focused more narrowly on relative caregivers, most commonly grandparents. Throughout the literature review we describe the type of HBCC setting (FCC, FFN, or relative care only) that we found evidence on, and how evidence for quality features might differ across HBCC settings. We use the broader term HBCC when the research does not specify the type of setting.

2. *What are the features of quality in HBCC? In what ways do quality features in HBCC differ from quality features in other ECE settings?*

The review identified four broad components of quality in HBCC: (1) home setting and learning environments; (2) provider-child relationships; (3) provider-family relationships and family supports; and (4) conditions for operations and sustainability. Each of these four components has several quality features (Exhibit ES.1). The review also explored two broad contextual factors that may influence quality features in HBCC: provider and neighborhood characteristics (Exhibit ES.2).

Exhibit ES.1. Components, subcomponents, and quality features in HBCC

Components	Home setting and learning environments	Provider-child relationships	Provider-family relationships and family supports	Conditions for operations and sustainability
Subcomponents	**Physical environment and setting**	**Provider support for children's development**	**Relational supports**	**Working conditions**
Quality features	• Group size and adult-child ratios • Indoor and outdoor space • Use of community spaces as extension of child care • Health and safety • Family-like settings • Care offered during nontraditional hours	• Support for children's emotional development • Support for children's language, literacy, and cognitive development • Support for children's social development • Support for children's physical development	• Family-like relationships and connections among families • Trust • Reciprocal communication • Facilitation of family engagement in children's learning	• Working alone • Work-family balance • Management of multiple roles
Subcomponents	**Learning environment and routines**	**Family-like relationships with children**	**Logistical supports**	**Business practices and caregiving resources**
Quality features	• Materials and organized environment • Curricula • Intentional learning activities • Opportunities for informal learning	• Close provider-child relationships • Support for mixed-age peer interactions • Continuity of care • Cultural congruence	• Flexibility • Resources and referrals for families • Help with non-child–care tasks	• Business practices • Program policies • Access to business supports • Access to and participation in support communities

Exhibit ES.2. Provider and neighborhood characteristics that may influence quality features in HBCC

Provider characteristics	Neighborhood characteristics
Provider background in ECE – Sources of knowledge about children and caregiving – Professional development – Years of experience **Provider attitudes** – Motivations – Professional identity – Caregiving beliefs, cultural values, and racial identity **Provider health and well-being** – Provider psychological health – Provider physical health – Provider financial and economic well-being	**Neighborhood structural characteristics** (such as crime; disadvantage) **Neighborhood social processes** (such as collective efficacy; social cohesion; neighborhood engagement)

Several quality features may be more likely to occur in HBCC settings, or may be implemented differently there than in other ECE settings such as center-based care. For example, HBCC providers are more likely to care for children of mixed ages (NSECE Project Team 2013) and to offer care during nontraditional hours like evenings and weekends (NSECE Project Team 2013). Many qualitative studies in our review described continuity of care, close-knit relationships, and logistical supports to families as common in HBCC settings. These studies hypothesized that these features are important aspects of HBCC that may support children's social and emotional development as well as parents' well-being. Yet the literature review found little or no evidence of correlational or causal links between these quality features and provider, child, or family outcomes.

3. In what ways do quality features vary by type of HBCC setting?

Across components of quality and provider and neighborhood characteristics, most of the research concentrated on FCC providers. Few studies examined quality components and related features in FFN settings, although we found more research on care by relatives (mostly grandparents) than on care from friends or neighbors.

4. How do quality features of HBCC support positive provider, child, and family outcomes? What are the mechanisms that link quality to outcomes?

Understanding how quality features support positive outcomes is necessary to design interventions and supports that build the supply of high quality HBCC, including FCC and FFN settings. For example, provider outcomes such as health and well-being are important for stability of the HBCC workforce. Child outcomes such as language and social-emotional development are important for future school success. Parental outcomes such as employment and reduced stress are important for family economic sustainability and positive parent-child relationships.

We found more evidence in the research literature on quality features that are found across ECE settings than on quality features that may be more likely to occur or to be implemented differently in HBCC settings. These gaps in evidence are critical because they might explain results from prior research that had found lower quality of care in HBCC than in other ECE settings.

Across studies, we found more evidence of links between quality features and child outcomes than evidence of links to family or provider outcomes. The most evidence of a link between quality features and child outcomes was found for features within the components (and subcomponents) of home setting and operations and provider-child interactions, as listed in ES 1. The limited evidence for family outcomes was in the provider-family relationships and family supports component, and evidence for associations with provider outcomes was found for features within the component of conditions for operations and sustainability.

5. *How do provider and neighborhood characteristics influence quality features in HBCC?*

Ample evidence detailed how provider characteristics interact with quality components and features in HBCC. Literature described the importance of neighborhood context in parenting and children's developmental outcomes. Although the literature on neighborhood context did not specifically examine HBCC settings, findings about how it contributes to parenting practices have implications for HBCC caregiving practices.

Recommendations

Several gaps in the literature suggest directions for future research. There is a relative lack of studies on HBCC that are based on samples of Black, Latinx, and Indigenous providers, families, and children, or those from other historically marginalized groups. This suggests that future research needs to more explicitly center on these groups. How HBCC settings contribute to equitable outcomes for children, including racial and ethnic identity and resilience for children of color and other marginalized groups, is critical to understanding the strengths of these settings. Other gaps include the lack of research on school-age children and children with disabilities in HBCC settings. In addition, more research is needed on quality features in FFN settings.

Future research is needed to examine how features of quality that may be implemented differently or more likely to occur in HBCC are associated with child, family, and provider outcomes. Prior research on HBCC is limited by the measures used and the features of quality examined, which largely are features common in center-based ECE settings (Doran et al. forthcoming).

Moreover, there is a need for research that uses mixed methods like observation and qualitative interviews. Most research is cross-sectional, with few studies examining provider practices and outcomes over time. There is also a need for experimental research designs that investigate HBCC quality features and how they directly and indirectly shape child and family outcomes.

GLOSSARY

HBCC: Home-based child care refers to any nonparental child care in the provider's own home or the child's home.

FCC: Family child care refers to home-based child care that is regulated, formal, and paid.

FFN: Family, friend, and neighbor care refers to unregulated, informal, or license-exempt home-based child care. It may also include care by relatives, most often grandparents.

ECE: Early care and education refers to all settings that offer care and education to young children.

I. INTRODUCTION

Millions of American families rely on home-based child care (HBCC). It is the most common form of care for infants and toddlers and for children living in poverty (National Survey of Early Care and Education [NSECE] Project Team 2016). On the important subject of improving the quality of child care, however, the research literature and policy discussions usually focus on care provided in centers.

Families choose HBCC for a variety of reasons (Porter et al. 2010). These include trust; shared culture, language, and child-rearing values; parents' nonstandard or unpredictable schedules; convenient locations; lower cost; a need for infant care; and a need for care of children with special needs or chronic illness. However, HBCC providers do not have the same access to resources and supports that staff in child care centers do, and many of them face substantial challenges as they work to provide quality care. These include lower rates of subsidy, exclusion from Quality Rating and Improvement Systems (QRISs), and isolation and stress (National Center of Early Childhood Quality Assurance [NCECQA] 2020a).

The Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families (ACF) contracted with Mathematica, Erikson Institute, and Toni Porter to conduct the Home-Based Child Care Supply and Quality (HBCCSQ) project. The project aims to synthesize what is known about HBCC supply and quality, analyze existing data on HBCC supply and quality, develop a research agenda to address gaps in knowledge about HBCC supply and quality, and conduct new research and develop measures to answer pressing research questions.

A. Purpose of the literature review and research questions

This literature review is one of the first activities conducted as part of the HBCCSQ project. Its focus is the small but growing body of research on quality features in HBCC and on provider and neighborhood characteristics as factors that may be related to quality in HBCC settings. The findings presented here, including findings on what the research gaps are, will inform how we understand and approach quality in other project activities, including the conceptual framework on quality in HBCC, review and development of quality measures, secondary data analyses, and development of a research agenda. This review did not examine the literature on other contextual factors, such as policies and regulations that apply to HBCC, available and accessible supports for HBCC, or the role of broader systemic inequities in HBCC providers' experiences of offering care and education. For example, systemic racism is a challenge long faced by marginalized communities of color, including HBCC providers from these communities. Yet only a handful of studies reviewed here intentionally examined how race, culture, or language might relate to how HBCC providers put quality features into practice (Freeman 2011; Jarrett et al. 2011; Paredes et al. 2018; Shivers et al. 2016a,b; Shivers and Farago 2016; Satkowski et al. 2016; Tonyan 2017). Future literature reviews and

syntheses need to intentionally examine research on the contextual and systemic factors that may influence practices and associated outcomes in HBCC settings.

The review builds on the work of previous literature reviews—particularly the wide-ranging review by Porter et al. (2010)—and on previous conceptual frameworks such as Blasberg et al. (2019). These earlier reports were used to identify gaps in research evidence that guided our search process. This literature search focuses on research published since the 2010 review (and not included in the 2019 framework), but it does include a small number of studies published in 2010 or before.[1] Instead of reviewing all literature on HBCC quality that was published in this time frame, we examined fewer studies in detail, specifically: (1) existing literature reviews of articles on topics related to HBCC quality, and (2) primary studies on or related to aspects of HBCC quality. We used an iterative process, described below in Section I.C, to identify gaps in evidence on topics such as professional development and access to professional resources.[2] Although this review does not focus on research targeting quality improvement and professional development initiatives, including intervention research, we included literature review articles that examined this research to fill gaps in the research on features involving access to or receipt of these initiatives. We also examined provider and neighborhood characteristics as factors that might contribute to how quality is implemented in HBCC settings. We chose to examine these two factors because HBCC is often offered by only one provider and is rooted in a residential neighborhood. This review does not evaluate the quality of study designs, although detailed tables with sample size, study design, and method for each primary research study can be found in Appendix B. This review is a first step in identifying quality features in HBCC that can inform future reviews on interventions designed to improve those features.

The broad research questions for this review are:

1. How is HBCC defined in the research literature?
2. What are the features of quality in HBCC? In what ways do quality features in HBCC differ from quality features in other early care and education (ECE) settings?
3. In what ways do quality features vary by type of HBCC setting?
4. How do quality features of HBCC support positive provider, child, and family outcomes? What are the mechanisms that link quality to outcomes?
5. How do provider and neighborhood characteristics influence quality features in HBCC?

[1] Some seminal research reports were important to include because they introduced a key quality construct. In addition, some research reports published in 2008–2009 were not included in the review by Porter et al. (2010).

[2] We identified gaps in evidence throughout the search and review process for both literature review articles and primary research articles.

B. Road map of the report

The structure of this report is based on the research questions. Chapter II has findings on how HBCC is defined in the literature (Research Question 1), and provides some important context about HBCC. The chapter gives an overview of the prevalence of HBCC in the United States, a description of who uses it, and a summary of how the prevalence and usage of HBCC compare with those of other ECE settings. It also summarizes the level of quality in HBCC settings based on existing measures, and how HBCC quality compares with the quality of other ECE settings.

Findings on quality features (Research Question 2) are in Chapter III. We categorized quality features into four broad components: (1) home setting and learning environments; (2) provider-child relationships; (3) provider-family relationships and family supports; and (4) conditions for operations and sustainability. This chapter describes how specific quality features vary across types of HBCC settings (Research Questions 2 and 3). Finally, the chapter also presents research findings on the links between quality features and outcomes for providers, children, and families, and discusses the mechanisms that could explain these links (Research Question 4).

Chapter IV focuses on how provider and neighborhood characteristics can influence quality features in HBCC and on how these contextual factors vary across types of HBCC (Research Question 5). We found several articles on provider characteristics, and we initially considered provider characteristics a component of quality. However, we found that most of the research on provider characteristics focused on how they are inconsistently linked to other aspects of quality. Moreover, providers with the same characteristics (for example, years of experience) can vary in how they implement or approach caring for children or supporting families. Consequently, we categorized provider characteristics as a contextual factor. Based on our team's experience conducting research with HBCC providers, we also added a literature search on neighborhood characteristics to more accurately capture how HBCC is rooted in local neighborhoods and communities. We did not examine other potential contextual factors such as policy contexts or characteristics of parents and children, because those factors were outside the scope of this review.

Chapter V summarizes the findings and expands the discussion of their implications, gaps in the literature, and directions that research could take going forward. The references include the review bibliography and other cited literature. Tables with details on the process and methodology of the review, the study samples, and methods are in the appendices.

C. Process and methodology

We took an iterative approach to the review with a goal of ensuring that it covered as many HBCC quality features as possible. The review prioritized features that are either implemented differently in HBCC or are more likely to occur in HBCC than in other ECE

settings. We hypothesized an initial set of components and features in a draft conceptual framework, then updated and added to this list of features, and identified gaps in evidence throughout the search and review process for both literature review articles and primary research articles. A full list of quality features is in Chapter III.

Given resource constraints and our initial target number of about 50 articles, the team wanted to focus on the most informative sources. The review proceeded in two main stages:

- We reviewed existing literature review articles on HBCC or related topics that were published since the previous review by Porter et al. (2010). We included a few review articles published before 2010 that studied a key quality construct.
- We reviewed primary literature on HBCC quality features that was published in the same time frame. A few articles that were published before 2010 were included because they are especially important for understanding a quality construct or because they had not been published in time to be included in the Porter et al. (2010) review.

This process is detailed below.

1. First stage of the search: reviewing existing literature reviews

We identified existing literature review articles based on the project team's knowledge and on the results of targeted searches. More information about the search process can be found in Appendix A. The goal was to include all review articles that directly focused on HBCC quality and key articles that covered topics or features relevant to HBCC quality. We included literature review articles from related fields such as pediatrics, sociology, parenting, family support, child welfare, cultural studies, and disability studies because researchers in these fields also study children in HBCC settings, or the research settings have features like the ones in HBCC settings. For example, we include literature on parenting because some HBCC providers, such as relatives, interact with children in ways that could look more like parenting than formal ECE. Literature review articles included systematic research reviews, syntheses, and meta-analyses. They included both peer-reviewed articles and grey literature. Existing review articles also included reviews of interventions both in HBCC and in related ECE settings.

In searching for existing literature review articles, we aimed to avoid redundancy of studies cited in more than one review. For the most part, reviews focused on different topics and consequently covered distinct sets of articles. In a few cases, literature review articles included some of the same research. For example, both Porter et al. (2010) and Susman-Stillman and Banghart (2011) reviewed HBCC literature: the former studied HBCC in general, and the latter focused on family, friend, and neighbor (FFN) care.

We selected and reviewed 21 existing literature review articles during this first phase. In our search for primary articles (described below) we identified 8 more literature review articles that included HBCC or addressed a gap such as research on school-age child care.

2. Second stage of the search: reviewing primary articles

For primary literature, we conducted a wide-ranging search for both peer-reviewed literature and grey literature (such as federal agency reports and white papers). As the review of primary literature progressed, we used the results of our initial searches and article selections to conduct more searches using updated terms and to "snowball search"[3] for articles to fill gaps in the research.

a. Searching articles

We searched for terms related to the initial list of features in the draft conceptual framework. We also used terms to capture various types of HBCC settings, such as grandparent care or informal care. We did not search for the terms "nanny" or "babysitter." We specifically included terms that were not examined in the existing literature review articles, such as mixed ages, continuity of care, or school-age child care. Appendix A lists the specific search terms.

We conducted formal searches of journal databases and websites, supplemented by asking five experts about literature on specific topics. We primarily searched for literature focused on HBCC settings, but also searched for research on other ECE and non-ECE settings, such as school-based after-school programs.

Our primary literature searches yielded a total of 1,677 articles across journal databases, the Child Care and Early Education Research Connections database, search engines and other websites, and recommendations from experts and other snowball sampling (Exhibit I.1). We took steps to minimize duplicate results. For example, we used automatic de-deduplication procedures on each journal database search, and, for the Research Connections search, we filtered out journal articles to avoid overlap with the journal database searches. However, in some cases the same article turned up in more than one search method, so these counts include a few duplicate results.

[3] In a snowball search, the first searches inform the later searches. For example, primary articles in our first round of searches revealed new search terms to use in the second round of searches for primary research, and we used the bibliographies in book or journal articles as a source of other relevant research articles on the subject.

Exhibit I.1. Primary literature search and prioritization

Step of review	Number of articles
Articles found in the search	1,677
Journal databases	1,022
Child Care and Early Education Research Connections database	294
Search engines and other websites	306
Recommendations from experts and other snowball sampling	55
Articles found eligible and rated as higher priority	170
Articles selected and reviewed	67

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: The number for each search method represents the unique number of articles found for that method. In some cases, an article was found through more than one method, so the total number of articles includes some duplicate results.

b. Selecting articles

For the primary literature, we screened out articles if they: (1) were not published in English, or took place in countries that do not participate in the Programme for International Student Assessment (PISA);[4] (2) were not about HBCC or related fields;[5] (3) did not address the research questions for this review (for example, they did not address quality features in HBCC or related settings); or (4) did not present or describe findings from theoretical or empirical research. (For example, we did not review technical assistance documents.) We reviewed article abstracts as a way of efficiently assessing the relevance of each article. If the article seemed promising, but the abstract was missing or not detailed enough, we looked at the full text of the article.

Resource constraints kept us from reviewing every relevant article, so we used five criteria to prioritize articles to review. The first criterion was to include quality features that may be implemented differently in HBCC settings or be more likely to occur there than in other ECE settings. A list of these features was derived from the literature reviews and the previous conceptual model (Blasberg et al. 2019). Examples of these features included mixed-age groups (HBCC settings often have a wide range of ages, from infant to school age, whereas centers may care for a narrower range of age groups, such as ages 3 to 5) and nontraditional hour care. We also iteratively updated and added to this list of features as the review progressed and we identified more features. For example, the feature of opportunities for informal learning emerged from our literature review, and this was added as a quality feature that may be more likely to occur in HBCC settings.

We considered four additional criteria when selecting primary articles to include: (1) a study presented empirical evidence on the processes linking quality features to child

[4] Countries that do not participate in the PISA have less advanced economies, and their child care contexts would not be comparable to those in the United States.

[5] We excluded articles that examined care by nannies or babysitters without examining any other types of HBCC.

and family outcomes; (2) an article addressed gaps in quality features identified from the review of existing literature review articles; (3) a study was conducted in HBCC settings; and (4) a study had a novel sample—that is, the researchers were not analyzing the same study or sample that was the subject of another selected article.[6]

For some quality features, such as support for physical health and development, we found many articles on a single dimension of the feature (for example, obesity prevention in HBCC). We prioritized the studies that rated high on the criteria described above (for example, they included HBCC). For other features, such as mixed-age groups, this review found little to no literature on HBCC settings, and we had to search for articles about those features in other ECE settings. Our goal was to include more than one article for each feature identified in our review.

Through the search and prioritization process, we rated 170 primary research articles as higher priority, and selected the 59 rated as highest priority to review. In the search for primary articles, we also found and included 8 more articles from literature reviews or meta-analyses that we had not identified in the first stage, so the list of articles from this second stage includes those reviews.

In addition to our review of existing literature review articles and primary articles, we cite several research articles as context for this review. For example, in Chapter II we cite several studies that examine the prevalence of and levels of quality in HBCC in the United States. Section C of the reference list contains these articles.

3. Process for reviewing existing literature review articles and primary research articles

We used a standardized template to extract information from each article we reviewed. (A list of fields in each template can be found in Appendix A.) For both existing literature review articles and primary research articles, we documented information about the study's background, context, and methodology. For each existing literature review article, we summarized findings across the articles included in the review. For primary literature, we used the broad components of quality (for example, provider-child relationships) to structure the template, and used separate fields to describe any evidence of links between specific quality features and outcomes. Our review process also documented types of evidence and types of HBCC providers, as well as evidence of the mechanisms that link quality features to outcomes. Chapters III and IV describe the types of evidence examined in this review in detail.

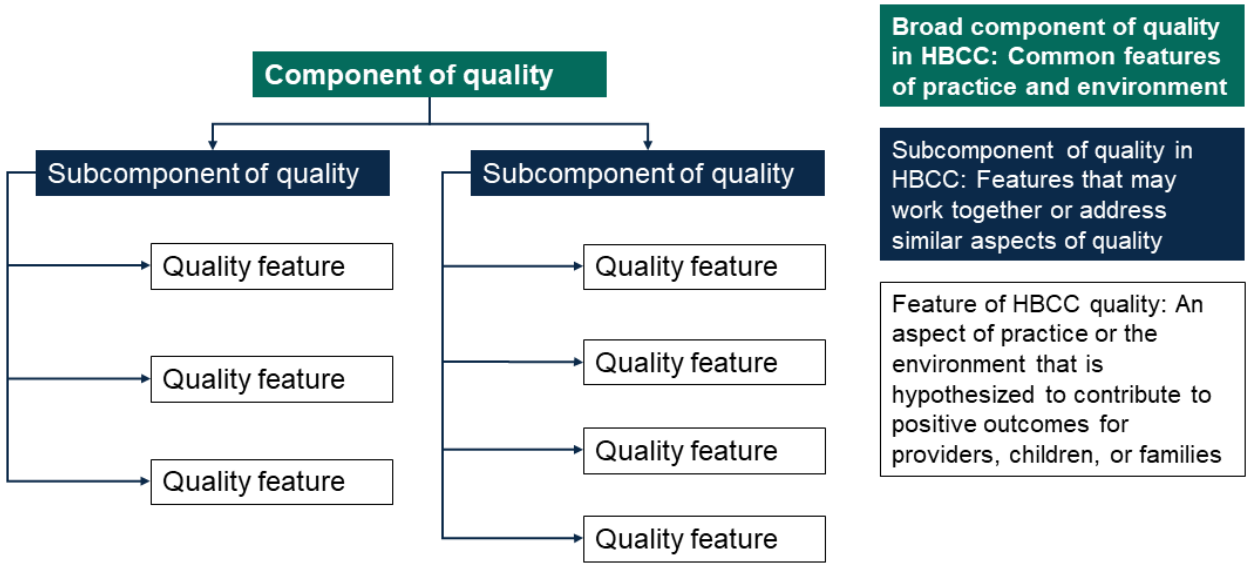
[6] Although we focused on primary articles that had been published since 2010, and we had selected several existing review articles because they focused on primary studies before 2010, it is possible that some primary articles were on studies discussed in existing review articles.

4. Process for analyzing findings from reviews

After we finished these reviews, we refined the list of quality features and organized them into broad components and subcomponents of quality. Components of quality capture common features of practice and the environment in HBCC. Based on similarities of and differences between the quality features, we used a consensus approach to organize the features into subcomponents within each broad component of quality. Subcomponents are also included to further delineate groups of features that may work together or address similar aspects of HBCC settings and practice (Exhibit I.2).

Sometimes a quality feature is related to more than one component (for example, cultural congruence). If so, we grouped it under the component it was more closely connected to based on how the feature was connected to outcomes. For example, research indicates that cultural congruence contributes to provider-child interactions and children's emotional attachment, so we put it under provider-child relationships. We followed the same categorization process for provider characteristics and neighborhood characteristics.

Exhibit I.2. Definitions and structure of components, subcomponents, and quality features in HBCC



D. Overview of the literature reviewed

This review encompassed 29 literature review articles and 59 primary articles (Exhibit I.3). Next, we describe (1) the characteristics of the review and primary articles and (2) the characteristics of the samples in the 59 primary research articles. Detailed tables on individual primary studies, including sample size and characteristics, are included in Appendix B. Characteristics of the sample were not calculated for the 29 literature review articles.

Most of the primary articles were peer reviewed: just 10 of the 59 were grey literature. The existing literature review articles were evenly split between peer-reviewed articles and grey literature. Ten primary articles reported on studies that were conducted outside of the United States, primarily in the United Kingdom and Australia. Close to three-quarters (73 percent) of the primary articles reported on studies in the United States; two-thirds of the U.S. studies had single-state samples; and the rest were equally divided between those that used multistate samples and those with national samples.

Exhibit I.3. Article characteristics

	Number of literature review articles	Number of primary articles
Review stage		
First stage of review	21	n.a.
Second stage of review	8	59
Field of study		
Early care and education	23	55
Related fields	6	4
Article type		
Peer reviewed	15	49
Grey literature	14	10
Setting		
United States only	n.a.	43
One state	n.a.	27
Multistate	n.a.	8
National	n.a.	8
International only	n.a.	10
Not described	n.a.	6
TOTAL	**29**	**59**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

n.a. = not applicable.

Most of the articles (49 articles; 81 percent) in this literature review included HBCC in their samples, and 32 articles focused exclusively on HBCC samples. FCC providers were the most common type of HBCC provider in the primary study samples, with more than one-third of studies focusing exclusively on FCC providers, and up to 69 percent including FCC providers in the sample (Exhibit I.4). By comparison, 14 percent of the studies had samples that included only FFN caregivers. Only one of these studies had a sample that focused exclusively on relative caregivers. Just three studies included nannies or babysitters in their samples, and that was in addition to other types of HBCC providers. In slightly more than one-quarter of the studies (27 percent), the sample included both HBCC providers and center providers. More than half of the studies that included HBCC did not report on the location of care. Of the 22 articles that included location of care, more than four in five (82 percent) reported that care only took place in the provider's home.

Slightly more than half (54 percent) of the studies did not report the provider's race or ethnicity (Exhibit I.4). Of the 27 studies that did report these data, more than half had majority White samples. Only 7 studies included samples in which Black providers were the majority, and two samples were majority Latinx.

More than half the studies reported on providers' education (58 percent). In about one-third of the 34 studies reporting these data, the majority of the providers reported some college, and 15 percent reported that providers held a bachelor's degree or higher.

Exhibit I.4. Sample characteristics: providers

	Number of primary articles
Provider type	
HBCC providers only	5
FCC only	20
FFN only	7
Relatives only	1
HBCC and centers	16
Centers only	6
Related care settings only (for example, parents, after-school programs)	4
Provider location	
Provider's own home only	18
Child's home only	0
Both provider's and child's home[1]	4
Not described	27
Not applicable	10
Provider race/ethnicity[2]	
Majority White (50%+)	14
Majority Black (50%+)	7
Majority Latinx (50%+)	2
No majority or other	4
Not described	18
Not applicable (no provider sample)	14
Provider level of education[2]	
Majority bachelor's degree or higher (50%+)	5
Majority some college/associate degree (50%+)	11
Majority high school or less (50%+)	5
No majority or other	13
Not described	11
Not applicable (no provider sample)	14
Total number of articles	**59**

[1] Three of these articles may include nannies or babysitters.

[2] Appendix B has details about each study's sample demographics and characteristics.

Two-thirds of the 34 studies that included children or families reported on the racial or ethnic characteristics of the sample of children (Exhibit I.5). Of these 21 studies, about equal proportions were based on samples of children that were majority White or majority Black; only one sample of children in one study was mostly Latinx.

We determined family income status by (1) whether the sample included families and specified their income status as defined by the federal poverty level, or by their

participation in subsidy, Head Start, or other government funding such as Temporary Assistance for Needy Families (TANF), or (2) whether the sample included providers who served families receiving a child care subsidy, participating in Head Start, or participating in other government funding for families with low incomes, such as TANF. One-third of the studies in this review included samples of families with low incomes or samples of providers serving families with low incomes.

Of the 46 studies in this review that reported data on children's ages or otherwise described the age range of the children in the settings involved, close to three-quarters included only children ages 5 and younger (Exhibit I.5). Only 8 studies included samples that exclusively focused on infants and toddlers (birth to age 3).

No primary research studies in this review focused exclusively on school-age children (ages 5 to 18). However, more than one-quarter of the studies included children up to age 18 (Exhibit I.5). A small proportion of study samples in this review included children with disabilities: only 6 of the 59 studies indicated that the sample of children or the setting involved included children with special needs.

Exhibit I.5. Sample characteristics: children and families

	Number of primary articles
Child/family race/ethnicity	
Majority Black (50%+)	8
Majority White (50%+)	7
Majority Latinx (50%+)	1
No majority or other	5
Not described	13
Not applicable (no child/family sample)	25
Family income status	
Focus on children and families with low incomes[1]	18
Does not focus on children and families with low incomes	39
Not applicable	2
Child age	
Early childhood, birth to 5	
Infant/toddler only (birth to 3)	8
Preschool only (3–5)	13
All early childhood (birth to 5)	13
School-age	
School-age only (5–18)[2]	0
All ages (birth to 18)	12
Not described	13
Child with a disability status	
Yes	6
No or not stated	53

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

[1] This includes studies with samples of families and children with low incomes and studies with samples of providers serving families and children with low incomes.

[2] This review included only three articles that focused exclusively on school-age children, and all three were literature reviews, not primary research studies. We did not calculate sample descriptions for literature reviews.

II. OVERVIEW OF HBCC

This chapter addresses the first research question: How is HBCC defined in the research literature? The lack of consensus on how to define HBCC presents an array of challenges for researchers seeking to understand what quality looks like in these settings and what role these providers play in the lives of children and families. This chapter presents an overview of how HBCC is defined in the research literature and offers context for the rest of the report, summarizing the research on the prevalence of HBCC in the United States and how quality is measured in HBCC compared to other ECE settings such as centers, preschools, and Head Start programs. We acknowledge that part of the challenge in defining HBCC is categorizing types of HBCC arrangements. Caution is needed in interpreting these categories given the inconsistencies in state policies and regulations. Specifically, a provider who is unregulated or exempt in one state may be required to be licensed in another state. Although typologies may be helpful to narrow the scope of a research study, they can also inadvertently lead to inequitable comparisons across HBCC providers who have different access to resources and supports.

A. How is HBCC defined in the research literature?

Our review found a wide variety of descriptions and definitions of HBCC. Some researchers defined HBCC as care that takes place in the provider's home, whereas other researchers defined HBCC as nonparental and noncustodial care that may take place in the child's home. Three studies in this review, for example, included nannies who care for children in the child's home. Still other research defined types of HBCC settings more narrowly based on regulatory status—that is, whether the HBCC setting was or was not licensed, certified, or registered. Some studies defined regulated HBCC as formal care, and unregulated or exempt HBCC as informal care. These definitions, especially license-exempt qualifications, varied across state policy contexts[7] and, for the international studies, national policy contexts. A few articles limited their focus to HBCC providers who were paid to care for children.

Our review revealed a lack of consensus on terminology for different categories of HBCC (Exhibit II.1). Family child care (FCC) was most commonly used to refer to regulated, formal, and paid HBCC. Family, friend, and neighbor care (FFN) was most commonly used to refer to unregulated, informal, or license-exempt HBCC. Some studies focused specifically on child care by relatives, usually grandparents, as a distinct subcategory within the broader FFN term. Grandparent care could take place in the grandparents' own home and/or the child's home if the grandparents live with their

[7] For example, some states require providers to be licensed if they care for one child who is not related to them, whereas other states exempt providers from licensing regulations if they provide care for up to four children who are not related to them (NCECQA 2020b).

grandchildren. Some international studies used the term home-based child care without making distinctions about types of home-based care. Research on child care in England used the term “child minder” for FCC.

The NSECE has the most comprehensive and nationally representative data on the U.S. ECE workforce. The NSECE uses different terminology to define HBCC, defining HBCC providers as individuals who regularly provide care in a home setting for children younger than age 13 who are not their own (NSECE Project Team 2015c). These providers are grouped into two broad categories: (1) listed providers, who were sampled through state or national administrative lists, and (2) unlisted providers, who were identified through a household survey and regularly cared for a child who was not their own in a home setting at least five hours a week. The unlisted providers were grouped into two categories: those who were paid, and those who gave care without being paid. Although the NSECE project team (NSECE Project Team 2016) does not use the terms FCC and FFN care, they do offer a specific set of criteria for defining FCC. Criteria for FCC providers are: (1) paid to care for one or more children, (2) has no prior relationship with at least one child in care, and (3) child care is offered in the provider’s own home.

The National Center on Early Childhood Quality Assurance uses an additional set of definitions to distinguish between large and small regulated FCC homes. Small FCC homes have a sole provider, whereas large FCC homes have two or more providers (NCECQA 2020a).

Exhibit II.1. Terms and language used in defining types of HBCC settings

Family child care	Family, friend, and neighbor care
• Regulated • Licensed • Registered • Certified • Formal • Listed • Child minder	• Unregulated • Unlicensed • License-exempt • Relative care • Unlisted • Informal

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

B. How prevalent is HBCC in the United States, and who uses it? How do prevalence and usage compare with other ECE settings?

We begin the comparison by presenting data on overall numbers of providers and ages and characteristics of children in care across HBCC and center-based settings. Next, we present data on how use of HBCC and center-based care varies by family characteristics such as income, work hours, and race/ethnicity. We then examine the prevalence of different types of HBCC, including current trends in HBCC supply.

We reference several sources for these findings, many of which are not included in our primary literature review counts because they are used to frame the literature review

findings. For example, we reference the 2012 National Survey of Early Care and Education (NSECE) reports, which have the most currently available comprehensive data on the ECE workforce in the United States, including HBCC settings.[8]

There are many more HBCC providers than center-based teachers, and HBCC providers care for about as many young children as center-based programs do. The 2012 NSECE data on HBCC settings reveal both the prevalence of HBCC compared to other ECE types and the prevalence of certain quality features and provider characteristics.

The number of HBCC providers far exceeds the number of center providers: In 2012, there were approximately 3.8 million HBCC providers offering care to almost 7.2 million children ages birth to 5 (and not yet in kindergarten) for at least five hours a week, compared with about 129,000 center-based programs with 1 million teaching staff caring for almost 7 million children (NSECE Project Team 2013, 2014, and 2016).

More infants and toddlers are cared for in HBCC settings than in center-based programs. HBCC is the most common type of care for infants and toddlers. Thirty percent of children in this age group attend HBCC settings as their primary child care arrangement; just 12 percent of infants and toddlers attend center-based programs (Paschall 2019). Moreover, only a few centers exclusively care for infants and toddlers (3 percent), whereas far higher proportions of HBCC providers (just over one-third, most of whom are unlisted providers) offer care *only* for children in this age group (NSECE Project Team 2013).

Families with low incomes, families working nontraditional hours, families of color, and those living in rural areas may be more likely to use HBCC than center-based care. Families with low incomes working nontraditional hours at their jobs, those living in rural areas, those from immigrant backgrounds, and/or families of color are also more likely to use HBCC than they are to use centers, including Head Start (Laughlin 2013; Liu 2015; Liu and Anderson 2012; NSECE Project Team 2015b; Porter et al. 2010). Literature review articles on grandparent care in the United Kingdom and the United States found that parents with low incomes, including teenage mothers, tended to use grandparents for care (Kinsner et al. 2017; Statham 2011).

Families of children with disabilities may also rely on HBCC settings. Findings about the use of care by families with children with disabilities were mixed. Some studies revealed that mothers of children with special needs often turned to HBCC, and particularly to relatives, for their children's care (Henly and Adams 2018; Liu 2012). Analysis of the 2012 NSECE found that one-fifth of listed and unlisted paid HBCC providers and 10 percent of unlisted unpaid HBCC providers reported caring for at least one child with a disability (Hooper and Hallam 2021).

[8] At the time this report was written, data from NSECE 2019, the most recent round of the survey, had not been released.

There are many more unlisted, unpaid HBCC providers than regulated FCC or listed providers. In 2012, about 7 in 10 HBCC providers—2.7 million, caring for more than 4 million children ages birth to 5—were unlisted and unpaid, had a prior relationship with the children in almost all cases, cared for an average of two children, and were likely to be FFN providers (NSECE Project Team 2016). Another estimated 919,000 unlisted providers were paid to offer child care to more than 2.3 million children, and the NSECE project team estimates that 22 percent of this group could have been FCC providers because they did not have a prior relationship with some children in care, cared for four or more children, or offered care in the provider's own home (NSECE Project Team 2016). Most of the listed HBCC providers were considered by the NSECE project team to be FCC providers. Out of the 118,000 listed providers (who care for more than 750,000 children), 88 percent were considered to meet the NSECE team's definition of family child care, which includes offering paid care for children they had no prior relationship with.

HBCC providers come from different racial, ethnic, and linguistic backgrounds, although a higher proportion of providers are Black and Latinx compared with the general population. Analysis of the 2012 NSECE indicates that Black and Latinx HBCC providers make up 33 percent of listed providers; 44 percent of unlisted, paid providers; and 33 percent of unlisted, unpaid providers (Whitebook et al. 2018; Hooper and Schweiker 2020).

There has been a precipitous decline in regulated small FCC compared to a slight increase in center-based programs during the same time period. According to national child care licensing data, there are more small regulated FCC homes than large FCC homes in the United States (NCECQA 2020a). Yet recent trends suggest a 52 percent decrease in the number of regulated small FCC homes between 2005 and 2017 and a very slight increase in the number of large FCC homes during this time period (NCECQA 2020a). Both small and large FCCs' participation in the Child Care and Development Fund (CCDF) subsidy system decreased by 51 percent between 2005 and 2017. License-exempt FFN providers' participation in CCDF decreased by 75 percent in the same time period (NCECQA 2020a). The CCDF data pertain to providers who are legally operating without regulation, and include relatives and non-relatives who provide care in the child's home and in their own homes. These trends contrast with trends in center-based programs, where there was a slight increase in CCDF participation during the same time period (NCECQA 2020a).

C. How is quality traditionally conceptualized and measured?

The ECE field has traditionally conceptualized quality as having two broad dimensions: structural features and process dimensions (Howes et al. 2008). These dimensions are based on prior research conducted in center-based ECE settings, and are used across studies that examine HBCC settings. Structural dimensions include those aspects of ECE settings that can be regulated, such as group size, child-adult ratios, and provider

education. Process dimensions focus on provider-child interactions and supports for children's learning and development.

A common approach in research on ECE quality is to include both structural and process elements when measuring global quality. Approaches to measuring global quality rely on the Environmental Rating Scales, which were designed for center-based programs (for example, the Early Childhood Environment Rating Scale [Harms et al. 1998]) but adapted for FCC (Box II.1). For example, the Family Child Care Environment Rating Scale-Revised (FCCERS-R; Harms and Cryer 2017) emphasizes quantity and presence of materials in the child care environment. Multiple toys and puzzles may be more likely to occur in a center-based setting and less likely to occur in an HBCC setting where there are fewer children of the same age group and where household activities and materials (for example, pots and pans for music making) may replace more expensive materials (such as musical instruments). The Family Day Care Rating Scale (FDCRS; Harms and Clifford 1989) and the more recent version, the FCCERS-R, are widely used across research studies and in state Quality Rating and Improvement Systems (QRISs). Commonly used measures of process quality include the CLASS (Hamre et al. 2014; La Paro et al. 2012), which focuses on provider-child interactions and is increasingly used in HBCC settings, especially through state QRISs. There are several age-specific versions of the CLASS (for example, a toddler CLASS, a preschool CLASS) which make it difficult to use in mixed-age HBCC settings. Unlike the FCCERS, there are no specific adaptations of the CLASS for HBCC settings (Vitiello 2014). The Arnett Caregiver Interaction Scale (CIS; Arnett 1989) is an older process measure that examines how sensitive caregivers are in their interactions with children and continues to be used across studies that include HBCC. The HBCCSQ project's review of quality measures in HBCC settings finds that these measures largely focus on features of quality that are found across ECE settings, as opposed to features that are more likely to occur in HBCC settings (Doran et al. forthcoming).

Findings about levels of HBCC quality in the United States as measured with these existing instruments have not changed overall since the 2010 literature review on HBCC quality. Porter et al. (2010) reviewed studies indicating that, compared to centers, FCC and FFN providers had lower levels of global quality as measured by the FDCRS, and high levels of nurturing and sensitive caregiving as measured by the CIS—levels that were similar to those for center-based providers. More recent analyses of national data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B) found lower levels of global quality in HBCC settings (both FCC and FFN) than in center-based or school-based programs, as measured by the FDCRS (Bassok et al. 2016; Coley et al. 2016). An exception to this pattern was found in a study conducted in the Netherlands that found higher quality caregiving in FCC compared to center-based programs; the study used measures of caregiver sensitivity, talking, and listening (Groeneveld et al. 2012).

Box II.1. Quality measures commonly used in HBCC settings and cited in articles included in this review

- Arnett Caregiver Interaction Scale (CIS; Arnett 1989)
- Business Administration Scale for Family Child Care (BAS; Talan and Bloom 2009)
- Child Care – Home Observation for Measurement of the Environment (CC–HOME; Bradley et al. 2003)
- Child Care Assessment Tool for Relatives (CCAT–R; Porter et al. 2006)
- Child Care Ecology Inventory (CCEI; Rusby et al. 2013b)
- Child-Caregiver Observational System (C–COS; Boller et al. 1998)
- Classroom Assessment Scoring System – Infant (CLASS – Infant; Hamre et al. 2014)
- Classroom Assessment Scoring System – Toddler (CLASS – Toddler; La Paro et al. 2012)
- Child/Home Environmental Language and Literacy Observation (CHELLO; Neuman et al. 2007)
- Environment and Policy Assessment and Observation (EPAO; Ward et al. 2008)
- Family Day Care Rating Scale (FDCRS; Harms and Clifford 1989). Family Child Care Environment Rating Scale – Revised version (FCCERS-R; Harms and Cryer 2017)
- Home Observation Measurement of the Environment (HOME; Caldwell and Bradley 2016)
- Observational Record of the Caregiving Environment (ORCE; NICHD ECCRN 1996)
- Quality of Early Childhood Care Settings: Caregiver Rating Scale (QUEST; Goodson et al. 2005)

Porter et al. (2010) also reviewed research that examined quality across types of HBCC providers, and found that regulated FCC providers had higher global quality scores than FFN caregivers did. More recent analyses of national and regional data also found that regulated FCC settings offered higher global quality and higher structural quality (provider education) than license-exempt HBCC settings (Bassok et al. 2016; Raikes et al. 2013).

D. How does the type of ECE setting, and the HBCC setting in particular, contribute to child outcomes?

A small body of literature in this review examines how the type of ECE setting may relate to a range of children's outcomes, including cognitive, language and literacy, numeracy, social-emotional, and health outcomes. The review found mixed evidence for

links between type of ECE setting and children's cognitive, social-emotional, and health outcomes. The relevant studies, however, did not examine data on the specific processes or structural features of care that could explain any relationships. Nor did these studies examine the role that contextual factors such as systemic inequities and racism play in the relationship between ECE type and children's outcomes. Different ECE settings might have different levels of access to resources and supports that could contribute to positive outcomes for children. Some of the existing research on ECE setting types and outcomes examines quality broadly, using an array of measures. Findings should be interpreted with caution because quality comparisons across types of ECE with different levels of access to resources may reveal less about quality and more about systemic inequities. The research reviewed here did not examine the specific factors, features, and mechanisms that explain differences in children's outcomes across ECE types.

A 2011 literature review on FFN care cited a three-city study of families with low incomes who had young children. The study found that children cared for in FFN arrangements had significantly lower cognitive and school readiness skills than children in center-based care, although this relationship was mostly explained by differences in quality between FFN and centers (Susman-Stillman and Banghart 2011).

The ECLS-B is one of the few national studies that compares child outcomes across ECE settings, including HBCC. Analyses of ECLS-B data found that children in informal care, which included FCC and FFN, had lower math and literacy scores than children in formal care (such as centers). The correlational relationship between type of care and child outcomes was mostly explained by differences in the quality of care, which was assessed through self-report, observation, and provider characteristics. However, the relationship between specific features of quality and child outcomes was not examined (Bassok et al. 2016; Coley et al. 2016). We also identified three literature reviews that reported on ECE participation and children's health outcomes. These reviews found that children in the care of relatives were more likely to be overweight than children in other types of HBCC and ECE settings, although contextual factors that could help explain this association were not examined (Kinsner et al. 2017; Larson et al. 2011; Statham 2011).

Research also found differences in child outcomes across types of HBCC settings. A review article on FFN care cited the National Study of Child Care for Low-Income Families, which found that children cared for by relatives were more likely than children in non-relative HBCC to act pro-socially toward adults and were less likely to engage in dramatic play or object play with peers. Children in non-relative HBCC (for example, with friends and neighbors) were more likely than children under relatives' care to direct language only to adults and not to both peers and adults (Susman-Stillman and Banghart 2011). Authors hypothesized that these differences in child outcomes may have been influenced by the different types of relationships children have with relatives versus non-relative caregivers.

A review of the literature on grandparent care found mixed results for how type of care is associated with child outcomes. One study cited in the review found that children who had only been in FFN care, including those cared for by grandparents, had lower performance levels on numeracy and literacy at ages 4 and 8 and higher levels of hyperactivity and difficulties interacting with peers compared to children who had been in some type of formal care (Statham 2011). Another study in the review on grandparents found that children who had been in grandparent care at 9 months had similar vocabulary scores at age 3 to those who had been in center-based care and higher scores than children who had been in the care of friends and neighbors (Statham 2011).

Children's outcomes in ECE may also be related to the combination of care they experience. The literature review on grandparent care found that children whose grandparents cared for them as a supplement to center-based care or FCC had better early communication skills than children who were only in center-based care (Statham 2011). A primary research study examined children who were in FCC or FFN care as infants and toddlers and then went on to center care as preschoolers. This study found that children with FCC or FFN backgrounds had better cognitive outcomes than children who had only been in center-based care (Morrissey 2010).

III. COMPONENTS, SUBCOMPONENTS, AND FEATURES OF QUALITY IN HBCC

In this chapter, we address the following research questions:

- What are the features of quality in home-based child care? In what ways do quality features in home-based child care differ from quality features in other early care and education (ECE) settings? (Research Question 2)
- In what ways do quality features vary by type of home-based child care setting? (Research Question 3)
- How do quality features support positive provider, child, and family outcomes? What are the mechanisms that link quality to outcomes? (Research Question 4)

To answer these questions, we organized quality features into four components that we generated from those commonly used in ECE research: (1) home setting and learning environments; (2) provider-child relationships; (3) provider-family relationships and family supports; and (4) conditions for operations and sustainability. Each component includes two subcomponents with several HBCC quality features based on research on a range of HBCC providers, including regulated FCC as well as FFN caregivers. In this review, we define quality features as aspects of the ECE setting that either are linked to provider, child, or family outcomes or are hypothesized to play a role in supporting these outcomes. Some subcomponents and quality features within these broad components are also commonly included in ECE research (such as support for cognitive development) or regulatory standards (such as group size and ratios), but some features emerged from our literature review such as family-like settings, logistical supports for families, or access to business supports. In Exhibit III.1, we provide a full list of components, subcomponents, and quality features.

Exhibit III.1. Components, subcomponents, and quality features in HBCC

Components	Home setting and learning environments	Provider-child relationships	Provider-family relationships and family supports	Conditions for operations and sustainability
Subcomponents	**Physical environment and setting**	**Provider support for children's development**	**Relational supports**	**Working conditions**
Quality features	• Group size and adult-child ratios • Indoor and outdoor space • Use of community spaces as extension of child care • Health and safety • Family-like settings • Care offered during nontraditional hours	• Support for children's emotional development • Support for children's language, literacy, and cognitive development • Support for children's social development • Support for children's physical development	• Family-like relationships and connections among families • Trust • Reciprocal communication • Facilitation of family engagement in children's learning	• Working alone • Work-family balance • Management of multiple roles
Subcomponents	**Learning environment and routines**	**Family-like relationships with children**	**Logistical supports**	**Business practices and caregiving resources**
Quality features	• Materials and organized environment • Curricula • Intentional learning activities • Opportunities for informal learning	• Close provider-child relationships • Support for mixed-age peer interactions • Continuity of care • Cultural congruence	• Flexibility • Resources and referrals for families • Help with non-child–care tasks	• Business practices • Program policies • Access to business supports • Access to and participation in support communities

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

In the rest of this chapter, we provide a definition and rationale for each component, the related subcomponents, and the corresponding quality features. Each section also includes the following:

- Description of research evidence, including theoretical, descriptive, correlational, and causal evidence linking the specific features to provider, child, and/or family outcomes (see below for definitions of evidence)
- Evidence table presenting gaps in research evidence for quality features within each broad component and subcomponent (see below)
- Description of null findings, even though we do not include null findings in the counts of articles that show evidence in the evidence tables[9]
- Degree to which specific quality features differ from or are observed more frequently in HBCC than in other ECE settings

[9] Null results mean that the effect of a policy or intervention subject to testing did not differ from than that of some alternative.

- How quality features may vary by HBCC setting type (FCC versus FFN versus grandparent only)
- How quality features may vary by children served, including children with disabilities and/or infants, toddlers, preschoolers, and school-age children
- Summary of findings, including key themes, level of evidence, types of settings, and gaps in evidence

Exhibit III.2 lists the definitions of types of evidence we present for quality features in each component and subcomponent.

Overall, we found fewer examples of causal evidence linking quality features to outcomes, compared with descriptive or correlational evidence. Two reasons likely explain the difference in the number of examples. First, we did not prioritize intervention research in our review of primary articles. Second, we prioritized our review of primary articles on quality features where we found a gap in our review of literature reviews. For many of these features, there is limited research, and most of what we found was descriptive or correlational. These are limitations of our literature review, and they constrain the conclusions that we draw about the state of causal evidence in the field.

Exhibit III.2. Definitions of types of evidence for quality features in HBCC

Type of evidence	Definition of type of evidence
Theoretical evidence	The link between a quality feature and outcomes for providers, children, and/or families based on a conceptual model or theory of change rather than on empirical evidence.
Descriptive evidence	Descriptions of quality features in HBCC based on survey data, interview data, focus group data, or observational data. Descriptive data might also include exploratory and nontraditional research methods as well as small sample sizes (Appendix B, Exhibit B.1 has details about the study samples included in this review).
Correlational evidence	Evidence for a link or association between quality features and provider, child, and/or family outcomes based on quantitative data (from surveys, interviews, or observations).
Causal evidence	Evidence for the impact of a quality feature on child and/or family outcomes and for how a feature predicts child or family outcomes based on experimental or quasi-experimental study designs.

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

In this report, we use terms and criteria listed in Exhibit III.3 to refer to and categorize types of providers in the studies that include evidence for the quality feature. Types of providers include the broad category of HBCC (some research does not specify a specific type of HBCC setting), FCC, FFN, or relative-only care. In areas where we did not find research in HBCC settings, we included studies that only examined features of quality in center-based ECE. We include literature on parents that focuses on parenting and parental care (not parents' use of HBCC) because some HBCC providers may interact with children and offer care in environments that are similar to family homes and parenting contexts. Finally, "other" refers to literature on non-ECE contexts such as after-school programs or home visiting that may have features that are similar to HBCC contexts.

Exhibit III.3. Terms and criteria for the settings of interest in studies that include evidence for quality features

Terms	Criteria
HBCC	Study or review did not specify type of HBCC provider or setting,
FCC	Study or review included FCC providers or included parent report of FCC.
FFN	Study or review included friend or neighbor caregivers or a combined sample of FFN caregivers, or included parent report of friend or neighbor caregivers or of a combined sample of FFN caregivers.
Relative only	Study or review included only relative caregivers (typically grandparents) or included parent report only of care provided by relatives.
ECE	Study or review included HBCC and center-based care, but findings do not distinguish between settings.
Centers	Study or review involved center-based care only; we did not use this category if a study compared HBCC to center-based care.
Parents	Study or review focused on parental care or parenting in families (but did not address parental use of ECE or other aspects of ECE settings).
Other	Study or review focused on a non-ECE program (such as a school-based or commercial after-school program, intervention program, family support program, experimental lab, or home visiting program).

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

We distinguish between provider outcomes and provider characteristics. In this chapter we identify evidence for links between quality features and provider outcomes. A provider outcome is defined as a change in a provider characteristic that is associated with a quality feature. For example, providers may gain increased knowledge from access to professional support communities. Similarly, providers may experience increased stress related to features of quality that have to do with extending support to families beyond child care responsibilities.

In Chapter IV, we describe the characteristics that HBCC providers can bring to their HBCC work and roles. Some, like provider age, gender, and race, cannot be changed by quality features, but they may influence the implementation of quality features. If provider characteristics were examined in relation to quality features at the same point in time with no prior measure, we also considered them as provider characteristics and not as outcomes in the study.

There is some overlap between provider outcomes and characteristics. Some studies may have found an association between provider characteristics at one point in time, but there was a directionality assumed. For example, having a degree in ECE might be associated with less authoritarian caregiving beliefs. In this case, it seems likely that the more progressive caregiving beliefs were an outcome of the provider's education in child development, and not that providers with fewer authoritarian beliefs were more likely to obtain degrees in ECE.

A. Home setting and learning environments

The home setting and learning environment is a fundamental broad component of quality because it lays the foundation for provider-child and provider-family relationships and, to some degree, for sustainability. This broad component is organized into two subcomponents with corresponding quality features. The physical environment subcomponent includes the following features: group size and adult-child ratios, indoor and outdoor space, use of community spaces, health and safety, family-like settings, and nontraditional hour care. The learning environment and routines subcomponent includes the following features: materials and organized environment, curricula, intentional opportunities for learning, and opportunities for informal learning.

Research suggests features in this component can support children's positive learning and development (Burchinal 2018), and several of the features in this component (such as group size and ratios and health and safety) are subject to state or local licensing regulations that aim to keep children healthy and safe (NCECQA 2020b). Other features such as the use of curriculum are frequently included in QRISs. Still other features such as family-like settings, nontraditional hours, and opportunities for informal learning may be more prevalent in HBCC settings than in centers.

Overall, we found more descriptive and correlational research on features of the physical environment than on features of the learning environment (Exhibit III.4). This component also had ample evidence of correlational links between quality features and children's outcomes across developmental domains. For example, studies disclosed evidence of positive associations between children's cognitive, prosocial, emotional, and physical development (as well as health outcomes) and three features of the physical environment (group size and ratios, indoor and outdoor space, and health and safety). We also found evidence of positive associations between children's social-emotional, cognitive, and physical development outcomes and four features of the learning environment (materials and organized environment, curricula, intentional learning activities, and opportunities for informal learning).

No studies in this review examined how use of community spaces, family-like settings, or nontraditional hour care were associated (positively or negatively) with children's outcomes. All of the research we found on these four features was descriptive. Nor did we find research on how the home setting and learning environment might contribute to provider or family outcomes. Across HBCC, more studies focused on FCC than on FFN. Among FFN providers, most studies focused on grandparents.

Forty-three articles—15 literature reviews and 28 primary research articles—examined the home setting and learning environment in HBCC.

Exhibit III.4. Evidence for home setting and learning environments (15 literature reviews and 28 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal[1]	Article types for correlational and causal
Subcomponent: Physical environment and setting (10 literature reviews and 21 primary research articles)								
Group size and adult-child ratios	✓✓	FCC; FFN	—	✓✓[2]	—	—	HBCC; FCC	Primary
Indoor and outdoor space	✓✓	FCC; ECE	—	✓✓	—	—	FCC; Parents	Primary; Review
Use of community spaces as extension of child care	✓✓	HBCC; FCC; FFN; Parents	—	—	—	—		
Health and safety	✓✓	FCC; FFN; Relative only	—	✓	—	—	FCC	Review
Family-like settings	✓✓	HBCC; FCC	—	—	—	—		
Care offered during nontraditional hours	✓✓	FCC; FFN; ECE	—	—	—	—		
Total	**✓✓**	**HBCC; FCC; FFN; Relative only; ECE; Parents**	**—**	**✓✓**	**—**	**—**	**HBCC; FCC; Parents**	**Primary; Review**
Subcomponent: Learning environment and routines (9 literature reviews and 11 primary research articles)								
Materials and organized environment	✓✓	FCC; FFN	—	✓✓	—	—	FCC	Primary
Curricula	✓✓	FCC	—	✓✓	—	—	Centers	Review
Intentional learning activities	✓✓	FCC; FFN; Relative only;	—	✓✓	—	✓✓[3] (child)	FCC; Other	Primary; Review
Opportunities for informal learning	✓✓	FCC; Parents	—	✓	—	—	Parents	Review
Total	**✓✓**	**FCC; FFN; Relative only; Parents**	**—**	**✓✓**	**—**	**✓✓**	**FCC; Centers; Parents; Other**	**Primary; Review**
Grand total	**✓✓**	**HBCC; FCC; FFN; Relative only; ECE; Parents**	**—**	**✓✓**	**—**	**✓✓**	**HBCC; FCC; Centers; Parents; Other**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that included only HBCC.

Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; — = No evidence found.

[1] Provider type refers to the focus of the research, not to the sample. For example, research on parents' experiences with family child care are marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

[2] Equivocal findings for the relationship between group size/ratios and child outcomes. One out of four studies found a null association between group size/ratios and child outcomes.

[3] Two literature review articles on after-school programs included studies with experimental designs. None of the causal research for this feature included samples of HBCC.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers), but not on ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting.

1. Physical environment and setting

The physical environment of ECE settings plays an important role in supporting children's development. Regulations typically govern several aspects of the environment, including group size, child-adult ratios, and health and safety practices. Regulations may also specify the amount of indoor and outdoor space. Providers typically determine other aspects of the environment such as hours of care.

Physical environment and setting

- Group size and adult-child ratios
- Indoor and outdoor space
- Use of community spaces as extension of child care
- Health and safety
- Family-like settings
- Care offered during nontraditional hours

Most of the research on quality features in this subcomponent focused on group size and ratios, indoor and outdoor space, and health and safety. We found evidence of links between these aspects of HBCC physical home environments (for example, small group size, ample indoor space, low noise levels, health and safety practices) and children's cognitive, social-emotional, and health outcomes. We found less research on quality features such as use of community spaces, family-like settings, or nontraditional hour care, and most research on these features was descriptive. Few studies examined how these features contribute to provider, child, or family outcomes. Studies on the physical environment included both FCC and FFN providers.

a. Group size and adult-child ratios

The number of children in ECE and the ratio of children to adults may limit or support providers' availability to respond to the needs of individual children (Dowsett et al. 2008). Licensing regulations for ECE settings specify requirements for the maximum number of children who may enroll and for the number of adults who must be present, often with varying requirements depending on children's ages (for example, lower child-adult ratios for infants than for preschoolers) (NCECQA 2020b).

The 2012 NSECE found that median enrollment in listed HBCC was considerably lower than that in centers: 6.9 children and 50 children, respectively, although there were fewer children in each classroom within a center (NSECE Project 2015a). Research using the ECLS-B national data set found that child-adult ratios were lower in HBCC than in centers, with an average of 3 children per adult in HBCC (including FCC and FFN) compared with 7 children per adult in centers, including Head Start and prekindergarten classrooms (Bassok et al. 2016). Within HBCC, ratios were higher for FCC (4 children to one adult) than for FFN (defined here as relatives or non-relatives, including nannies; 2 children to one adult) (Bassok et al. 2016). An earlier literature review on FFN reported similar findings, with consistently lower ratios in FFN than in FCC (Susman-Stillman and Banghart 2011). Other research suggested that ratios in

FCC settings may vary by urbanicity. A literature review on rural child care, for example, cited a study showing lower child-adult ratios for toddlers in rural FCC compared to non-rural FCC (Anderson and Mikesell 2019).

We found mixed results for associations between group size and child-adult ratios and quality caregiving measures. One study included in a literature review on HBCC (Porter et al. 2010) found no significant relationship between FCC group size and ratings on the CC-HOME, but did find a positive relationship between compliance with group size regulations and positive caregiving interactions. Studies in a literature review article on FFN care, however, reported associations between group size across HBCC settings and caregiving quality as measured by the ORCE (Susman-Stillman and Banghart 2011). More positive caregiving was observed in FFN settings, which had smaller groups, compared to FCC settings, which had larger groups of children and lower levels of caregiving quality (Susman-Stillman and Banghart 2011). Similarly, a primary research study found that larger group size in FCC was associated with negative caregiver sensitivity based on CIS scores (Forry et al. 2013). Another primary study of FCC learning environments suggested that group size may contribute to learning activities in FCC: providers in FCC settings with higher adult-child ratios planned more free-choice activities (Rusby 2017). The authors hypothesized that providers working alone with larger groups of mixed-age children may have found free-choice time a preferred strategy for engaging children in social interactions and play.

Mixed evidence was also found for a positive relationship between small group size and/or low child-adult ratios in HBCC and children's cognitive and social-emotional outcomes. Using data from the ECLS-B, Iruka and Forry (2018) identified quality profiles across FCC and centers based on the reported frequency of reading and math activities as well as the teaching and learning subscales on the ECERS, the FDCRS, and the CIS. Preschool children in the highest FCC quality profile were more likely to achieve higher reading and/or math scores than children in the two lowest FCC quality profiles. Similar results were not found for children in the highest quality center-based profiles. The authors suggested that their finding of positive child outcomes only in FCC settings could be related to the small group size, which may have facilitated positive teacher-child interactions in developing numeracy and literacy.

Findings from three primary studies examined associations between group size and/or adult-child ratios and children's social-emotional outcomes, and found mixed results. One study of FCC social environments, as measured by the Child Care Ecology Inventory (CCEI), reported that FCC homes with higher child-adult ratios had a significant association with children's noncompliant and aggressive behaviors, also finding that FCC homes with lower ratios had no relationship with children's positive behaviors (Rusby et al. 2013b). In another study, Morrissey (2010) examined associations between school readiness (including assessments of behavior) and the sequences of children's time spent in center-based and HBCC settings before the kindergarten year. Using data from the National Institute for Child Health and Human

Development's Study of Early Child Care and Youth Development, Morrissey examined the quality of ECE—including group size and ratios—and children's outcomes. Findings indicated that smaller group sizes in FCC settings during the preschool years may have mediated the positive relationship between continuous HBCC experience before kindergarten and positive peer status. This finding contrasted with findings on the relationship between children's experiences in a combination of HBCC as infants and toddlers and center-care as preschoolers, and lower peer status. The author suggests that the small group size of HBCC may be less stressful for toddlers and preschoolers and may offer children opportunities to practice emotional regulation and social interaction with the same small group of peers over time. In contrast, a third study of children's stress cortisol levels in FCC settings found that group size was not a factor in children's stress levels. Contrary to expectation, smaller group size in FCC—even with only one or two children in care—was not associated with more or less stress throughout the child care day (Gunnar et al. 2010).

Overall, the research suggested that group size and ratios may contribute to child outcomes by affording providers more opportunities for sensitive and responsive caregiving and offering children more opportunities to engage and interact with peers in a small setting, although evidence is mixed. Our review found no evidence of a link between group size or ratios and provider or family outcomes in HBCC.

b. Indoor and outdoor space

The availability and organization of space in ECE programs—both indoor square footage and outdoor play space—may relate to the types of activities that ECE providers can engage children in (Berti et al. 2019). In particular, indoor space may include aspects of the physical environment such as noise levels and chaos levels. These are all important features to consider in HBCC, especially if providers use their entire homes or convert small basements or other rooms in their homes into dedicated spaces for child care.

Research suggested that the amount of space available in FCC homes may pose a challenge for providers. A literature review on obesity prevention in child care cited research findings that FCC providers were less likely than centers to have enough indoor and outdoor space (Francis et al. 2018). FCC providers in a Canadian focus group study said they regarded their home space as a positive feature of care (Doherty 2015), but another qualitative study of FCC providers in an urban community in the United States reported that providers had limited indoor space for children's physical activity (Figueroa et al. 2019). A statewide study suggested that FCC providers may not use outdoor space for mixed-age groups because of the difficulty of managing children outside (Neshteruk et al. 2018).

Lack of space in FCC may also be a barrier to providing care for children with disabilities (Wong and Cumming 2010). In a study of child care providers' views about

inclusion, many providers reported that they did not feel that their homes were designed to accommodate children with disabilities (Weglarz-Ward et al. 2019). On the other hand, the quiet, small, secure environments that characterized some FCC settings may promote inclusion of children with disabilities (Wong and Cumming 2010).

Correlational research on FCC settings identified links between the home environment and children's physical and social-emotional outcomes. Neshteruk et al. (2018) found more indoor space in FCC homes was associated with more physical activity in children. A study of noise level and variability in FCC homes in the Netherlands found that children's well-being (measured by observation of children's relaxation versus discomfort) was negatively associated with both high noise levels and variability of noise in FCC homes (Linting et al. 2013).

Research on parenting and child development also found that children's home environments contributed to their experiences. A literature review on housing and child development in Australia cited studies that found a negative relationship between inadequate and crowded living space and children's autonomy, social development, health, and cognitive development (Dockery et al. 2010). The same review linked unsafe and unclean living spaces to children's poorer cognitive and health outcomes (Dockery et al. 2010).

Overall, adequate indoor and outdoor space may be a contributing factor in children's physical, social-emotional, and cognitive outcomes by allowing or hindering adequate room for children to explore and learn, engage in physical activity, and practice autonomy. Our review found no descriptive or correlational research on indoor and outdoor space specifically in FFN settings. We did not find any research linking the use of space in HBCC with provider outcomes, although later in this review we examine research on working conditions and providers' experiences of managing a child care program in a home environment. (Section III.D has more on the component of conditions for operations and sustainability.)

c. Use of community spaces as extension of child care

In their conceptual model of quality in HBCC, Blasberg et al. (2019) suggested that HBCC providers' engagement and relationships with community resources were foundational elements for lasting relationships with children. HBCC providers may use neighborhood spaces to offer children additional opportunities for play, exploration, and enrichment.

Research has revealed that the use of community spaces may be shaped by how neighborhoods differ along class and racial lines. Qualitative research with mostly White, middle-income providers suggested that FCC providers viewed the neighborhood as a learning opportunity (Doherty 2015; Freeman 2011). Proximity to parks and school playgrounds may have been a factor in how these HBCC providers used neighborhood spaces for physical activities (Figueroa et al. 2019). Yet, for

providers and families living in neighborhoods with high crime rates, strategies for countering obstacles to the use of community resources may be critical to promoting opportunities for children's play and exploration. A study of Black families and grandparents in a low-income urban neighborhood identified strategies used by these caregivers to create safe opportunities in the community for children (Jarrett et al. 2011). These strength-based strategies included appraisal of the safety of neighborhood spaces for children's use, enforcement of safe boundaries for play in the neighborhood, close supervision and collective monitoring, and use of safe play spaces such as preschool or school playgrounds both within and outside the neighborhood.

One study in this review examined FFN caregivers' use of neighborhoods. Using national data on child care arrangements, Bassok et al. (2016) found that FFN providers were more likely than center providers to take children on outings such as trips to the library, the zoo, or other community spaces.

Use of community space may supplement and, for some providers, compensate for the lack of adequate space in the home setting. None of the research on use of community spaces examined links between this quality feature and provider, child, or family outcomes.

d. Health and safety

Health and safety are fundamental quality features across ECE settings and include materials and equipment, accident-prevention practices, and universal and age-specific health practices (Banghart and Kreader 2012; see box at right).

Aspects of health and safety in ECE

- Safety equipment: smoke detectors, covered electrical outlets, safety gates
- Accident-prevention practices: placing poisons in inaccessible areas
- Universal health practices: regular handwashing for both the children and the provider; sanitizing tables and toys
- Age-specific health practices: putting babies to sleep on their backs

Research yielded mixed results on healthy and safe environments and health and safety practices in HBCC. Two reviews of the literature found that child care quality as measured by the FCCERS, which includes a subscale for safety, was consistently lower in HBCC than in centers (Porter et al. 2010; Susman-Stillman and Banghart 2011). A large-scale primary study found that FCC and FFN were significantly less likely than prekindergarten classrooms or Head Start to meet basic safety standards on the availability of electrical outlet covers, smoke detectors, and first aid kits (Bassok et al. 2016). However, other studies, cited in the literature reviews, revealed that FCC and FFN settings were deemed safe based on the QUEST (Porter et al. 2010; Susman-Stillman and Banghart 2011).

Focus group and survey research in both domestic and international settings suggested that health and safety were important to HBCC caregivers. Two studies—one with FCC

providers in Canada and England (Doherty 2015) and another with organizations that served FFN providers in the United States (Engage R+D 2018)—found that providers regarded the protection of children's health and safety as an essential feature of the care they provide.

The health and safety features and practices of HBCC providers varied. One literature review cited a study reporting that grandparents received somewhat lower ratings on health and safety for children at 18 months on the HOME scale than FCC providers did (Statham 2011). Another literature review reported the results of a large-scale national survey of U.S. grandparents. The study demonstrated that close to one-quarter of the grandparents were unaware of back-to-sleep safety practices, and more than two-thirds did not know that wounds heal better when they are covered (Kinsner et al. 2017).

Health and safety practices are directly related to children's experiences in ECE by preventing physical harm. A review of research on health and safety practices across child care settings, including FCC and FFN, indicated that practices such as hand washing, first aid, safe-sleep practices, and CPR training reduced rates of children's accidental injuries and illness in both centers and FCC (Banghart and Kreader 2012).

Descriptive research suggests that some providers may face challenges in meeting health and safety licensing regulations (Porter and Bromer 2020). However, we did not find any correlational research that examined how health and safety requirements may contribute to providers feeling increased stress or burnout as a result of having to comply with standards. Nor did we find research on how health and safety practices in HBCC may contribute to families' satisfaction or comfort with the child care arrangement.

e. Family-like settings

By definition, HBCC settings are family-like, in contrast to the single-classroom spaces that typify centers (Doherty 2015). Many HBCC settings use the entire home for child care (including living rooms, kitchens, bedrooms, and backyards) and children in the program often use the same furnishings used by the provider's family (for example, couches, kitchen tables, and beds). Family-like settings extend to household routines such as making lunch in the kitchen and doing activities around the dining room table. A qualitative study of FCC providers described the use of spaces such as the kitchen for art, the living room for music and free play, and bedrooms for napping (Doherty 2015).

This review found conceptual models hypothesizing that family-like settings promote responsive and nurturing caregiving in HBCC, but we did not identify any primary research examining the relationship of family-like spaces to provider, child, or family outcomes. Blasberg and colleagues hypothesized in their conceptual model of quality in HBCC (2019) that the family-like characteristics of HBCC settings may reflect children's experiences in their own homes, perhaps easing the home-to-child care transition for children. Stratigos et al. (2014) presented a conceptual model positing that home-like

characteristics were important aspects of belonging in FCC. The researchers hypothesized that the home becomes a meaningful space for children over time, offering a sense of comfort and safety.

f. Care offered during nontraditional hours

Child care during nontraditional hours is an essential support for parents who work in health, retail, hospitality, and food service industries with nontraditional work schedules (Sandstrom et al. 2018; Stoll et al. 2015). Nontraditional hour care is defined as care provided in the early morning before 7 a.m., early evening after 6:00 p.m., nighttime and weekend care, and care that accommodates changing work or school shifts (Sandstrom et al. 2018). One-fifth of all adult workers in the United States work weekday evenings and nights or weekends. Half of parents with low incomes work outside typical daytime hours (Enchautegui 2013). Some studies in this review suggested that the supply of care available during nontraditional hours does not meet parent demand (NSECE Project Team 2015b; Sandstrom et al. 2018; Siddiqui et al. 2017; Stoll et al. 2015).

Families that work nontraditional hours are more likely to use HBCC than centers (Liu 2015; NSECE Project Team 2015b; Porter et al. 2010). HBCC providers, particularly those who are the children's relatives, are more likely to offer care during these hours. According to the 2012 NSECE, nontraditional hour care was more frequently available in HBCC settings than it was in centers (NSECE Project Team 2015b). Eighty-two percent of unlisted, unpaid providers; 63 percent of unlisted, paid providers; and 34 percent of listed providers offered nontraditional hours of care compared to 8 percent of centers (NSECE Project Team 2015b). Similarly, a study in the District of Columbia found that FCC providers were more likely than centers to offer nontraditional hour care (Sandstrom et al. 2018). Other research suggested that families relied on FFN providers, particularly grandmothers, for these hours of care (Siddiqui et al. 2017; Stoll et al. 2015). Families sometimes relied on a package of mixed arrangements to meet their child care needs, using centers for part of the day and turning to FCC and FFN providers for evening or nighttime care (Brady 2016; Stoll et al. 2015). In contrast, data from the Arizona Kith and Kin study that surveyed 4,000 Latinx FFN caregivers found that only one-third of caregivers offered families nontraditional hours of care (Shivers et al. 2016a).

Only one study addressed the issue of quality in nontraditional hour care—namely, the specific practices and provider behaviors that were most likely to be associated with positive child and family outcomes. Interviews with stakeholders, FCC providers, and center directors in a study of nontraditional hour care in Washington, DC, suggested that expectations for caregiver practices and activities were different for nontraditional hour care than they were for care on weekdays between 8:00 a.m. and 6:00 p.m. (Sandstrom et al. 2018). Nighttime care, for example, required different practices such as putting children safely and comfortably to sleep for the night. Weekend care, particularly for school-age children, required different types of activities than those

offered during the week. FCC providers in the same study reported that extending hours to offer nontraditional hour care took a toll on their physical and mental health, increasing the stress of balancing work and family life (Sandstrom et al. 2018).

Although care offered outside traditional hours clearly supports the demands of parents' work schedules, our review found a significant lack of research on the characteristics of nontraditional hour care in HBCC. Our review disclosed no studies examining evidence of links between the use of nontraditional hour care in HBCC settings and provider, child, or family outcomes.

2. Learning environment and routines

Learning environment and routines

- Materials and organized environment
- Curricula
- Intentional learning activities
- Opportunities for informal learning

The learning environment and routines are a central quality component across ECE settings. Routines help children know what to expect and may help self-regulation, especially for infants and toddlers (Atkins-Burnett et al. 2015; Rusby et al. 2013b). The predictability of routines and activities also provides opportunities for children with special needs to interact across developmental stages (Weglarz-Ward and Santos 2018). A variety of materials can provide opportunities for children's learning and development. ECE settings that have a balance between formal, adult-directed whole group, small group, and one-on-one activities and child-directed free-choice activities may contribute to children's positive cognitive, language, social-emotional, and physical development. Curricula, which include both the content of activities and strategies for delivering the content, can promote children's cognitive and language skills. Some HBCC environments that function more like families than like ECE settings may also offer opportunities for informal learning.

This review found ample research on learning environments and routines for preschool-age children in FCC homes, and this research often compared FCC to centers. Four studies examined the relationship between learning environment and routines and child outcomes in HBCC settings. Our review identified a correlational link between curriculum use and child outcomes in ECE settings broadly, but we found no research specifically linking curriculum use in HBCC settings and child outcomes. In addition, we found less descriptive research on learning environments in FFN care settings and on opportunities for informal learning in HBCC generally.

a. Materials and organized environment

Aspects of materials and organized environment

- Materials that promote physical activity: outdoor activities, basketball hoops, balancing surfaces, tricycle tracks
- Materials that promote academic readiness: math games, storybooks
- Materials that promote fine motor development: manipulatives, puzzles

One important feature of ECE environments is the availability of a variety of age-appropriate materials that are organized and accessible for children (Clarke-Stewart et al. 2002; NICHD ECCRN 2000; see box). Descriptive research on materials and organized learning environments in this review found inconsistent results on the adequacy of materials in HBCC settings. Two literature review articles cited studies finding that both FCC and FFN providers had adequate materials (Porter et al. 2010; Susman-Stillman and Banghart 2011). Primary research also concluded that FCC providers had materials to promote physical activity outdoors, such as basketball hoops, balancing surfaces, and tricycle tracks, which can promote gross motor development (Neshteruk et al. 2018). However, research also found that children in HBCC and FFN settings in particular may spend more time watching television than children in centers do (Bassok et al. 2016; Phillips and Morse 2011), and this time may or may not be used for educational purposes. Phillips and Morse (2011) also found that FCC providers had, on average, at least half of the specific math and literacy learning materials (such as storybooks and math games) examined in the study. Similarly, Bassok et al. (2016) reported that FCC and FFN providers were less likely than center-based providers—specifically, Head Start providers—to engage 4-year-old children in games or puzzles, suggesting that games or puzzles may not be universally available in HBCC environments.

Two primary studies examined the relationship between the quantity, type, and availability of learning materials and children's social-emotional and cognitive outcomes in HBCC settings (Iruka and Forry 2018; Rusby et al. 2013b). Using the CCEI and the CC-HOME, Rusby et al. (2013b) found that children in FCC homes that offered an organized environment and clear expectations exhibited fewer behavior problems than children in homes that did not have organized environments. This study also found an association between children's prosocial behaviors and FCC homes with intentional activity centers and accessible toys and materials (Rusby et al. 2013b). In an examination of the relationship between quality and cognitive outcomes across centers and FCC homes, Iruka and Forry (2018) compared children's outcomes across FCC programs that fit into different quality profiles and found that children in FCC settings identified in a "good" quality program profile, which included the use of math and literacy materials, had higher math and reading scores in preschool, but not in kindergarten.

Findings suggested that materials and an organized environment may promote children's learning, physical heath and development, and cognitive and social-emotional

development in HBCC settings, yet we found only two examples of evidence linking these quality features to behavioral and cognitive child outcomes in FCC. No research examined how materials and an organized environment were related to provider outcomes (for example, providers who have an organized learning environment may feel more effective and satisfied with their work) or family outcomes (for example, families may experience more satisfaction with HBCC settings that are more organized around learning opportunities).

b. Curricula

Curricula represent a structured approach to providing support for children's development. They may include a combination of child-directed, play-oriented activities and teacher-directed instructional activities that lend themselves to presentation in large or small groups. Several curricula such as the Creative Curriculum (Teaching Strategies, LLC, n.d.) and HighScope (Epstein and Hohmann 2012) are based on evidence of associations with ECE quality and/or child outcomes (Burchinal 2018; NSECE Project Team 2015a). Meta-analyses and literature reviews of ECE programs in this review found a link between curriculum use and children's school-readiness outcomes such as reading and math skills (Anderson and Mikesell 2019; Joo et al. 2020), but none of this research focused on HBCC settings. Instead, we found a handful of descriptive studies of FCC that included an examination of curriculum use.

The 2012 NSECE indicated that HBCC providers were less likely than centers to use an evidence-based curriculum: 55 percent of listed providers and 28 percent of unlisted paid providers versus 74 percent of centers (NSECE Project Team 2015a). Descriptive research in this review reflected these national data and found inconsistent data on FCC providers' use of published curricula. Forry and Wessel (2012) found that, unlike center directors and prekindergarten teachers, none of the FCC providers in focus groups in a single state reported the use of the state-approved curriculum. Instead, the FCC providers created their own curricula or used activity books purchased from big box stores (Forry and Wessel 2012). Another single state study of FCC also found that slightly more than half of FCC providers (55 percent) reported the use of published curricula. The authors point out that despite this prevalence of curriculum use, the rate of use was lower than that of prekindergarten and Head Start teachers, who were likely mandated to use a curriculum (Phillips and Morse 2011). A third study examining educational practices across FCC and private and public centers found that FCC providers who used a published curriculum were most likely to use Creative Curriculum, although they were also more likely to use "other" curricula, which may have included less well-known resources or "locally developed" curricula (Fuligni et al. 2012).

Research examined in our review clearly suggested that curriculum use in center-based preschool settings is associated with children's cognitive development and school readiness. However, though some FCC providers use a published curriculum, we did not find evidence of whether or not curriculum use yielded similar results in HBCC

settings as in centers. In addition, we found no evidence of how curriculum use may contribute to provider outcomes (for example, providers who use a curriculum may experience greater efficacy and satisfaction with the work) or family outcomes (for example, families may feel more satisfied with programs that have a formal curriculum in place) in HBCC.

c. Intentional learning activities

Intentional learning activities

- Whole or small group, adult-directed activities or lessons
- Free choice or free play, where activities are child-directed (adult provides materials and activity options); examples include block play, dramatic play, open-ended art

ECE programs typically offer intentional opportunities for children to learn through group and individual activities that may be teacher- or child-directed (see box). Activities may be focused on specific academic content such as literacy or numeracy, or may be more broadly aimed at promoting exploration and autonomy (Howes et al. 2008). ECE programs typically offer intentional free-choice or free-play periods for children to direct their own learning and exploration, although research in this review did not define the difference between free choice and free play. Providing a balanced mix of these activities may support positive cognitive, language, physical, and social-emotional outcomes for children. Most of the research on this quality feature focused on preschool-age children in FCC and center-based settings.

This review found consistent descriptive research showing that HBCC providers are less likely than center-based programs to offer planned educational activities for children in care. A review of research on HBCC, including both FCC and FFN care, cited studies indicating that HBCC providers did not spend significant time on activities such as reading, math, or science, according to observations with the QUEST, the CCAT-R, or the C-COS (Porter et al. 2010). Another literature review on care provided by grandparents cited studies revealing that grandparents were less likely than FCC providers to offer adult-led activities such as circle time and reading (Statham 2011).

Primary research found mostly similar results on FCC providers' focus on formal, academic learning activities. One study found that HBCC providers, and FFN caregivers especially, were significantly less likely than Head Start or prekindergarten teachers to read books to children or conduct math or other reading activities (Bassok et al. 2016). Iruka and Forry (2018) found that only one-fifth of FCC providers were part of a "good" quality program profile characterized, in part, by weekly literacy and numeracy activities. Fuligni et al (2012) found that, overall, most FCC settings and center-based settings in the study offered children a balance of adult-directed group activities with child-directed free-choice opportunities. However, FCC programs and private centers offered children more free-choice time during the day compared to public preschools, which offered more formal teacher-directed lessons throughout the day. Similarly, Rusby (2017) found that FCC providers spent 50 percent of observed time engaged with children during

free-choice activities, compared to only 30 percent of time spent in formalized, adult-led learning activities with children. In contrast, Phillips and Morse's self-report study of FCC practices with preschool-age children (2011) found that most FCC providers reported offering equal amounts of organized, formal activities and free-play opportunities, most of them offered planned activities such as reading books to children, and most endorsed academic goals for children in their care.

Findings showed associations between teacher-directed activities and children's cognitive and social-emotional outcomes. One study found an association between time spent in structured versus free-choice ECE environments including FCC and centers. Children in structured environments, with more time spent in learning activities, had higher vocabulary scores compared to children in environments with more free-choice activities (Fuligni et al. 2012). Iruka and Forry (2018) found that preschool-age children in FCC programs that were part of a "good" quality program profile defined by weekly academic activities, FDCRS and CIS scores, had higher math and reading scores compared to children in FCC programs with lower quality profiles. These child outcomes did not hold at the kindergarten-year assessment (Iruka and Forry 2018).

This review also found research linking opportunities for learning in FCC settings and children's social-emotional outcomes as well as children's engagement in other areas of learning. Fuligni et al.'s study (2012) found that children in FCC or center-based programs that were rated as having more free-choice activities than structured activities spent more time engaged in gross motor and fantasy play. Two other studies examined children's social-emotional development and time spent in both formal academic activities and free-choice activities in FCC. The first study found that children demonstrated more positive behaviors in FCC homes with higher scores on a measure of planned activities and routines, which included sequenced and structured formal activities, schedules, and transitions (Rusby et al. 2013b). The second study found a link between the percentage of time FCC providers spent in free-choice activities with children and children's prosocial behaviors with peers—that is, using social skills and interacting with each other (Rusby et al. 2017).

Two literature review articles on school-age programs (Palmer et al. 2009; Smith and Bradshaw 2017) and a meta-analysis of after-school programs (Durlak et al. 2010) cited studies linking intentional programming, including programming related to skill development, with achievement scores, emotional development, and prosocial behaviors among children in kindergarten through grade 8.

We found research across ECE settings, parenting, and after-school programs suggesting that opportunities for formal learning, either through provider-directed academic activities or through free-choice activities, have the potential to contribute to children's positive cognitive and social-emotional outcomes. Yet, we found no studies examining how opportunities for formal learning may contribute to other domains of children's school readiness, such as executive functioning skills or how to function in a

group of children. Moreover, we did not find any research on how learning activities may contribute to providers' own feelings of efficacy or families' experiences engaging in their own children's learning.

d. Opportunities for informal learning

Some HBCC providers may use everyday routines, activities, and relationships that are part of living in a family home as opportunities for children's learning. Some of these experiences may be more informal and less intentional than lesson plans or schedules, with free-play and group lessons throughout the day.

In her theoretical framework comparing informal, home-based learning environments to school-based learning settings for school-age children, Rogoff (2014) suggested that opportunities for informal learning within families offered a context for understanding culturally relevant child development. Specifically, she defined the cultural practice of "learning and observing by pitching in" as the engagement of school-age children in helping with household tasks within the family. Her model suggested that these types of informal learning opportunities within the family may support children's development of social skills such as collaborating with peers, as well as their development of emotional skills such as self-regulation and perspective taking (Rogoff 2014).

A literature review on family routines and rituals and children's development found that children benefited from predictable and regular family routines such as meal times, as well as from rituals like book reading and bedtime songs (Spagnola and Fiese 2007). The authors explained that predictable and consistent routines offer children many opportunities to learn and practice skills within the context of family relationships. The review cited several examples of correlational research showing an association between regular family routines and children's cognitive and social-emotional outcomes.

Tonyan's conceptual model of quality in licensed FCC settings (2017) built on this multidisciplinary research on parenting and families and hypothesized that opportunities for learning may be implemented differently across HBCC settings depending on providers' cultural values, beliefs, and practices. Daily routines are seen as opportunities for learning beyond structured lessons (for example, literacy and math activities) and may benefit children in care. Tonyan found that FCC providers' cultural values may shape the ways they offer opportunities for learning and development through daily routines; some providers may organize routines around close relationships while others may emphasize academic or school readiness.

As Tonyan points out, it is also possible that HBCC providers seek to engage children in formal learning activities, but that these activities are different in the more informal contexts of HBCC compared to how they are in centers. In their qualitative mixed-method study with five FCC providers, Ang and Tabu (2018) found that HBCC providers sought to offer children a range of educational and enriching experiences but that these might have occurred through everyday routines and activities that were less structured

and perhaps less scheduled, such as trips to local parks or “guided free play” with small groups of children (p. 152).

This review found theoretical and descriptive evidence for opportunities for informal learning in HBCC settings. We also found correlational evidence for a link between routines as opportunities for informal learning and children’s positive outcomes in parenting contexts. We did not find correlational evidence for a link between informal learning in HBCC settings and provider, child, or family outcomes.

Summary of findings

- Overall, the bulk of research evidence pertained to traditional features of the physical and learning environment, such as group size, indoor and outdoor space, health and safety, curricula, and intentional learning activities, all of which have long been defined as core structural and process quality features across ECE settings.
- Less research evidence was available on features that may be more more likely to occur in HBCC, such as family-like setting, use of community spaces, nontraditional hour care, and opportunities for informal learning.
- The review found ample descriptive and correlational research for quality features in this component. In addition, we found no causal research specific to ECE on the setting and environment component. Much of the correlational research compared FCC settings with centers and examined associations between group size and adult-child ratios, indoor/outdoor space, intentional learning activities, and caregiving practices according to the FCCERS or other global environment quality measures.
- Evidence suggested that 5 of the 10 quality features in home settings and operation were associated with positive child outcomes in HBCC settings. We found inconsistent evidence of an association between group size and child outcomes.
- Ample evidence was available on curriculum use and child outcomes in centers, but no studies in our review examined relationships between curriculum use and child outcomes in HBCC settings.
- No child outcomes were associated with three quality features—family-like care, use of community space, and nontraditional hour care—that are more likely to be found in HBCC. All of the research on these HBCC quality features was descriptive or theoretical.
- Across HBCC, more studies focused on FCC than on FFN. Our review found no studies examining indoor/outdoor space or curriculum in FFN care. The only feature for which we found evidence of a link to child outcomes in FFN care was group size and adult-child ratios.
- We found no evidence of a link between home setting and learning environments in HBCC and family outcomes.
- Most of the research on this component of quality focused on preschool-age children. Few examined how home settings and routines may vary by age group, and none examined quality of HBCC settings for school-age children or specifically for infants. Only two studies examined HBCC providers' views of their child care environments and inclusion. No research addressed the use of learning activities or informal learning opportunities for school-age children in HBCC, although research from cross-cultural parenting literature and research on after-school programs suggested that both informal learning opportunities and adult-directed sequenced activities for older children may support their development.

B. Provider-child relationships

Across ECE settings, positive provider-child interactions are closely linked to the relationships that providers develop with children in their care. These interactions and relationships, typically termed process quality in the ECE literature, are fundamental aspects of quality in ECE settings. ECE providers play a key role in facilitating nurturing relationships with children through sensitive and responsive caregiving that supports children's social-emotional, language, academic, cognitive, and physical development. Responsive provider-child interactions across ECE settings are associated with children's social-emotional, language, and cognitive outcomes (Blasberg et al. 2019; Halle et al. 2011; Werner et al. 2016).

This component of quality includes two subcomponents: (1) provider support for children's development and (2) family-like relationships with children. Within the first subcomponent, we describe quality features that are found across ECE settings, namely provider support for children's emotional, social, language, literacy, cognitive, and physical development. In the subcomponent of family-like relationships with children, we describe features that are implemented differently or are more likely to occur in HBCC settings, including close provider-child relationships, support for mixed-age peer interactions, continuity of care, and cultural congruence (Blasberg et al. 2019).

As shown in Exhibit III.5, we found descriptive evidence for the presence of quality features in provider-child relationships in both FCC and FFN settings. In addition, our review found correlational evidence of links between nearly all the features in the broad component provider-child relationships and child outcomes. Specifically, we found evidence of associations between provider support for children's development and children's literacy and language skills, math competencies, and social-emotional and physical development. We also found some evidence of a link between family-like relationships in FCC and FFN settings and children's emotional well-being and behavioral outcomes. More research evidence linking features such as mixed ages and continuity of care to children's cognitive outcomes was found in studies of center-based settings.

Forty articles examined provider-child relationships in HBCC settings, including 15 literature review articles and 26 primary research articles.

Exhibit III.5. Evidence for provider-child relationships (15 literature reviews and 26 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal[1]	Article types for correlational and causal
Subcomponent: Provider support for children's development (10 literature reviews and 9 primary research articles)								
Support for children's emotional development	✓✓	HBCC; FCC; FFN; ECE; Parents	—	✓✓[2]	—	✓[3] (child)	FCC; Parents; Other	Primary; Review
Support for children's language, literacy, and cognitive development	✓✓	HBCC; FCC; FFN; ECE	—	✓✓	—	—	HBCC; FFN; Parents	Primary; Review
Support for children's social development	✓✓	FCC; FFN	—	✓✓	—	—	FCC	Primary
Support for children's physical development	✓✓	FCC	—	✓	—	—	FCC	Primary
Total	✓✓	**HBCC; FCC; FFN; ECE; Parents**	—	✓✓	—	**✓[3] (child)**	**HBCC; FCC; FFN; Parents; Other**	**Primary; Review**
Subcomponent: Family-like relationships with children (9 literature reviews and 17 primary research articles)								
Close provider-child relationships	✓✓	HBCC; FCC; FFN	—	✓	—	—	Relative only	Review
Support for mixed-age peer interactions	✓✓	HBCC; FCC; FFN; Centers	—	✓✓[4]	—	—	Centers	Primary
Continuity of care	✓✓	HBCC; FCC; Centers	—	✓✓[2]	—	—	HBCC; FCC; Centers; Parents	Primary
Cultural congruence	✓✓	HBCC; FCC; FFN; Relative only; Other	—	✓	—	—	FFN	Primary
Total	**✓✓**	**HBCC; FCC; FFN; Relative only; Centers; Other**	**—**	**✓✓**	**—**	**—**	**HBCC; FCC; FFN; Relative only; Centers; Parents**	**Primary; Review**
Grand total	**✓✓**	**HBCC; FCC; FFN; Relative only; ECE; Centers; Parents; Other**	**—**	**✓✓**	**—**	✓	**HBCC; FCC; FFN; Relative only; Centers; Parents; Other**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that included only HBCC.

Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; — = No evidence found.

[1] Provider type refers to the focus of the research, not to the sample. For example, research on parents' experiences with family child care are marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

[2] Equivocal findings for the relationship between feature and child outcomes. Some studies found a null association between feature and child outcomes.

[3] One literature review article on after-school programs included studies with experimental designs. The causal research for this feature did not include samples of HBCC.

[4] One of these studies in center-based Head Start settings showed a negative relationship for the oldest children between participation in a mixed-age classroom and child outcomes.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers), but not on ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting.

1. Provider support for children's development

Provider support for children's development

- Support for children's emotional development
- Support for children's language, literacy, and cognitive development
- Support for children's social development
- Support for children's physical development

Sensitive and responsive caregiving supports young children's development across domains (Atkins-Burnett et al. 2015). Across ECE settings, some studies examined the association between provider-child interactions and child outcomes; few of them examined these links in HBCC settings. Our review found studies—albeit primarily in FCC settings—examining a correlational link between each of the four quality features within the subcomponent supporting children's development and positive child outcomes.

a. Support for children's emotional development

In their early years, children are building their emotional competencies, and they need the people caring for them to help them learn to regulate their emotional state and form secure attachments to others (Halle et al. 2011). In supporting the well-being and emotional state of the child, a provider must build a secure relationship with the child, one that allows the child's cognitive, social, and physical development to flourish (Ang et al. 2017). A review of quality caregiver-child interactions for infants and toddlers, based mostly on studies of parenting, identified caregiver sensitivity and responsiveness, positive and negative caregiver affect, positive regard, warmth, reciprocity, joint attention, lack of detachment, and positive guidance as distinct features of supporting individual children's development (Halle et al. 2011).

Positive affect and warmth, demonstrated through nurturing and joyful interactions with children, are aspects of quality features that were more frequently observed in HBCC settings than in centers (Ang et al. 2017; Engage R+D 2018; Susman-Stillman and Banghart 2011). Two reviews of research suggested that HBCC providers and, in particular, FFN caregivers may engage in more positive interactions with infants and toddlers than center-based providers do (Ang et al. 2017; Susman-Stillman and Banghart 2011). In a study on community organizations' understanding of quality in FFN care, grantees described nurturing interactions and relationships that develop through demonstrations of love in the home as the most important quality indicators in FFN care (Engage R+D 2018). Descriptive research in Denmark found that positive touch encounters such as use of massage by infant/toddler caregivers resulted in greater intimacy and more exchanges between providers and toddlers in FCC and other types of care (Svinth 2018).

A smaller number of studies focused on caregiver responsiveness and sensitivity across HBCC settings rather than across center-based settings. Research on HBCC providers

focused as much on negative provider behaviors (for example, a lack of emotional support or intrusive caregiving) as on positive behaviors. Susman-Stillman and Banghart (2011) found a range of FFN provider sensitivity levels in the three studies they reviewed, reporting that generally "reasonable" levels of warmth and sensitivity were common. Porter et al. (2010) highlighted four studies using the CIS measure; in those studies, HBCC providers demonstrated fairly high levels of engagement with children and few instances of harsh or ignoring behavior.

Research on parenting settings indicated a link between provider supports for children's emotional development and a range of positive child outcomes. Halle et al. (2011) found that caregiver sensitivity and warmth, positive regard, and supportive behavior guidance (in studies of parenting) were associated with positive cognitive and social-emotional outcomes for infants and toddlers, including early literacy skills, children's own positive affect and engagement in shared tasks, greater attachment security, moral conduct, and more involvement in play. The review found less research on caregiver reciprocity, joint attention, and lack of detachment and fewer links to child outcomes (Halle et al. 2011).

Correlational evidence showed links between provider sensitivity and support for children's emotional well-being and positive child outcomes in FCC settings. Two studies in a literature review on rural ECE settings found that a lack of emotional support for children in both home- and center-based care was associated with children's math and behavioral problems (Anderson and Mikesell 2019). Two primary research articles examined responsive caregiving in FCC settings. Gunnar et al. (2010) found that warm, supportive care in FCC settings was associated with less angry, aggressive child behavior but that intrusive or overcontrolling care of children was associated with more anger and aggressive behaviors. In contrast, a correlational study on FCC providers (Forry et al. 2013) found no significant associations between ratings of caregiver sensitivity, as measured by the CIS, and children's emotional health, behavior problems, or pre-academic skills. The correlational study noted that this null finding may be related to limited variation in the CIS (Forry et al. 2013). Our review found no studies that examined a link between caregiver sensitivity and child outcomes specifically in FFN settings.

Warm and emotionally supportive relationships were also linked to child outcomes for older school-age children. One literature review on nurturing practices in after-school programs described how program staff practices such as setting clear behavioral expectations and helping youth develop a sense of agency were linked to positive outcomes for school-age children (Smith and Bradshaw 2017). We did not find any primary research articles on emotional responsiveness to children with special needs in HBCC settings. A literature review on inclusion-based ECE programs suggested, however, that positive provider-child interactions for children with disabilities were the foundation of high quality inclusion programs and were even more important than environmental arrangements or materials (Weglarz-Ward and Santos 2018).

No studies in this review examined associations between provider support for children's emotional development and child outcomes in FFN settings, although one literature review noted a consistent association in the parenting literature for infants and toddlers. No research examined provider or family outcomes associated with provider responsiveness to children in care.

b. Support for children's language, literacy, and cognitive development

Cognitive and language development skills, those needed to engage and understand the world and think and act on new knowledge, are particularly important in the early years of development (Atkins-Burnett et al. 2015). Providers support language, literacy, and cognitive development by helping young children build their verbal, thinking, and reasoning skills. To help young children learn how to interact with the world, providers ensure that children have opportunities for and take advantage of interactions and activities that challenge them (Atkins-Burnett et al. 2015)

The evidence for supports for cognitive and language development in HBCC settings was mixed. One literature review on HBCC cited studies indicating that HBCC providers—unlike providers in other settings—may engage in relatively low levels of cognitive stimulation and provide children with limited learning activities (Porter et al. 2010). Another literature review on FFN care cited studies showing that FFN caregivers could provide beneficial supports for infants' and toddlers' cognitive development; infants and toddlers were more likely to receive care in FFN settings than in other settings (Susman-Stillman and Banghart 2011). A study of FCC providers' literacy practices found that providers had access to modest levels of supports for learning and literacy materials such as books as measured by the CHELLO (Buell et al. 2018). A study of a shared services network for centers and FCC providers found that early language support for infant development as measured by the infant CLASS improved between pre- and post-assessments (Etter and Capizzano 2018).

Correlational evidence indicated a link between provider support for children's cognitive and language development in HBCC settings and positive cognitive and language outcomes for children. A literature review on quality caregiving for infants and toddlers found evidence of an association between parental supports for language and positive child outcomes such as vocabulary development and attention (Halle et al. 2011). Another review of the literature on rural child care reported on studies indicating that provider-child language interactions in ECE settings, including HBCC, were associated with children's expressive language and were especially important for children who might lack sufficient language support at home (Anderson and Mikesell 2019). A study of FFN participation in facilitated support groups reported a link between improvements in providers' language support for children and dual language learners' pre-literacy skills (Shivers et al. 2016b).

No study examined a link between support for children's cognitive and language development and provider or family outcomes in HBCC.

c. Support for children's social development

Children's ability to interact with peers in a positive way requires social and emotional skills, such as the ability to self-regulate, cooperate, and positively initiate and respond to other children (Rusby et al. 2013b). HBCC providers have the potential to help children develop these skills and support close child-child relationships that, in turn, can lead to future school success (Halle et al. 2011; Rusby et al. 2013b).

Our review found few studies that examined support for peer interactions in HBCC settings. A review of research on FFN quality (Susman-Stillman and Banghart 2011) cited two studies reporting that FFN providers missed opportunities to promote social skills such as cooperative play, sharing, and emotional control. One study in FCC settings found gender differences among children in support of peer interaction. Providers encouraged "community building" as measured by the ORCE and observed positive peer interactions more among girls than among boys (Gunnar et al. 2010). A literature review of HBCC pointed to the opportunities in both FCC and FFN settings for providers to promote healthy sibling relationships when siblings were placed together in the same care arrangement (Porter et al. 2010).

Two studies found evidence for a link between provider supports for children's peer interactions and positive child outcomes. Using the CCEI and other FCC-specific observation measures, Rusby et al. (2013b) found that preschool-age children showed more socially skilled behaviors when FCC providers clearly and consistently defined rules and expectations and encouraged children to interact positively with each other. Gunnar et al. (2010) found a correlation between FCC providers' encouragement of prosocial behaviors and fewer externalizing behavior problems.

Only two studies examined support for peer interactions; none examined associations with child outcomes in FFN settings.

d. Support for children's physical development

Provider-child interactions in ECE settings that support children's physical development—healthy eating habits and motor development—can play a critical role in preventing childhood obesity, which is a major health concern in the United States (Larson et al. 2011). Our review found an emerging body of research on obesity prevention in FCC settings; we did not find research on how HBCC providers promoted other aspects of physical development, such as fine motor coordination.

Supports for children's physical development, including health and nutrition, may be more challenging in HBCC because of space constraints in the physical environment (as noted in the component on home setting and learning environments) and providers' health and well-being (Chapter IV has more on provider and neighborhood

characteristics that influence quality in HBCC). Findings about FCC suggested that education, cultural beliefs, and income may be greater factors in the quality of health and nutrition practices in FCC than in centers. However, as described below, our review suggested that positive health and nutrition practices in FCC are linked to children's healthy eating.

Descriptive research on physical activity and health demonstrated mixed results in FCC settings, perhaps as a function of provider characteristics such as income, neighborhood, and cultural beliefs. A review of descriptive research on obesity prevention (Francis et al. 2018) found that after controlling for neighborhood and income factors, FCC settings were less likely than center-based care to include physical activity. In addition, FCC providers were more likely than center-based providers to engage in negative, controlling behaviors such as insistence, threats, and pressure related to children's eating, although these behaviors may have reflected providers' education levels and cultural beliefs (Francis et al. 2018). Differences between FCC and center-based providers were also found in nutritional practices but were eliminated when adjusting for neighborhood income. The authors concluded that differences in nutritional practices may have been related to neighborhood conditions such as food scarcity. Another review of obesity prevention in child care settings cited research showing that FCC providers who did not reside in low-income neighborhoods were more likely to meet national nutrition requirements, sit and talk with children during meals, and discuss healthy eating habits (Larson et al. 2011). Another study in the same review found that only half of FCC providers offered children nutrition education by reading books or playing games with nutrition themes (Larson et al. 2011).

Only one correlational study on FCC providers found a link between support for children's physical development and positive child health outcomes. By examining baseline data from FCC providers who were participating in an obesity-prevention training program, the study found that the promotion of healthy eating, nutrition education, and physical activity were associated with children's healthier diets as observed with the Environment and Policy Assessment and Observation (EPAO; Benjamin-Neelon et al. 2018).

Our review found descriptive studies on FCC providers' nutrition practices. However, none of the studies examined nutrition and health practices in FFN settings despite research findings that children in relative care were more likely to be obese than children in non-relative child care settings (Kinsner et al. 2017; Larson et al. 2011; Statham 2011; see Chapter II). The research did not consider how provider support for children's physical development was linked to provider or family outcomes.

2. Family-like relationships with children

Family-like relationships with children

- Close provider-child relationships
- Support for mixed-age peer interactions
- Continuity of care
- Cultural congruence

In addition to providing children with support for their development, HBCC providers may develop family-like relationships with the children in their care and promote close relationships between children (Hooper and Hallam 2019). The mixed-age setting allows for siblings to be cared for together which may contribute to the sense of family within HBCC settings (Porter et al. 2010). Children may grow up in HBCC settings from infancy to school-age; of course, in relative care, the provider and children are family (Susman-Stillman and Banghart 2011). Compared with studies in center-based settings, few studies examined evidence of how the four quality features within the subcomponent family-like relationships contributed to child outcomes in HBCC settings.

a. Close provider-child relationships

Close relationships with children in ECE settings may include both actual family relationships and family-like or fictive kin relationships that extend over time and sometimes throughout childhood. These close relationships may be an quality feature that is implemented differently or more likely to occur in HBCC than in other ECE settings. Moreover, the cultural values that are transmitted through close provider-child relationships may also be a more frequent occurrence in HBCC settings.

Descriptive, qualitative research with FCC providers suggested that providers viewed themselves as nurturers or extended family of children in their care (Forry et al. 2012; Hooper 2019). One study examined the cultural values of love and affection for children among Latinx FCC providers (Paredes et al. 2018). A review of the FFN literature cited studies finding that relative caregivers were motivated to maintain intergenerational connections with children related to them (Susman-Stillman and Banghart 2011).

Another literature review described a link between close relationships in relative settings and children's outcomes. Research on grandparent care found that closeness to grandparents was linked to children's emotional adjustment. Instances of closeness included frequency of contact, physical proximity, and quality of the relationship between the grandparent and parent of the child in care (Statham 2011).

b. Support for mixed-age peer interactions

Provider promotion and facilitation of positive interactions among mixed-age groups of children is a quality feature more likely to be found in HBCC than in centers. According to the 2012 NSECE, HBCC providers are more likely than center-based providers to care for mixed-age groups of children, including infants and toddlers, preschoolers, and

school-age children: Close to one-third of all HBCC providers and 80 percent of listed HBCC providers care for mixed ages compared to only 9 percent of center-based providers (NSECE Project Team 2013). Even though a center may enroll mixed-age children, the age range is usually limited to one or two years. Several descriptive studies documented that HBCC providers commonly cared for mixed-age groups of children from infants to school-age children, including siblings (Ang and Tabu 2018; Doherty 2015; Hooper 2019; Phillips and Morse 2011; Porter et al. 2010).

This descriptive research stressed that the presence of mixed-age groups can offer learning opportunities for both younger and older children in care (Blasberg et al. 2019; Hooper 2019; Doherty 2015). In addition, mixed-age groups may help create a sense of belonging for children in care, which researchers hypothesized could benefit children (Doherty 2015; Stratigos et al. 2014). Researchers also hypothesized that children and families may benefit when siblings receive care together in HBCC. Further, those without siblings may benefit from mixed-age peer interactions not available in their home (Blasberg et al. 2019; Porter et al. 2010).

No research examined a link between support for mixed-age groups and child outcomes in HBCC settings. We looked to research on center-based ECE classrooms that included a narrower range of mixed-age groups and found that teacher practices in mixed-age classrooms might be a function of the composition of ages present in the classroom. One study of preschools in Switzerland found that mixed-age classrooms with more children under 18 months of age reduced the quality of teacher-child interactions as measured by the toddler CLASS (Diebold and Perren 2019). The authors suggested that the intensive care required for infants might lead to less guidance and teaching of older children.

Research on centers also suggested that mixed-age classrooms may play a role in children's social and cognitive outcomes. Researchers hypothesized that younger children in mixed-age settings can learn by observing and matching the behaviors of older children. In parallel, older children can practice prosocial behaviors and leadership skills by providing support and guidance to younger children (Guo et al. 2014).

Support for mixed-age groups in center-based ECE programs has led to mixed results that vary by specific domains of child outcomes, the ages of children in care, and teachers' behavior management skills. Research examining children's social development outcomes in same-age and mixed-age classrooms with 3- and 4-year-olds in urban, low-income preschools found that teachers reported fewer negative interactions with children in mixed-age classrooms. These children engaged in more positive peer-to-peer interactions and demonstrated lower levels of challenging behaviors than children in same-age classrooms did (Plotka 2016). Studies examining the relationship between mixed-age classroom composition and cognitive outcomes showed greater benefits for younger children than for older children. A study comparing Head Start programs for 3- and 4-year-olds found that mixed-age classrooms could

disadvantage older children's gains in math and reading (Ansari and Purtell 2018). The authors did not examine teacher practices but hypothesized that teachers in mixed-age classrooms focused more attention on younger children, perhaps explaining the negative impact on older children in these settings. Guo et al. (2014) found that younger children in Head Start and public prekindergarten in mixed-age classrooms demonstrated an increase in vocabulary gains when taught by teachers who adopted better behavior management strategies compared to teachers who did not adopt these strategies.

The lack of research in HBCC settings—where the presence and range of mixed ages is more likely and greater than in center-based classrooms—indicated a significant gap in evidence about the link between provider practices for mixed-age groups and children's outcomes. Caring for a wide range of ages from infants through school-age children may pose challenges for providers, yet we found no research examining provider outcomes. We also found no research on family outcomes, although mixed-age care may allow families to use the same setting for siblings, which could reduce parental stress and improve work-family balance.

c. Continuity of care

Continuity of care refers to one caregiver over time with the same group of children. The potential of continuity of care to affect children's experiences positively builds on research from the parenting literature. The research has shown that cumulative parenting investments in children during early childhood, middle childhood, and adolescence may have greater effects on children's outcomes than investments at a single point in a child's development (Longo et al. 2017).

HBCC settings do not often involve several teachers nor do children move to new classrooms each year, a practice common in center-based settings (Ang et al. 2017; Forry et al. 2012; Ruprecht et al. 2016). Children in HBCC settings may benefit from the "lasting relationships" that take root in the case of continuity of care, with one child care provider over time. Consistency of care may further add to a strong sense of belonging (Blasberg et al. 2019; Stratigos et al. 2014).

Research examining the impact of continuity of care in center-based classrooms cited a 1999 study that found that infants enrolled in FCC at an earlier age and for a longer duration exhibited higher levels of interaction and attachment security (Ruprecht et al. 2016). Descriptive research on HBCC suggested that continuity of care might ease children's transition to school (Ang et al. 2017; Forry and Wessel 2012).

One primary research article in our review examined children's experiences of continuous versus sequencing of care types during the years before kindergarten (Morrissey 2010). The study did not specifically examine whether or not children experienced different HBCC settings or different centers during these continuous periods of time. The study found that children in continuous center-based care before

the kindergarten year experienced lower-quality care as measured by the HOME and the ORCE than those in HBCC during infancy and toddlerhood and then center care during the preschool years. This study also found that children in continuous center-based care and continuous home-based care exhibited more internalizing and externalizing problems than children who were in a sequence of HBCC followed by center care. Both continuous center-based care and a sequence of HBCC followed by center care were associated with positive cognitive outcomes, although continuous HBCC care was associated with poorer child cognitive outcomes, which diminished between the preschool years and first grade. By contrast, children who experienced continuous HBCC and no center-based care in the years before kindergarten were rated significantly more popular with their peers than those who experienced both types of care.

A small body of correlational research examined continuity-of-care practices in center-based classrooms and found that the relationship to child outcomes may differ by age of child. Two studies of infant/toddler classrooms that implemented continuity-of-care practices found positive emotional regulation and observed strong attachment behaviors among toddlers and fewer behavior problems as reported by teachers when continuity-of-care practices were in place (Ruprecht et al. 2016; Horm et al. 2018). Using FACES data, multivariate research on age composition and child academic outcomes in center-based Head Start classrooms found that stability of teachers over a two-year period was not associated with cognitive outcomes for children and did not buffer the poorer math and reading outcomes for older children in the mixed-age classrooms (Ansari and Purtell 2018).

We found only two studies (one from 1999 and not included in this review) that examined continuity of care in HBCC settings. Findings from these studies suggest potential benefits of consistent caregivers over time for children's social and emotional development. Most of the research on continuity of care, however, took place in center-based settings, and these studies found inconsistent evidence of benefits of continuity practices. No research in this review examined the relationship between continuity of care and family or provider outcomes, and no research looked at continuity of care in FFN settings.

d. Cultural congruence

Cultural congruence refers to the potential match in race, culture, and/or language between provider and children in ECE. We conceptualize cultural congruence as a key quality feature in HBCC, where providers are more likely to come from similar racial, cultural, and linguistic backgrounds as the children in their care (Porter et al. 2010; Shivers et al. 2016a). When providers and children share a racial, cultural, or linguistic background, providers may be more likely to enact responsive and attuned care although few studies have examined whether cultural congruence in HBCC supports more responsive care. Research from school-based settings finds that children of color,

and Latinx children in particular, have better outcomes when they experience a racial/ethnic match with their classroom teacher (Downer et al. 2016).

By definition, racial, cultural, and linguistic congruence are a feature of relative child care and many FFN care settings. Data from the Arizona Kith and Kin study examined the quality features and characteristics of 4,000 Latinx FFN caregivers and found that 88 percent spoke Spanish with children in their care who were likely also Spanish speakers (Shivers et al. 2016a). Researchers also posited that a linguistic and cultural match in ECE may be a particularly important support for dual language learners (Shivers et al. 2016a).

Families may appreciate shared background including race, culture, and language, in their child care setting as well as other features such as cost and convenience, which may support children's adjustment to and comfort in care (Susman-Stillman and Banghart 2011). A national study of Latina mothers' child care choices found that level of acculturation was a key predictor of reliance in relative child care. Mothers who did not report their acculturation into the dominant culture were more likely than assimilated mothers to use relatives for child care; relatives offered cultural congruence that might not be found in centers, where teachers might not have shared families' culture and language (Satkowski et al. 2016). In fact, immigrant mothers in this panel study preferred relative care arrangements despite their higher ratings of centers' quality of care. Trust was examined as a potential factor in mothers' choices of relative care but was not found to be correlated with relative care preferences. The authors suggest that immigrant mothers' preference for relative care may be indicative of the importance of supporting "ethnic identity" as an aspect of quality care regardless of "quality" features as defined by professionals (Satkowski et al. 2016).

Cultural congruence in HBCC may offer the potential for positive effects on children's outcomes. Only one study in our review found evidence of a link between cultural congruence and child outcomes. Shivers and Farago (2016) found that Black FFN caregivers caring for Black children, enacted culturally normative practices with children in care that were more restrictive and controlling than mainstream, White parenting standards. These practices, which may have been perceived as necessary to protect children from racism and violence, were found to be associated with higher observed security attachment among children in care.

Other literature hypothesized a link between cultural congruence and child outcomes. One literature review of HBCC cited studies indicating that children's knowledge of their ethnic/racial heritage and identity could affect their self-esteem and emotional resilience, resulting in greater school success (Porter et al. 2010). Blasberg et al.'s (2019) conceptual model of HBCC quality hypothesized that building on children's culturally relevant, familiar, and everyday experiences can promote learning. One descriptive study of 36 FCC providers, half of whom were Latinx, proposed a model for culturally congruent care that could enhance children's outcomes (Paredes et al. 2018).

The proposed model described two primary cultural concepts found in HBCC settings: “familismo” (offering support for children and families together and closeness among children and families) and “compadrazgo” (reciprocal relationships between providers and family members, including other adults and children).

Two school-age child care literature reviews described cultural congruence as a component of high quality programming in after-school initiatives (Palmer et al. 2009; Smith and Bradshaw 2019).

Several studies examined the prevalence of culturally congruent care in HBCC settings, yet none of the studies in this review examined correlational links between cultural congruence and provider, child, or family outcomes in HBCC settings.

Summary of findings

- Most of the research examining provider-child interactions in HBCC settings was descriptive and focused on caregiver sensitivity and nurturing in HBCC, particularly in relative or FFN care settings.
- Studies found evidence of a link between supports for emotional, cognitive, and social development and child outcomes mostly in FCC providers and a link between cultural congruence and child attachment security.
- Few studies examined support for children's physical development.
- There was scant descriptive research and little correlational evidence on how HBCC providers supported interactions for mixed-age groups or continuity of care and how these aspects of HBCC provider-child interactions were associated with child outcomes.
- Correlational and experimental research from center-based settings found some evidence for a relationship between positive child outcomes and features that could be similar to those in HBCC, such as multiage classroom composition and continuity of care in infant/toddler classrooms.
- No studies found correlational evidence for a link between provider-child interactions in HBCC and provider or family outcomes.
- More studies examined correlational links between provider-child interactions and outcomes for children in FCC than FFN care.
- Most of the research in this review on support for children’s emotional development in HBCC focused on infants and toddlers, whereas research on other features of provider-child interactions focused on preschool-age children. No research in this review explicitly addressed provider-child interactions with school-age children in HBCC.

C. Provider-family relationships and family supports

Responsive and supportive provider-family relationships are a core component of quality in ECE. They are associated with aspects of families' well-being, including self-efficacy, leadership, positive parenting practices, and family functioning, as well as with children's academic, cognitive, and health outcomes (Forry et al. 2012). This broad quality component is grouped into two subcomponents—relational and logistical supports to families. Within these subcomponents, features such as trust, reciprocal communication, and flexibility assume strength-based approaches to responding to family needs and circumstances. Features such as family-like relationships and help with non-child–care tasks may be more likely to occur in HBCC settings, particularly in FFN settings, than in other ECE settings.

As Exhibit III.6 shows, research on provider-family relationships and family supports in HBCC was mostly descriptive, with few to no studies examining how family-provider relationships contribute to provider, child, or family outcomes in HBCC settings. Much of the research on this quality component focused on family perspectives and reports of child care decision making and preferences. We reviewed several studies that documented the experiences of families who used informal or FFN care settings, with few studies examining the specific features of these settings that may be linked to outcomes. Despite limited research on how relational and logistical supports are related to provider, child, or family outcomes in FCC and no correlational research on FFN care, the available information supported the potential importance of this quality component.

Twenty-eight articles, including 8 literature review articles and 20 primary research articles, examined provider-family relationships and family supports in HBCC settings.

Exhibit III.6. Evidence for provider-family relationships and family supports (8 literature reviews and 20 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal[1]	Article types for correlational and causal
Subcomponent: Relational supports (7 literature reviews and 17 primary research articles)								
Family-like relationships and connections among families	✓✓	HBCC; FCC; FFN; Relative only	—	—	—	—		
Trust	✓✓	FCC; FFN; Relative only	—	—	—	—		
Reciprocal communication	✓✓	FCC; FFN; Centers; Other	—	—	—	—		
Facilitation of family engagement in children's learning	✓✓	HBCC; FCC	—	✓✓	✓	✓[2] (child)	FCC; Centers	Primary; Review
Total	✓✓	**HBCC; FCC; FFN; Relative only; Centers: Other**	—	✓✓	✓	✓[2] **(child)**	**FCC; Centers**	**Primary; Review**
Subcomponent: Logistical supports (4 literature reviews and 8 primary research articles)								
Flexibility	✓✓	HBCC; FCC; FFN	—	—	✓	—	FCC	Review
Resources and referrals for families	✓✓	HBCC; ECE	—	—	—	—		
Help with non-child–care tasks	✓✓	FCC; FFN; Relative only	—	—	—	—		
Total	✓✓	**HBCC; FCC; FFN; Relative only; ECE**	**—**	**—**	✓	**—**	**FCC**	**Review**
Grand total	✓✓	**HBCC; FCC; FFN; Relative only; ECE; Centers; Other**	—	✓✓	✓✓	✓[2] **(child)**	**FCC; Centers**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.
Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that included only HBCC.
Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; **—** = No evidence found.

[1] Provider type refers to the focus of the research, not to the sample. For example, research on parents' experiences with family child care are marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

[2] None of the causal research for facilitation of family engagement in children's learning included samples of HBCC.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers) but not on ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting.

1. Relational supports

Relational supports

- Family-like relationships and connections among families
- Trust
- Reciprocal communication
- Facilitation of family engagement in children's learning

Relational support to families in ECE included provider-family relationships that were trusting, emotionally supportive, reciprocal, and culturally and linguistically responsive (Forry et al. 2012). Positive provider-family relationships may also involve the exchange of parenting information and education that facilitates parents' engagement in their children's learning and development. Our review found descriptive research evidence of relational supports across HBCC settings, but few examples of research connecting quality features to outcomes in this subcomponent.

a. Family-like relationships and connections among families

Family-like relationships between child care providers and parents of children in care may develop across child care settings, but the literature described them as a key quality feature in HBCC settings (Ang et al. 2017; Forry et al. 2012; Susman-Stillman and Banghart 2011). Family-like relationships may include reciprocal exchanges of social and emotional support, close bonds between providers and parents, and shared co-parenting roles with respect to care and education of children, especially among grandparent caregivers (Statham 2011).

Descriptive research in this review, from both literature review articles and primary research articles, suggested that provider-family relationships may be closer and more personally and emotionally supportive in HBCC than in centers. In addition, parents reported greater satisfaction with their relationships with providers in HBCC than in centers (Ang et al. 2017; Bromer and Henly 2009; Forry et al. 2012; Lehrer et al. 2015). HBCC providers might have viewed the development of family-like relationships with families of children in care as a component of quality (Ang and Tabu 2018). In addition, HBCC providers might have encouraged families to connect with each other and create a community of families. In their study of inclusion practices in FCC, Wong and Cumming (2010) suggested that the community-building role of FCC providers may support families of children with special needs.

A few qualitative studies found that FCC, FFN, and relative caregivers took on shared care roles with families of children in care (Hooper 2019; Kirby and Sanders 2012; Paredes et al. 2018). Community and cultural values may also shape the ways providers and families interact. One study with Latinx FCC providers found that providers valued the opportunity to support and raise children together with families (Paredes et al. 2018).

Provider-family relationships in relative child care settings take place, by definition, within the family. These close, familial relationships, especially between grandparent caregivers and parents, may resemble co-parenting (Statham 2011). Some research suggested that these relationships may require clear boundary-setting around child-rearing practices and roles. Grandparent caregivers may struggle with boundaries and establishing good communication with families (Kirby and Sanders 2012; Susman-Stillman and Banghart 2011). Grandparents may also experience burdens associated with negotiating child-rearing values with family members or setting limits for hours of care (Bromer and Henly 2009).

Close, family-like relationships between HBCC providers and families of children in care may be associated with other quality features such as provider responsiveness to children. One study found that FCC providers' perceptions of connectedness with families correlated with higher levels of provider responsiveness to children in care, but only for providers who reported lower levels of stress (Jeon et al. 2018). Overall, research in this review on family-like provider-family relationships was descriptive and did not examine related provider, family, or child outcomes.

b. Trust

Trust is often cited as a quality feature from a family perspective and includes parental and family perceptions that their child's caregiver is reliable, dependable, and caring (Porter et al. 2010; Susman-Stillman and Banghart 2011).

Results of descriptive research with samples of families across racial, ethnic, and linguistic groups suggested that trust was a key factor in families' decisions to place their children in HBCC. Studies of small samples of established FCC providers (those who considered themselves ECE professionals) reported trust as a key factor in what providers offered their families (Ang and Tabu 2018). Agencies that supported FCC providers or employers of families who used child care also reported the importance of trust in their description of high quality child care (Sandstrom et al. 2018). Qualitative studies of mostly Black single mothers who used FFN care during nontraditional hours and studies of families who relied on grandmother care reported trust as a major factor in their child care preferences (Stoll et al. 2015; Siddiqui et al. 2017). In a mixed-methods study, Weber et al. (2018) found qualitative evidence that trust was a factor in selection of FFN care for mothers who were White, single, and had low incomes, yet the authors found no correlational evidence of a link between trust and the selection of a type of child care. Another study based on a survey of immigrant and nonimmigrant Latina mothers' child care decisions found that, regardless of immigrant status, mothers reported trust as important in their choice or use of relative child care or center-based care (Satkowski et al. 2016).

Trust between providers and families may create a sense of belonging and comfort for children and families in the child care setting. This review also found mixed evidence

that trust is associated with families' choice of type of ECE. However, we did not find research that examined whether trust is associated with child or family outcomes in HBCC or other ECE settings.

c. Reciprocal communication

A previous literature review on family engagement and family involvement identified two-way communication as a component of positive family-provider relationships across ECE settings (Forry et al. 2012). Reciprocal communication strategies assumed provider skills in responding to family preferences, interests, and needs. Researchers hypothesized that good communication between providers and families shaped positive relationships between providers and families, positive parenting practices, and child outcomes (Forry et al. 2012).

In non-HBCC settings such as ECE centers or family support programs, the same literature review suggested that bidirectional communication strategies were associated with "providers' self-efficacy, competence, the development of professional goals, and ability to build partnerships with parents" (Forry et al. 2012, p. 53). However, in our review, we did not find studies that examined evidence of a correlational link between reciprocal communication with families and positive provider outcomes.

Two primary articles described bidirectional communication as a quality feature in HBCC settings. In a Canadian focus group study, FCC providers discussed two-way communication as an element of collaborative partnerships between providers and families in care (Doherty 2015). In the Arizona Kith and Kin study, primarily Latinx FFN providers reported talking with families about their children and their own home life (parent and provider) as important aspects of building trusting and strong relationships (Shivers et al. 2016a).

Despite conceptual evidence and some correlational evidence from related fields, no studies examined how reciprocal communication in HBCC settings is linked to provider, child, or family outcomes.

d. Facilitation of family engagement in children's learning

Family engagement in children's learning is a key component of high quality provider-family relationships across ECE settings (Forry et al. 2012) and may include support for families' involvement in ECE and at home around children's learning and development as well as parent education (see box). Most research on family engagement, however, has focused on home visiting or Head

Types of facilitation of family engagement in children's learning

- Support for families' involvement in children's experiences in ECE
- Support for families' involvement in children's learning at home
- Parent education, information, and guidance around child-rearing topics

Start settings (Forry et al. 2012). None of the research in our review examined facilitation of family engagement in children's learning in HBCC.

A prior literature review on family-provider relationships in ECE found causal evidence in home visiting programs that family engagement shapes children's learning and child outcomes. The review also found correlational evidence in center-based programs for a link between practices that support families' involvement in their own children's learning and child and family outcomes. The review did not cite research on family engagement in HBCC settings (Forry et al. 2012). However, our review identified a qualitative study of FCC provider perceptions of school readiness which found that FCC providers reported offering families at-home activities that might enhance children's school readiness. Providers in this study reported that they faced challenges in working with families that may have had unreasonable expectations for their children's development (Forry and Wessel 2012).

Research focused on parent education in HBCC came from literature on obesity prevention and indicated inconsistent findings on FCC parent education practices. Two literature review articles on obesity prevention—one focused on HBCC settings—found that, across studies, most FCC providers who had not participated in professional development in obesity prevention did not offer parent education in nutrition and healthy development (Francis et al. 2018; Larson et al. 2011). Yet, one of the reviews cited a study finding that FCC providers rather than non-Head Start, center-based teachers were more likely to offer parents information about nutrition and physical activity (Larson et al. 2011). We identified one primary research study that examined baseline data from an obesity intervention study with FCC providers and children, found a link between parent education on nutrition and children's healthy diets (Benjamin-Neelon et al. 2018).

The ECE literature widely cites family engagement in children's learning as a central component of high quality programs. However, we identified very little research describing family engagement in HBCC settings. We found only one qualitative study that examined how HBCC providers promote family engagement in children's learning (Forry and Wessel 2012). We found more research focused on parent education specifically around nutrition education practices in HBCC and one example of how this type of parent education was linked to positive nutrition outcomes for children. No studies examined evidence of a link between facilitation of family engagement in children's learning or parent education and family outcomes. In addition, we did not find any descriptive or correlational research on how FFN caregivers facilitated family engagement in children's learning.

2. Logistical supports

Logistical supports and resources for families may encompass the various ways that HBCC providers extend care to families beyond direct care of children, including flexible hours and payment schedules, referrals to or provision of resources for children in care and/or for families themselves, and help with non-child–care tasks.

Logistical supports and resources for families

- Flexibility
- Resources and referrals for families
- Help with non-child–care tasks

A conceptual framework for family-sensitive caregiving hypothesized that logistical supports for families respond to the work-family balance needs of families with low incomes and are a core component of high quality ECE (Bromer et al. 2010). The model posited that child care programs that are sensitive to the logistical needs of families as well as to the development needs of children may be well positioned to improve children's well-being (Bromer et al. 2011; Forry et al. 2012).

Descriptive research suggested that HBCC providers may be more likely than centers to offer logistical supports to help families manage work-family balance (Bromer and Henly 2009). Many families working in low-wage jobs with nontraditional hours rely on HBCC for its convenience, affordability, and flexibility (Liu 2015; Susman-Stillman and Banghart 2011).

a. Flexibility

Flexibility refers to providers' abilities to offer families a variety of scheduling and payment options that accommodate the nontraditional work hours and inconsistent payment schedules that are common among low-wage workers. ECE providers that offer flexible scheduling and hours of care may help support families' employment and well-being that, in turn, may contribute to positive child outcomes (Forry et al. 2012).

Findings from the NSECE indicated that listed and unlisted paid HBCC providers were more likely than centers to offer flexible hours—at least 70 percent of HBCC versus 45 percent of centers. Unlisted, paid HBCC providers were more likely to offer flexible payment schedules such as allowing families to pay for and use varying hours of care from week to week (57 percent) compared to both listed HBCC providers (39 percent) and centers (41 percent) (NSECE Project Team 2015b). A handful of descriptive studies supported these results. They suggested that HBCC providers and FFN caregivers, in particular, were more likely to offer scheduling and payment flexibility to families of children in care (Ang et al. 2017). In a qualitative study of HBCC and center-based providers serving primarily low-income families, HBCC providers reported offering flexible payments and flexible drop-off and pick-up schedules to help low-wage working families that must deal with irregular payment and inconsistent hours (Bromer and Henly 2009).

Compared with providers' perspectives, families' perspectives on flexibility in child care arrangements and child care decision making have captured greater research interest. Most of the research suggested that families needing flexible child care arrangements were likely to choose FFN care (Susman-Stillman and Banghart 2011). A mixed-methods study of single parents with low incomes found that parents who prioritized flexibility were more likely to choose FCC and FFN care than center-based child care (Weber et al. 2018). Other qualitative studies on families' perspectives found that single mothers in particular may choose FFN caregivers because these providers were more likely to accommodate family needs and circumstances.

Flexible practices may also include helping families create a patchwork of child care arrangements such as child care between formal arrangements, during emergencies, or when formal arrangements fall through (Brady 2016; Stoll et al. 2015). In a longitudinal, qualitative study of single mothers in Australia, Brady (2016) found that such supports offered by informal HBCC providers helped families "glue together" different child care arrangements, which led to stronger maternal employment trajectories, such as increasing professional qualifications, securing a new job, or advancing in a job. In contrast, a study of middle-income families in Canada found no link between parents' preference for flexibility and preference for HBCC versus center-based care for 4-year-old children (Lehrer et al. 2015). These findings suggest that the age of children in care and family income level may both be factors in how parents perceive the importance of flexibility.

Forry et al. (2012) cited one research study that found an association between flexible practices in FCC and centers and few employment exits by mothers working in low-wage jobs. Data from a nationally representative sample of parents in Australia showed an association between reliance on informal child care provided by relatives and reduced parental stress levels. The researchers hypothesized that the flexibility offered to parents by informal child care providers was a possible mechanism of how informal providers contributed to parental stress reduction (Craig and Churchill 2018).

Some qualitative research suggested that flexible practices may overburden providers, create feelings of ambivalence around professionalism and boundary setting and contributing to provider stress and exhaustion (Bromer and Henly 2009). However, we did not find any correlational evidence of links between flexibility and provider outcomes. Nor did this review find research that examined how flexibility in HBCC may contribute to children's experiences in care.

b. Resources and referrals for families

One feature of high quality family-provider relationships in ECE settings is the capacity of providers to connect families to resources for their children and for themselves (Blasberg et al. 2019; Forry et al. 2012). Yet, national data suggest that HBCC providers may have less capacity to offer resources and referrals to families than center-based

programs do. The NSECE reported that 89 percent of centers helped families find services such as health screening, therapy, counseling, or social services. In contrast, 44 percent of listed HBCC providers and 24 percent of unlisted paid HBCC providers helped families find these services. (NSECE Project Team 2015a). Starker differences were apparent in the proportion of centers that helped families find developmental assessments (81 percent); 30 percent of listed HBCC providers and 16 percent of unlisted paid HBCC providers helped families find these assessments.

Two conceptual models that included HBCC settings hypothesized that connecting families to resources was a core feature of ECE quality (Blasberg et al. 2019; Forry et al. 2012). Neither model, however, cited research on this quality feature. An evaluation of an Early Head Start-Child Care Partnership initiative that included FCC providers (Etter and Capizzano 2018) found that all providers increased their offerings of comprehensive services to families and children (a Head Start performance standard requirement), although the study did not specify if FCC providers experienced the same gains in this area as did centers.

No primary research studies examined how the provision of resources and referrals for families in HBCC related to provider, child, or family outcomes.

c. Help with non-child–care tasks

Help with non-child–care tasks may be another way that ECE providers support families (see box). HBCC providers may be more likely than centers to offer these types of extended supports, especially FFN caregivers who often reside in the same household as the family and children in their care.

Non-child–care tasks

- Shopping for families
- Cooking for families
- Doing laundry for families
- Running errands
- Help with tasks beyond child care, such as homework help and putting children to bed

A literature review and two descriptive studies included samples of FFN providers with low incomes and found that these caregivers frequently reported that they helped families with non-child–care needs (Ang et al. 2017; Bromer and Henly 2009; Shivers et al. 2016a). A study of mothers' experiences using child care during nontraditional hours found that parents appreciated relative caregivers' taking on additional tasks such as helping with children's homework and putting children to bed (Stoll et al. 2015).

None of the research on how HBCC providers helped families with non-child–care tasks examined links between these supports and child or family outcomes. Nor did we find evidence of how help beyond child care was related to provider outcomes. As with practices around flexible hours and payment, providers who assumed additional roles with families may experience unintended negative consequences such as stress and work overload.

Summary of findings

- The limited research base on how HBCC providers supported families was mostly qualitative and descriptive and focused on samples that included a mix of FCC and FFN providers. Overall, we identified more research on relational support features of provider-family relationships and family supports than research on logistical supports. We found few examples of research that examined how family engagement in children's learning or logistical supports for families in HBCC contributed to child or family outcomes.
- For some quality features such as family engagement or resources and referrals for families, most of the research focused on non-HBCC settings such as home visiting of family support programs.
- Much of the research on logistical supports focused on FFN caregivers, yet our review found no correlational research on how FFN caregiver supports improved family outcomes. Some studies compared FCC and FFN providers to center-based programs and found that logistical supports were more likely to occur in HBCC than in centers.
- Our review indicated that some of the features of provider-family relationships and family supports may be factors in families' choices of ECE. Some studies, for example, suggested that families preferred FFN care because of the logistical supports that FFN caregivers were able to offer. One study in our review found an association between FFN provider flexibility and positive maternal employment outcomes.
- We identified some limited evidence for a link between connectedness with families of children in care and greater responsiveness to children among FCC providers.
- We found no evidence of how provider-family relationships and family support may be related to provider outcomes such as increased or reduced stress and satisfaction with HBCC work.
- Family engagement in children's learning was the only feature in this component where we found evidence of a link to positive child outcomes. Only one study of FCC found a link between nutrition education for parents and children's health outcomes.
- Most studies included school-age children in the sample of children served by HBCC settings. Yet, none of the studies we examined on family-provider relationships described how these quality features differed for children in different age groups.
- Similarly, two articles mentioned that samples included families or providers who cared for children with disabilities, yet they did not discuss how family-provider relationships or family support practices varied for families of children with disabilities.

D. Conditions for operations and sustainability

Sustainability in ECE refers to providers' working conditions, successful business and administrative practices, and engagement in supports. Sustainability is hypothesized as a core component of quality in HBCC, and it has two subcomponents: (1) working conditions and (2) business practices and caregiving resources. Working conditions may contribute to providers' attachment or lack of attachment to the field. Successful business management may enable programs to continue operations and offer high quality care. Support communities may sustain FCC providers by offering social, emotional, informational, and professional support.

Two of the features described below are distinctive to HBCC settings—working alone and balancing work and family within the home space. Working alone may not be a quality feature, but it could indicate the importance of social connectedness in HBCC as an aspect of quality. The remaining features—managing multiple roles, business practices and resources, program policies, and access to support communities—may apply to centers but take on a different guise in HBCC settings.

As Exhibit III.7 shows, our review found both descriptive studies and studies examining correlational links between features of sustainability and provider outcomes in HBCC. The greatest evidence for links was between two features—working alone and access to business supports—and provider outcomes such as reduced stress. More research focused on FCC than on FFN in this component of quality, because many FFN providers do not necessarily see themselves as ECE providers or business operators. We did not find evidence that working conditions or business practices and supports are associated with children's outcomes.

We included access to support communities as a feature of business practices and caregiving resources, although a comprehensive search for studies of interventions that aim to support HBCC providers or professional development initiatives for HBCC providers fell outside the purview of this review. We relied on existing literature review articles to examine this quality feature and found that providers' use of supports was positively related to children's language and literacy skills, emotional development, and health outcomes.

Twenty-two studies, including 6 literature review articles and 16 primary research articles, explored quality features related to operations and sustainability of HBCC.

Exhibit III.7. Evidence for conditions for operations and sustainability (6 literature reviews and 16 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal[1]	Article types for correlational and causal
Subcomponent: Working conditions (4 literature reviews and 9 primary research articles)								
Working alone	✓✓	FCC; FFN; Relative only; Centers	✓	—	—	—	FCC	Primary
Work-family balance	✓✓	FCC; FFN; Relative only	✓✓	—	—	—	FCC; Relative only	Review
Management of multiple roles	✓✓	FCC; FFN	—	—	—	—		
Total	✓✓	**FCC; FFN; Relative only; Centers**	✓✓	**—**	**—**	**—**	**FCC; Relative only**	**Primary; Review**
Subcomponent: Business practices and caregiving resources (4 literature reviews and 10 primary research articles)								
Business practices	✓✓	HBCC; ECE	—	—	—	—		
Program policies	✓✓	FCC	—	✓	—	—	FCC	Primary
Access to business supports	✓✓	FCC; ECE	✓	—	—	—	ECE	Primary
Access to and participation in support communities	✓✓	FCC; FFN	✓	✓✓	—	—	FCC; FFN	Primary; Review
Total	✓✓	**HBCC; FCC; FFN; ECE**	✓✓	✓✓	**—**	**—**	**FCC; FFN; ECE**	**Primary; Review**
Grand total	✓✓	**HBCC; FCC; FFN; Relative only; ECE; Centers**	✓✓	✓✓	**—**	**—**	**FCC; FFN; Relative only; ECE**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that included only HBCC.

Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; — = No evidence found.

[1] Provider type refers to the focus of the research, not to the sample. For example, research on parents' experiences with family child care are marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers), but not on ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting.

1. Working conditions

Working conditions

- Working alone
- Work-family balance
- Management of multiple roles

HBCC providers face some unique working conditions. They often work alone and lack the support of co-workers. They are responsible for managing all aspects of their programs, including administration and business management. Managing their own family lives may be another factor associated with working conditions; HBCC providers work and live in the same physical space. These working conditions may leave few opportunities for free time and self-care and limit the time available for professional development or peer networking. Enormous demands on providers' time might contribute to poor psychological and physical well-being and may affect providers' marital and family relationships (Porter et al. 2010).

a. Working alone

Our review of literature reviews on HBCC found that isolation posed a primary challenge for HBCC providers (Porter et al. 2010; Blasberg et al. 2019), suggesting that social connectedness may be an important aspect of quality in HBCC. Most HBCC providers worked long hours alone or with an assistant. Data from the NSECE found that only 39 percent of listed providers and only 12 percent of unlisted paid providers who cared for unrelated children employed a paid assistant (NSECE Project Team 2016). Center-based providers may also work alone in a classroom (Corr et al. 2014), but they work with other staff in the same setting. Therefore, they might enjoy immediate and close access to other providers and to directors who can offer both personal and professional supports.

In a qualitative study with FCC providers, participants discussed the challenge of working alone and stressed the importance of regular contact with and connections to other providers who understood their experiences (Doherty 2015). FFN caregivers may have faced similar challenges with isolation. A review of literature on grandparent care highlighted the importance of social engagement and reduced isolation with respect to healthy aging (Kinsner et al. 2017). However, another review article on HBCC providers suggested that isolation may be more of a challenge for FCC than for FFN providers (Porter et al. 2010). The authors of the review cited research suggesting that some FFN caregivers did not experience isolation and, in fact, enjoyed many informal connections with other caregivers (Porter et al. 2010).

Working alone may influence the ways HBCC providers enact quality features. An analysis of composite global quality using the FDCRS, ECERS, and CIS factors found that the presence of a paid assistant was not a predictor of higher global quality scores or provider sensitivity (Forry et al. 2013), suggesting that working alone may not influence features of quality in HBCC settings.

The evidence for the relationship between working alone and provider outcomes in HBCC was limited. One literature review found descriptive evidence that feelings of isolation were related to stress among FCC providers (Corr et al. 2014). A study of FCC providers in Oregon found that working without an assistant was one of several variables that contributed to caregiver-reported stress (Rusby et al. 2013a), although here, working alone could have indicated additional workload rather than feelings of isolation.

Despite some primarily descriptive evidence that working alone and feeling isolated can be a source of stress for HBCC providers, we found no evidence for links to child or family outcomes.

b. Work-family balance

Management of home and child care in the same physical environment may pose a challenge for HBCC providers (Nelson 1991; Hooper 2019). Some providers offer care in their basements or in separate rooms of their homes, but many providers use their family space for child care (see Chapter III, Section A, on the home setting and learning environments component). Providers may also need to manage other family members who may or may not be supportive of the FCC business. For example, a spouse may work as an assistant in the program, or a provider's own young child may be in care alongside other children. Maintaining a balance between home life and the child care program may be a quality feature for some HBCC providers.

Several qualitative studies in this review described the challenges of balancing work and family in FCC settings. Together, these studies suggested that FCC providers faced challenges in managing the competing responsibilities of work and family (Corr et al. 2014; Hooper 2019). Corr et al. (2014) cited research showing that merging work and family for FCC providers often resulted in increased workload and decreased time for their own families, thereby contributing to provider stress. Providers in Doherty's study (2015) reported that a family member who was not keen on the child care program may contribute to provider stress. FCC providers in another study reported that, to reduce stress, they set boundaries between their professional and personal life through scheduling and space arrangement (Gerstenblatt 2014).

On the other hand, the co-location of child care and home may offer opportunities for FCC providers. Providers sometimes found that the presence of other family members in HBCC—such as spouses who functions as assistants or a provider's own children in care—could be a strength and not another challenge. One qualitative study with primarily Latinx FCC providers suggested that a provider's own child in care may create a "family-like" feeling. The provider's own child might treat the other children like siblings, and other adult family members might play a role similar to that of extended family (Paredes et al. 2018). In addition, a provider's experiences with his or her own family may influence how the provider approaches child care. For example, a

descriptive study found that FCC providers in Australia who had a family member with a disability or who worked in the disability sector were more willing to support the inclusion of special needs children in their own FCC programs (Wong and Cumming 2010). Although some researchers hypothesized that the presence of one's own child in care could increase provider stress and affect implementation of quality care, Forry et al. (2013) found no evidence of a link.

The line between work and family may be complicated for relative caregivers. They need to manage familial relationships alongside the child care arrangement. Descriptive research suggested that burdens associated with caregiving responsibilities and child-rearing values and approaches may be more fraught in relative care arrangements than in non-relative HBCC settings (Bromer and Henly 2009; Kirby 2012; Kinsner 2017).

Some research found correlational evidence of a link between work-family balance in HBCC settings and provider outcomes. A literature review of provider stress and well-being across ECE settings identified studies that found that work-family balance was associated with providers' psychological well-being, including level of stress and depression (Corr et al. 2014). One study found that the lack of emotional fulfillment from working with children and high work-family pressures were associated with higher levels of depression for both FCC and center-based providers (Corr et al. 2014). A review article on grandparent care cited two correlational studies reporting that grandmothers who provided child care experienced marital strain (Kinsner et al. 2017). Notably, these studies suggested that the relationship between grandparent care and marital strain varied with gender (grandfathers did not experience marital strain), shared child care responsibilities (grandparents who cared for children together did not experience marital strain), and hours of care. Grandparents providing part-time child care experienced less strain than those providing full-time care (Kinsner et al. 2017).

No research examined the challenges of balancing work and family across different types of HBCC providers who may hold differing views about the co-location of work and home or a link between this quality feature and child or family outcomes.

c. Management of multiple roles

Descriptive evidence across qualitative studies suggested that FCC providers take on multiple roles such as teacher, cook, nurse, and janitor within their FCC programs. Center-based directors may also assume multiple roles, especially in small centers. Yet research suggests that role management is more likely to occur in HBCC than in other ECE settings. How providers manage their various roles may relate to how they engage with children and families of children in their care (Doherty 2015; Hooper 2019).

Several qualitative studies examined roles and role burden in FCC. One study that specifically examined provider roles found that FCC providers assumed more than five roles on average. These included functional roles (for example, cook or janitor), relational roles (for example, nurturer or support to parents), and professional roles (for

example, teacher and administrator). The same study found that the majority of providers reported challenges in managing these roles and termed the roles "emotionally or physically draining" (Hooper 2019). FCC providers in another study reported role conflicts, such as the enforcer of policies governing sick care as part of an administrative role or taking on responsibility as co-parents or second mothers and worrying about children when they were not in care (Gerstenblatt 2014). The same study found that providers experienced stress when parents did not regard them as professionals. FCC providers in a third study attributed their stress to how successfully they handled work-related challenges, including juggling multiple roles (Doherty 2015). Only one study described provider-reported strategies for successful management of multiple roles by, for example, seeking help from an assistant or family member, preparing program activities outside of work hours, or following a clear schedule or routine (Hooper 2019).

As described here, management of a variety of roles in HBCC settings often led to provider stress and burnout, potentially distracting providers from the primary role of caring for and educating children. However, our review found only qualitative exploratory studies on how HBCC providers managed multiple roles. No correlational studies examined how successful management or mismanagement of multiple roles was associated with provider, child, or family outcomes. Few studies on role management in HBCC focused on FFN providers.

2. Business practices and caregiving resources

Business practices and caregiving resources

- Business practices
- Program policies
- Access to business supports
- Access to and participation in support communities

Stoney and Blank (2011) hypothesized that the "iron triangle" of business management, which includes maintaining full enrollment, collecting fees from parents on time, and maintaining revenue that covers the full cost of care in ECE settings, can translate into more sustainable programs with higher quality features. Yet, HBCC providers may face challenges in maintaining the iron triangle, particularly the on-time collection of parent fees. Difficulties in fee collection might stem from the absence of contracts with parents that specify attendance hours and fee payment schedules. In addition, the small number of children in care can make fluctuations in enrollment especially challenging. For children receiving a child care subsidy, HBCC providers also face sustainability challenges associated with subsidy systems that require complicated paperwork, use of online technology, and unreliable payment schedules (Porter and Bromer 2020). Consequently, they are more vulnerable to low and unstable incomes from their programs, perhaps ultimately leading to exit from the field.

The sustainability subcomponent of quality includes business practices, program policies, access to business supports, and access to support communities. For FCC providers and some FFN caregivers, caring for children at home is also a small business. Sound business and administrative practices including program policies and supports are essential quality features. By adopting and following such practices, caregivers are able to sustain their child care programs and maintain an environment that supports children's development. Support communities for HBCC providers include provider associations, family child care networks, peer support programs, or other initiatives that seek to connect HBCC providers to broader professional communities. This feature may overlap with the professional development activities in which providers participate (discussed in Chapter IV). In this feature, we posit that participation in a professional community is a quality feature in HBCC because it has the potential to mitigate some of the challenges of providing child care at home, such as isolation and working alone.

Overall, few studies described business practices and supports for HBCC providers. Even fewer examined the role that business practices may play in contributing to outcomes in HBCC settings. We identified more research on HBCC use of professional resources. The research on caregiving and professional resources focused on provider outcomes.

a. Business practices

Researchers hypothesized that strong business practices were an important feature of high quality and sustainable ECE programs, including HBCC (Blasberg et al. 2019; Bromer and Korfmacher 2017; Stoney and Blank 2011). Providers who cannot generate a sustainable income from their business may not be able to focus on aspects and features of their program that support children's development and families' work lives. Furthermore, HBCC providers lacking the essential skills needed for managing a business may experience significant stress (Blasberg et al. 2019).

Research demonstrated that individuals who operated ECE programs often had a strong background in child development or a related field, but they may not have had much experience in business management (Stoney and Blank 2011). According to the research, core business practices for ECE providers included keeping records, financial management, marketing, budgeting, preparing taxes, and developing contracts (Blasberg et al. 2019; Zeng et al. 2020). Although these business practices were relevant to all ECE programs, they were especially salient for FCC programs in which one person assumed the dual role of caregiver and business owner.

Clearly, business practices are an essential feature of sustainable, high quality HBCC, especially for FCC providers who are paid to offer care. Yet, we found a significant lack of both descriptive and correlational research on this sustainability feature.

b. Program policies

Written policies such as parent contracts or parent handbooks articulate ECE program expectations and rules. Such written material enhances communication and reduces the potential for conflicts between provider and families on matters that include payment, scheduling, and program practices. In the absence of written material, miscommunication may lead to family dissatisfaction, lost opportunities for shared care of children, and, ultimately, a family's exit from a program (Forry et al. 2012).

Few studies in our review addressed program policies in HBCC. Two qualitative studies suggested that clear program polices in FCC may reduce work-related stressors and enhance providers' professional identity (Gerstenblatt et al. 2014; Figueroa et al. 2019). Only one study assessed the relationship between program policies and children's outcomes in FCC (Benjamin-Neelon et al. 2018) and found a positive relationship between program policies related to nutrition (the addition of fruits, vegetables, and whole grains to children's meals) and children's improved healthy eating in the FCC setting. The authors suggest that the presence of policies may encourage providers to implement healthy eating practices with children in care.

None of the studies compared the use of program policies in HBCC and centers, and none provided evidence of reliance on program policies in FFN care. Given that FFN caregivers had more informal relationships with parents, they may not have relied on written policies, although they may have articulated their expectations to families.

Program policies may be one practice that contributes to a program's sustainability; however, none of the studies found links to provider outcomes such as attachment to the field or years in business, or family outcomes such as confidence or satisfaction with the program. In particular, the studies revealed no links to either short-term outcomes of positive provider-family relationships for both providers and families or longer-term outcomes of family engagement in children's learning.

c. Access to business supports

Business supports

- Coaching
- Training
- Shared services – back-office administrative support
- Collection of parent fees
- Recordkeeping support
- Bulk purchasing

Access to business and administrative supports may contribute to the sustainability of an HBCC program (see box). In particular, access to business coaching or training can help increase FCC providers' business skills and knowledge and help providers run financially stable programs (Stoney and Blank 2011; Etter and Cappizano 2018; Zeng et al. 2020). A study of an Early Head Start-Child Care Partnership initiative (Etter and Cappizano 2018) that combined business coaching and technology to support FCC businesses found that participating

providers improved their business practices as measured by the Business Administrative Scale (BAS). Another correlational study found an association between an intervention targeting business practices for FCC and small center-based programs and increased self-efficacy and improved business practices, but it did not find any impact on enrollment (Zeng et al. 2020).

As with research on business practices, no studies examined a link between access to business supports for FCC providers and family or child outcomes. No research examined business supports for FFN caregivers.

d. Access to and participation in support communities

Access to and participation in caregiving and/or professional supports may contribute to a provider's capacity to sustain high quality care. Descriptive and correlational research suggests that HBCC participation in professional organizations, support groups, networks, communities of practice, or other professional communities (Blasberg et al. 2019; Bromer and Korfmacher 2017; Porter et al. 2010; see box) may be related to positive caregiving outcomes and provider knowledge and efficacy.

Types of caregiving or professional support communities

- Peer support groups
- Family child care networks
- Family child care associations
- Communities of practice
- Workshops and training sessions
- Play and Learn initiatives for FFN providers

The 2012 NSECE findings indicated that most HBCC listed providers participated in workshops and that fewer than one-third participated in coaching (NSECE Project Team 2015a). These rates of participation in workshops and coaching by HBCC listed providers were similar to rates for center-based teachers. Greater differences in professional development participation were found between listed HBCC and unlisted paid HBCC providers. Listed HBCC providers were more likely to participate in either workshops (76 percent) or coaching (34 percent) than unlisted paid HBCC providers (23 percent and 12 percent respectively) (NSECE Project Team 2015a). Research suggests that FFN caregivers are interested in supports and resources in the areas of child development, caring for children, and working with parents (Porter et al. 2010). For example, data from the Arizona Kith and Kin study found that one-third of FFN providers had previous child care training (Shivers et al. 2016a).

Research that examined FCC participation in professional and peer supports focused on quality caregiving (Porter et al. 2010). FCCs in a Canadian focus group study reported that seeking opportunities to network with other providers was a component of high quality caregiving (Doherty 2015). Correlational studies found that FCC affiliation with a professional organization such as a provider association or family child care network was associated with higher scores on the FDCRS (Bromer and Korfmacher

2017; Forry et al. 2013; Porter et al. 2010). A study on FCC provider well-being found that providers who accessed professional resources from peers, schools, or agency staff reported that they engaged in fewer negative and non-supportive reactions to children in their care. Provider stress moderated this relationship such that providers who had access to professional resources *and* reported lower levels of stress had more positive reactions to children's behavior (Jeon et al. 2018).

Research on FFN caregivers' access to and participation in caregiving support communities focused more on provider outcomes and sustainability than on quality outcomes. A literature review on initiatives that supported FFN caregivers described three types of strategies aimed at engaging FFN caregivers in support communities: home visiting, Play and Learn strategies, and collaborations with other ECE programs such as Head Start and community preschools (Hatfield and Hoke 2016). Evaluations of several initiatives found improvements in provider knowledge as well as in quality features including provider-child interactions and learning environments based on a range of measures such as the CCAT-R. Six of the evaluations in the review of initiatives examined how engagement in a support community was related to aspects of sustainability, including increased opportunities to connect with other FFN providers, less isolation, and expanded networks of peers. One study of an FCC network found that providers reported lower levels of social support than unaffiliated providers did (Hatfield and Hoke 2016).

We found some evidence among FFN caregivers of links between reliance on caregiving resources and child outcomes. One of the 18 intervention studies in Hatfield and Hoke's literature review (2016)—an evaluation of a Play and Learn initiative for FFN—found evidence of a positive association between program participation and children's self-control, language, listening ability, and comprehension. An evaluation of facilitated support groups combined with literacy coaching for FFN caregivers found improvements in children's preliteracy skills (Shivers et al. 2016a).

Summary of findings

- Most of the evidence for features in conditions for operations and sustainability was descriptive.
- Few studies examined business practices or supports. All of the research on business practices focused on FCC.
- Some research evidence linked working conditions such as working alone to provider stress among FCC providers more than FFN.
- Few studies examined how conditions for operations and sustainability contributed to child outcomes; none examined a link to family outcomes.
- The literature on participation in caregiving and professional support communities in HBCC is substantial. Overall, the research found more links to provider outcomes among FFN caregivers who participated in peer support initiatives than among FCC providers who participated in networks or other professional organizations. This finding may relate to the fact that most studies of FCC quality improvement initiatives focused on quality of caregiving rather than on provider outcomes.
- We also found more research linking FFN participation in caregiving supports to child outcomes than we found for FCC.
- We identified a gap in research on how ages of children served in HBCC may be a factor in sustainability practices in HBCC. Only three articles specified the ages of children. Only one focused on the inclusion of children with disabilities in FCC. Another article included data on whether providers cared for children with disabilities. No studies examined how operations and sustainability in HBCC varied with school-age children in care.

IV. PROVIDER AND NEIGHBORHOOD CHARACTERISTICS THAT MAY INFLUENCE QUALITY IN HBCC

In this chapter, we address the following research question:

- How do provider and neighborhood characteristics influence quality features in HBCC? (Research Question 5)

As described in Chapter I, we did not set out to examine contextual factors of quality in this review. However, our team's experience conducting research with HBCC providers suggested that provider and neighborhood characteristics may present both opportunities and constraints to how quality is enacted in HBCC. These two contextual factors may be closest to the work of HBCC providers because of the single-provider model in many HBCC settings and the rootedness of HBCC in neighborhoods. We did not include an examination of research literature on other contextual factors, such as family and child characteristics. Nor did we review literature here on broader contextual factors, including ECE systems and policies as well as broader policy changes, social and economic trends, and systemic inequities and racism across sectors that touch the lives of HBCC providers.

Exhibit IV.1. Provider and neighborhood characteristics that may influence quality features in HBCC

Provider characteristics	Neighborhood characteristics
Provider background in ECE • Sources of knowledge about children and caregiving • Professional development • Years of experience **Provider attitudes** • Motivations • Professional identity • Caregiving beliefs, cultural values, and racial identity **Provider health and well-being** • Provider psychological health • Provider physical health • Provider financial and economic well-being	**Neighborhood structural characteristics** (such as crime; disadvantage) **Neighborhood social processes** (such as collective efficacy; social cohesion; neighborhood engagement)

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Characteristics of individual HBCC providers, such as their level of stress and sense of well-being, can operate together with neighborhood characteristics such as safety and collective efficacy and interact with quality features like caregiving behaviors and child care environments. These in turn can influence the outcomes of providers, children, and families. HBCC provider characteristics and neighborhood characteristics can interact when neighborhood features such as crime and safety require providers to adapt their approaches to child care. Conversely, provider characteristics such as financial and psychological well-being can promote positive social processes. Examples of

neighborhood characteristics are social cohesion and support among neighbors, and economic development in communities.

The following sections are in the same order and use almost the same approach as in Chapter III. We define each factor and present the types of evidence that we found in our review (as in Exhibit III.2), the types of HBCC providers who were studied (as in Exhibit III.3), and the variation across settings and across the ages and characteristics of the children who were served. We distinguish between provider characteristics and provider outcomes as discussed in Chapter III. We present tables of the evidence on provider and neighborhood characteristics that are similar to the tables on quality features from Chapter III. We add information about studies that link contextual factors to either quality features or measures of global quality in HBCC. This is particularly relevant for provider characteristics, because much of the research base in this area examines the relationship between provider characteristics and quality outcomes.

A. Provider characteristics

Research across ECE settings suggests that ECE providers' individual characteristics contribute to the ways they offer care and education to children and families. Providers' characteristics could also indirectly contribute to positive social-emotional and behavior outcomes in children as well as positive provider-family relationships, and family well-being (Epstein et al. 2016). Provider characteristics are especially important in HBCC settings, where the child care provider is often the entire program (Porter et al. 2010).

We reviewed a total of 32 articles with evidence on provider characteristics in HBCC, including 15 literature reviews and 17 primary research articles. We grouped the provider characteristics into three subcategories: (1) ECE background; (2) attitudes; and (3) health and well-being.

Our examination of the literature revealed that the majority of research on provider characteristics focuses on links to quality outcomes that are measured by global measures of the ECE caregiving environment. We did not include these studies in our descriptive category for contextual factors, but instead pulled them out as a separate evidence category.

In this section, we use the word "quality" to refer to these global measures of quality (unless otherwise noted). Our review found the strongest evidence of a relationship between provider education and professional development and quality outcomes. We also found substantial evidence for correlational links between quality outcomes and motivations, caregiving beliefs, psychological well-being, and financial well-being. Few studies examined the associations between provider characteristics and child outcomes, and we found no studies that looked at family outcomes (Exhibit IV.2).

Although this literature review did not encompass research on how systemic inequities, including those born of racism and income inequality, influence the experiences of

HBCC providers, we acknowledge that individual provider characteristics alone cannot fully account for how providers experience their work with children, families, and communities. Nor can individual provider characteristics be considered in isolation from the broader societal contexts that HBCC providers operate in. For example, provider education level and psychological, physical, and economic well-being are all interconnected. Moreover, for HBCC providers from marginalized communities, experiences with systemic inequities inevitably impact their individual experiences with broader educational, health, housing, and financial systems.

Exhibit IV.2. Evidence for provider characteristics (15 literature reviews and 17 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with quality outcomes	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal[1]	Article types for correlational and causal
Provider background in ECE (9 literature reviews and 8 primary research articles)									
Sources of knowledge about children and caregiving	✓✓	FCC; FFN	✓✓[2]	✓[2]	✓✓	—	—	FCC; FFN	Primary; Review
Professional development	✓✓	FFN	✓✓	—	—	—	✓✓ (quality)	HBCC; FCC; FFN	Primary; Review
Years of experience	✓✓	FFN	✓✓[2]	—	—	—	—	FCC	Primary; Review
Total	**✓✓**	**FCC; FFN**	**✓✓**	**✓**	**✓✓**	**—**	**✓✓ (quality)**	**HBCC; FCC; FFN**	**Primary; Review**
Provider attitudes (5 literature reviews and 10 primary research articles)									
Motivations	✓✓	FCC; FFN; Relative only	✓✓	✓	—	—	—	FCC	Primary; Review
Professional identity	✓✓	FCC; FFN	—	—	—	—	—		
Caregiving beliefs, cultural values, and racial identity	✓✓	HBCC; FCC	✓✓	—	✓✓	—	—	FCC; FFN	Primary; Review
Total	**✓✓**	**HBCC; FCC; FFN; Relative only**	**✓✓**	**✓**	**✓✓**	**—**	**—**	**FCC; FFN**	**Primary; Review**
Provider health and well-being (7 literature reviews and 7 primary research articles)									
Provider psychological health	✓✓	HBCC; Relative only	✓✓	✓	✓	—	—	HBCC; FCC	Primary; Review
Provider physical health	✓✓	FCC; Relative only	—	—	—	—	—		
Provider financial and economic well-being	✓✓	FCC; FFN	✓✓	—	✓	—	—	FCC; FFN; Centers	Primary; Review
Total	**✓✓**	**HBCC; FCC; FFN; Relative only**	**✓✓**	**✓**	**✓✓**	**—**	**—**	**HBCC; FCC; FFN; Centers**	**Primary; Review**
Grand total	**✓✓**	**HBCC; FCC; FFN; Relative only**	**✓✓**	**✓✓**	**✓✓**	**—**	**✓✓ (quality)**	**HBCC; FCC; FFN; Centers**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that included only HBCC.

Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; — = No evidence found.

[1] Provider type refers to the focus of the research, not the sample. For example, research on parent's experiences with family child care will be marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

[2] Equivocal findings for the relationship between feature and outcome. At least one article found a null relationship between feature and outcome.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers) but not ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting

1. Provider background in ECE

Provider background in ECE

- Sources of knowledge about children and caregiving
- Professional development
- Years of experience

Provider sources of knowledge, professional development, and work experience in ECE settings are frequently examined factors that may contribute to quality features across ECE settings. Research identifies higher education and professional development, in particular, as predictors of quality across ECE settings (NSECE Project Team 2015a). Our review found a consistent correlation between ECE-focused education and professional development and provider-child interactions and learning environments; we found less evidence for a correlation between a provider's education level or years of experience and quality outcomes. Few studies in this review examined links between provider ECE background and child outcomes. Most of the research on provider ECE background focused on FCC and not on FFN providers.

a. Sources of knowledge about children and caregiving

The knowledge, skills, and dispositions that providers gain from college coursework or degrees could enhance their capacity to provide both a learning environment and interactions that support children's positive development (National Association for the Education of Young Children [NAEYC] 2012). Specialized higher education—an ECE or ECE-related major—can prepare providers to translate their knowledge of child development into supporting positive child outcomes (NAEYC 2012).

Descriptive findings from the 2012 NSECE indicated HBCC providers had lower levels of higher education than center-based ECE providers. Less than one-third (30 percent) of listed HBCC providers reported an associate degree or higher, compared with more than half (53 percent) of center-based teachers. Similarly, 29 percent of listed HBCC providers reported ECE-specific majors, compared with 38 percent of center-based teachers. Among paid HBCC providers, unlisted paid HBCC providers had less education than listed HBCC providers (NSECE Project Team 2015a).

Additional descriptive research in our review also found HBCC providers have low education levels. Phillips and Morse (2011) found that 45 percent of FCC providers in their single-state study had only a high school degree or less. A literature review on FFN care cited studies indicating that FFN providers had lower levels of education than FCC providers, and might have had lower educational levels than the parents of the children in their care (Susman-Stillman and Banghart 2011). Analyses of the ECLS-B data found higher proportions of FCC providers with a college degree than FFN providers (Bassok et al. 2016). The Arizona Kith and Kin study found that 78 percent of FFN providers held a high school diploma or hadn't graduated from high school, and only 12 percent had any ECE-specific education or coursework (Shivers et al. 2016a).

There are consistent research findings about the relationship between a provider's education level combined with specialized ECE education and quality in HBCC settings. A literature review article on the infant/toddler caregiving workforce (including center and FCC providers) found some associations between having both a B.A. degree and ECE-specific education and higher scores on the FCCERS, the CC-HOME, and the ORCE (Epstein et al. 2016). Similarly, a primary study of FCC provider education and quality that used multivariate analyses of ECLS-B data found that both higher degree attainment and ECE-related education among paid HBCC providers who were not related to children in care (most likely FFC) were correlated with higher FDCRS scores (Schaack et al. 2017).

Research on how education level relates to quality outcomes revealed mixed results. Only one primary study found a consistent positive association between provider education level (some college or more) and membership in a higher quality program profile defined by higher FDCRS and CIS scores and by weekly academic activities (Iruka and Forry 2018). Both the review article on the infant/toddler caregiving workforce and primary research articles revealed limited or null associations between education level and global quality or provider outcomes in HBCC settings (Epstein et al. 2016). A primary research study found an initial positive bivariate correlation between an associate degree or higher and FCCERS scores among FCC providers, but education level was not significant in multivariate analyses (Hughes-Belding et al. 2012). In a study of FCC social environments, Rusby et al. (2013b) found that provider education level (for example, a bachelor's degree instead of some college or a high school degree) was only modestly associated with the quality of the caregiving environment (for example, activity planning and promotion of prosocial skills). The authors suggest that providers' higher education in ECE may not give them enough information about how to create a high quality FCC environment for children (Rusby et al. 2013b). Secondary data analysis of the Quality Interventions for Early Care and Education (QUINCE) study found no relationship between years of education and a composite score that included the FDCRS and ECERS (Forry et al. 2013).

Provider education level may also contribute to other provider characteristics such as caregiving beliefs or pedagogical knowledge. We found evidence in the review on the infant/toddler workforce for a link between higher levels of education combined with ECE-specific education and fewer authoritarian beliefs (Epstein et al. 2016). A correlational study of FCC providers from one state found years of education were not significantly related to providers' knowledge of language, literacy, or math concepts that would be appropriate to teach young children (Phillips and Morse 2011). Authors suggest that a college education might not necessarily prepare FCC providers with the kinds of knowledge they need to support children's school readiness.

Two primary studies examined the links between a provider's education level or specialization and child outcomes in HBCC. First, Schaack et al. (2017) found that paid HBCC providers who were not related to the children and had an associate degree

(regardless of ECE content) were less likely to rate children's behaviors as negative than providers without a degree. Having an ECE major was not associated with higher or lower assessments of children's language, math, and/or social-emotional outcomes (Schaack et al. 2017). Second, Iruka and Forry (2018) found an association between children's academic outcomes in preschool and kindergarten and the FCC provider's education level. Children who attended an FCC program that was part of a "good" quality profile and in which the provider had at least some college education were more likely to have higher reading scores in preschool and kindergarten and higher math scores in kindergarten. Within center-based programs that had a similar quality profile, teachers' education level was not associated with outcomes for children.

Specialized education could be important for HBCC providers caring for children with disabilities. A review article on inclusion in child care cited studies which found associations between providers' specialized education in disabilities and higher ECERS or FCCERS scores, although FCC providers were rated as lower quality than centers (Weglarz-Ward and Santos 2018).

Overall, research suggested that HBCC providers had lower levels of formal education than providers working in center-based programs. We only found one study that examined sources of provider knowledge about children and caregiving that may not have come from formal education. HBCC provider level of education combined with specialized education in early childhood or special education had a consistent association with quality in FCC settings. However, provider level of education alone was inconsistently associated with quality and had a tenuous association with child outcomes. We found no evidence of a link between provider education and family outcomes in HBCC settings, and only limited evidence for how a provider's level of education could be related to other provider-level characteristics such as caregiving beliefs. No studies focused on how provider education may contribute to quality or child outcomes in FFN care settings.

b. Professional development

In the ECE literature, professional development encompasses non-credit supports such as training, coaching, and consultation as well as credit-bearing courses that lead to a credential (for example, the Child Development Associate [CDA] credential) or a degree. Providers who participate in these kinds of activities can increase their knowledge and enhance their practices, which can lead to improved support for children's development (Aikens et al. 2016).

A large body of research exists on professional development in preschool, Head Start, and other center-based programs, but few studies examine professional development in HBCC settings (Aikens et al. 2016; Werner et al. 2016). Studies on professional development across ECE settings found some evidence for an association with improvement in caregiver practices, particularly within targeted professional

development interventions, but there were few impacts found on child outcomes.[10] A meta-analysis of 18 experimental interventions designed to improve caregivers' sensitivity to children and children's social-emotional outcomes in center-based programs and some HBCC settings found that targeted interventions had small to medium effects on caregiver interaction skills, with individualized coaching or consultation approaches having the greatest impact in changing providers' behaviors (Aikens et al. 2016; Werner et al. 2016).

Three existing literature review articles in our review cited studies that showed a positive association between professional development and HBCC provider and/or quality outcomes as measured by a variety of instruments (Bromer and Korfmacher 2017; Hatfield and Hoke 2016; Porter et al. 2010). Bromer and Korfmacher (2017) found that individualized approaches to support that included visits to FCC homes and coaching were more likely to be associated with improved provider practices than supports that did not include these approaches.

Two primary research studies found positive associations between providers' professional development and quality outcomes in FCC settings. A study on the predictors of quality in FCC found that providers with more than 20 hours of professional development had higher FDCRS teaching and interaction scores compared to providers with 10 hours (Hughes-Belding et al. 2012). Another study that looked at FCC social environments found that providers with specialized training in ECE were more likely than providers without this training to have an organized caregiving environment (Rusby et al. 2013b).

Overall, we found consistent evidence that providers who obtain professional development such as coaching and training may gain information that helps them offer higher quality care and education to children. No studies examined how professional development among HBCC providers predicts child outcomes in these settings. There is an emerging body of evidence that examines professional development and support interventions for HBCC providers; beyond what was reported in Chapter III (see Section D.2.d on access to and participation in support communities), it was outside the scope of this review. No studies examined how provider professional development was related to the experiences of families that use HBCC (for example, providers with more professional development focused on working with families may develop stronger partnerships with families of children in care).

[10] Our literature review did not systematically examine findings from interventions or initiatives included in these literature review articles, because that was not the focus of this review. We present them here in broad form and focus on research that examines provider professional development as an HBCC provider characteristic.

c. Years of experience

ECE providers' years of experience has long been considered an element of structural quality because providers can gain greater knowledge about, and enhanced skills for, supporting children's development over time (Burchinal et al. 2002). Yet, we found inconsistent evidence on how experience is related to practices involving quality features in HBCC settings.

Descriptive data from the 2012 NSECE found that higher proportions of listed HBCC providers reported more than 10 years of experience, compared with center-based providers (NSECE Project Team 2013). Across HBCC, the proportion of listed providers reporting more than 10 years of experience was more than double that of unlisted paid providers (63 percent compared with 30 percent) (NSECE Project Team 2013). A review of the FFN literature cited studies which found a wide range of experience among providers (Susman-Stillman and Banghart 2011). Data from the Arizona Kith and Kin study found that FFN providers had, on average, 7 years of experience offering child care (Shivers et al. 2016a).

Findings about the relationship between experience and different features of quality are mixed. A literature review on HBCC cited two studies, one of which found an inconsistent association with the FCCERS and the other a null association (Porter et al. 2010). One primary study found that years of experience was positively associated with higher scores on the teaching and interaction and tone and discipline subscales of the FCCERS but not with sensitivity as measured by the CIS (Hughes-Belding et al. 2012). Another study found the opposite: a positive association between experience and sensitive caregiving and a null association with global quality (Forry et al. 2013). A study of the FCC social environment found that for FCC providers, experience working in a child care center was moderately associated with all subscales of the CCEI measure of the environment, but experience working in HBCC was not associated with quality (Rusby et al. 2013b).

Our review found inconsistent evidence for how provider experience may be related to other provider characteristics. A study of FCC literacy and math knowledge and learning environments found that providers' prior preschool experience was negatively associated with provider knowledge of literacy and math concepts used in teaching young children (Phillips and Morse 2011). In a review of providers' mental health, the authors reported no consistent relationships between provider experience and psychological well-being (Corr et al. 2014).

Only one study examined correlates of child outcomes in FCC settings and found that FCC providers' years of experience were not a predictor of child outcomes. Iruka and Forry (2018) found that providers' years of experience were correlated with children's kindergarten reading scores for children enrolled in center-based care, but not for children enrolled in FCC.

We found inconsistent and limited evidence for a link between years of experience and HBCC quality, and no evidence that provider experience is associated with child outcomes in FCC. No studies examined the earlier experiences of FFN caregivers.

2. Provider attitudes

Provider attitudes

- Motivations
- Professional identity
- Caregiving beliefs, cultural values, and racial identity

Provider attitudes include motivations for offering ECE, professional identity and sense of professionalism, and caregiving and child-rearing beliefs including racial and cultural identity and values. Together, these individual dispositions toward doing ECE may contribute to the way care and education are offered to children and families, which in turn may be related to child and family outcomes. These dispositions can also interact with other characteristics of providers, such as education and well-being.

a. Motivations

HBCC providers' reasons and motivations for offering ECE may contribute to the quality of caregiving they offer children and families. In their landmark study of FCC and relative care, Kontos et al. (1995) found that FCC providers' commitment to ECE as a career was linked to higher quality care (Kontos et al. 1995).

Findings from the 2012 NSECE offered nuanced information about the differences in motivation between HBCC and center-based providers and across different types of HBCC providers. Among the reasons for providing care, the most frequently selected motivation for listed HBCC providers was viewing child care work as a career or calling (48 percent). The majority of center-based providers (71 percent) also selected this as one of their motivations. Far lower proportions of unlisted, paid HBCC (18 percent) and unlisted, unpaid HBCC (9 percent) reported viewing their child care work as a career or calling (NSECE Project Team 2015a; NSECE Project Team 2016). On the other hand, unlisted HBCC were more likely to report that their child care work was a way to help out families (45 percent of paid, unlisted and 77 percent of unpaid, unlisted) compared to listed HBCC (8 percent) or center-based teachers (1 percent) (NSECE Project Team 2015a; NSECE Project Team 2016). Notably, smaller proportions of all types of ECE providers reported that helping children was their motivation for doing child care work (NSECE Project Team 2015a; NSECE Project Team 2016).

Two existing literature review articles cited studies that also found that relative providers care for children to help out families (Porter et al. 2010; Susman-Stillman and Banghart 2011). These reviews cite research showing that relative providers were also less likely than non-relatives to do this work as a source of income (Porter et al. 2010; Susman-Stillman and Banghart 2011). A third literature review found that grandparents were

more likely to report their love of grandchildren as a reason for providing care (Statham 2011).

Our review of primary studies found little in-depth descriptive data on provider motivations, although findings here mirror the NSECE data. The Arizona Kith and Kin study found that most FFN caregivers reported offering child care because they wanted to help families go to work or school (72 percent). Fewer reported that spending time with children was a motivation (50 percent), and only 10 percent reported income as a motivation (Shivers et al. 2016a). A qualitative study with FCC providers in Australia found that providers with altruistic motivations were more likely to include children with disabilities in their programs (Wong and Cumming 2010).

We found mixed results on the association between motivation and global quality. One study of FCC providers found that providers' intrinsic motivation for doing child care (seeing the work as a calling rather than a way to make a living) was positively associated with higher scores on a composite of the FCCERS and ECERS measures and on the CIS (Forry et al. 2013). A multivariate study of FCC providers in five states found a positive association between commitment to child care and higher scores on the FDCRS and CIS, but the relationship did not hold when the analysis controlled for other variables, such as years of experience or provider beliefs (Hughes-Belding et al. 2012). Iruka and Forry (2018) found that FCC providers who expressed a stronger motivation to do ECE work because it meant they could take care of young children were more likely to be part of a "good" quality profile than FCC providers without that motivation.

Only one study in our review examined the relationship between motivation and provider outcomes. This study, cited in a literature review on provider mental health, found FCC providers with a commitment to the profession reported less stress than those who lacked such a commitment (Corr et al. 2014).

Overall, provider motivations about caring and educating children may be related to the ways providers engage with children and families and the approaches they take to setting up quality environments. However, this review found few studies and limited evidence that motivations are linked to positive provider-child or provider-family interactions or to high quality environments. No studies examined how motivations contribute to quality in FFN settings, and no studies examined relationships between HBCC provider motivation and child or family outcomes.

b. Professional identity

Some research suggests that ECE providers' professional identity relates to their goals for children, their program practices, and their desire for program improvement. Researchers hypothesize that professional identity may, in turn, be related to child and/or family outcomes (Hooper 2019; Figueroa et al. 2019). One descriptive study of five FCC providers reported that they viewed their continued efforts to improve their

environment and their interactions with children as expressions of their professionalism (Freeman 2011). Another qualitative study of HBCC providers (mostly FCC with some FFN) found similar results: many viewed themselves as teachers, developing lesson plans and assessments along with curricula to enhance individual children's outcomes (Hooper 2019). Another qualitative study similarly found that FCC providers' professional identity was defined by their commitment to improve their provision of high quality care (Figueroa et al. 2019).

This review did not find any correlational evidence of links between professional identity and provider practices, provider outcomes, or child and family outcomes. Not surprisingly, we did not find any research on how FFN caregivers view professionalism or their aspirations to become part of the regulated, professionalized ECE workforce.

c. Caregiving beliefs, cultural values, and racial identity

Research indicates that caregiving beliefs of adults who care for young children are an important component of care and education across settings (Hughes-Belding et al. 2012; NSECE Project Team 2015). Beliefs about caregiving may be child- or adult-focused. Caregiving beliefs may also vary for different ages and abilities of children. For example, providers may hold beliefs around caring for children with disabilities that differ from beliefs around caring for children with typical development. Caregiving beliefs may also derive from the intersection of cultural values and practices, racial identities, and neighborhood and community circumstances and realities.

Data from the 2012 NSECE found similar levels of authoritarian or adult-centered child-rearing beliefs among listed HBCC providers and center-based teachers and slightly higher adult-centered beliefs among unlisted, paid HBCC providers (NSECE 2015a). Other primary research on FCC providers' caregiving beliefs (with samples of mostly White providers) found that child-centered beliefs were associated with higher ratings on global and environmental ratings of quality as measured by a composite of the FCCERS and ECERS measures and higher levels of observed caregiver sensitivity (Forry et al. 2013; Hughes-Belding et al. 2012; Porter et al. 2010).

Providers may hold specific caregiving beliefs around inclusion of children with disabilities. One study across centers and HBCC found providers held positive beliefs about including children with disabilities in their programs (Weglarz-Ward et al. 2019) although they also reported several barriers to inclusion, including lack of specialized training. Child care providers agreed with statements about children with disabilities receiving services alongside same age peers, and believed that all children can learn.

Caregiving beliefs may also be a product of cultural values and racial or ethnic identity, and may be related to how providers engage with children. A review of nutrition and health practices among FCC providers found Hispanic providers were more likely to hold authoritarian views about feeding practices (for example, insisting children eat everything on their plate) than White or Asian FCC providers were (Francis et al. 2018).

In a study of Black relative caregivers with low incomes, some providers held child-rearing beliefs that included ideas such as "Too much talk about racism will prevent you from reaching your goals" (p. 70). Providers with these beliefs consistent with a "mainstream deficit racial socialization" viewpoint were more likely to be less responsive to and involved with children in their care, and were more likely to report lower levels of psychological well-being and material resources (Shivers and Farago 2016). This study points to how multiple provider characteristics, including racialized experiences and income inequities, can intersect to influence caregiving beliefs.

Research suggests that the relationship between caregiving beliefs and child outcomes in HBCC settings can vary across cultural and racial communities. Research with White FCC providers who were actively engaged in professional development found a positive association between FCC providers' child-centered beliefs and children's literacy and math skills (Forry et al. 2013). Research on Black FFN caregivers serving related and unrelated children in a low-income community found that both restrictive and nurturing beliefs about child-rearing were associated with more secure attachment among children in care. As the authors explained, these seemingly opposite child-rearing views were adaptive and normative in the sociocultural context of a low-income Black community where residents experienced high levels of institutional and individual racism. Restrictive beliefs about caregiving, and correspondingly restrictive practices, may be necessary to protect Black children from racism and oppression, and could contribute to strong attachment between caregivers and children in these FFN settings (Shivers and Farago 2016).

Clearly, caregiving beliefs are a provider characteristic that has the potential to drive the ways providers engage in caregiving work. Yet, research suggests that types of caregiving beliefs vary by individual provider and child characteristics as well as by cultural, racial and ethnic, and economic contexts, and that the interaction between beliefs and children's experiences may be different in these different contexts.

3. Provider health and well-being

Provider health and well-being

- Provider psychological health
- Provider physical health
- Provider financial and economic well-being

Providers' health and well-being are aspects of provider characteristics that are hypothesized to contribute to implementation of quality features and child and family outcomes (Corr et al. 2014; Cumming 2017). The quality subcomponent of provider health and well-being encompasses psychological well-being, physical health, and financial and economic well-being. A provider's own mental and physical health may be related to her availability and responsiveness to children and families, which is at the heart of high quality ECE. Our review found more studies on provider mental health and psychological well-being than studies on physical health

and financial well-being among HBCC providers. We also found less research focused on FFN caregivers than we did on FCC providers.

a. Provider psychological health

Psychological health refers to overall well-being and mental health, including levels of depression and stress that may result from difficult working conditions. For providers of color or providers living in poverty, psychological health may be exacerbated by the combination of difficult working conditions with experiences of racism and financial instability although studies on provider stress did not address the role of racial or economic inequities in provider experiences. Some of this research overlaps with our review of research on working conditions—particularly working alone and balancing work and family (Chapter III, Section D.1.a and D.1.b). Research across ECE settings finds that stress is a significant issue among both center-based and HBCC providers (Corr et al. 2014). Provider "self-health and wellness" may be particularly salient in HBCC settings where the individual provider, often alone, plays a central role in caring for children and families (Blasberg et al. 2019, p. 5). Some studies suggest that stress and depression are high among HBCC providers, especially those working long hours. A review of research on grandparent care, for example, found levels of depression and stress among grandparents increased as the number of hours of care increased (Statham 2011).

Research on provider well-being in ECE, including HBCC settings, found inconsistent evidence for an association between provider psychological health (stress or well-being) and how providers implement quality features (Corr et al. 2014; Cumming 2017). Some studies found that poor emotional well-being among providers was related to lower-quality interactions with children, whereas others found no relationship between depressive symptoms and FCC practices (Corr et al. 2014). Researchers using self-report data to assess FCC job-related stress and observational data of caregiver behaviors found a relationship between work stress and responsiveness to children's emotional needs as well as caregiver sensitivity and interactions with children in care (Forry et al. 2013; Hughes-Belding et al. 2012; Jeon et al. 2018).

A study comparing FCC and center-based care in the Netherlands suggested that there may be a stronger relationship between stress and caregiver practices in HBCC than in other ECE settings. Groeneveld et al. (2012) compared the relationship of stress to caregiving behaviors among both FCC and center-based providers, and found that FCC providers offered higher quality caregiving than center-based providers overall, but that high levels of perceived stress among FCC providers were associated with lower ratings of observed behaviors with children—including offering emotional support and talking and listening to children. This association between stress and caregiving behaviors was not found among center-based providers (Groeneveld et al. 2012).

Fewer studies examined the relationship between provider well-being and provider outcomes. In a literature review on ECE provider well-being, researchers hypothesized that provider stress across ECE settings could contribute to provider turnover and exit from the field (Corr et al. 2014). These same researchers found a correlation between social support and lower levels of stress.

Only one study examined a link between caregiving psychological well-being and child outcomes. Rusby et al. (2013a) found FCC providers with low levels of self-efficacy were less likely to be observed giving children positive attention, and more likely to report behavior problems among children in care; however, this correlational finding does not indicate a causal relationship. It is possible that providers who dealt with behavior problems among children in their care were more likely to have feelings of low self-efficacy.

Several studies found a correlation between provider stress and less responsive caregiving behaviors, as well as a link between provider psychological well-being and potential exit from HBCC work. We found only one study that examined associations between provider psychological well-being and child outcomes.

b. Provider physical health

Providers' own physical health could be a factor in how providers work with children across ECE settings. This review did not identify any literature reviews or primary research articles that described or examined a relationship between providers' physical health and implementation of quality features or child outcomes in ECE settings.

Neither of the two literature review articles on obesity prevention in ECE focused on providers' own physical health. A review on obesity prevention in FCC cited one study of health practices among FCC providers in Kansas, which found that most providers demonstrated healthy eating practices themselves while caring for children, but 17 percent reported consuming unhealthy foods and drinks in front of the children in their care (Larson et al. 2011).

Descriptive research suggests that grandparents who provide child care for their grandchildren find the work itself to be physically taxing (Kinsner et al. 2017; Porter et al. 2010: Statham 2011). Yet neither of the two literature review articles that focused on grandparents examined the physical health of grandparents and how preexisting conditions or obesity may hinder their caregiving capacity. Kinsner et al. (2017) cited research that indicates some grandparents may experience physical benefits from doing child care, such as more physical activity. We did not find research that examined how HBCC providers' own experiences of systemic inequities in access to health care, especially for providers who are people of color, might impact their own physical health and well-being.

c. Provider financial and economic well-being

The financial and economic well-being of individual providers across ECE settings is another factor that could affect quality caregiving and child outcomes. Yet, because paid HBCC providers are self-employed, individual financial resources may be a more salient factor in how providers implement quality features than they are for center-based programs. According to Forry et al. (2013): “Financial well-being may facilitate providers’ ability to offer adequate and appropriate materials and activities, while financial stress may constrain resources or negatively impact caregiver psychological well-being” (p. 894).

Descriptive evidence suggests that FFN caregivers, and relative caregivers, in particular, may have lower household incomes than regulated FCC providers. Some FFN providers may hold other jobs in addition to caring for children, an indication of economic insecurity (Porter et al. 2010). The 2012 NSECE found that almost half of unlisted, unpaid providers had other jobs (48 percent); this figure was 13 percent for listed providers and 28 percent for unlisted, paid providers (NSECE Project Team 2016). One study of licensed FCC providers in a midwestern state found that FCC providers lived in lower-income households compared to other residents in the same census block. The authors hypothesized that residing in a low-income household may hinder access to materials and opportunities that could promote quality caregiving (Figueroa et al. 2019). A study of Black FFN caregivers found that providers with fewer financial resources were less likely to endorse caregiving beliefs around racial pride (Shivers and Farago 2016). The authors suggested that the transmission of racial pride may be conceptualized as an aspect of responsive care in FFN settings. As the authors explained, this finding about financial well-being and caregiving beliefs may be explained by the lack of access to integrated communities and possibilities for racial equity experienced by Black providers living in poverty.

Correlational research, including both primary articles and literature review articles, found higher family income among FCC providers predicted higher scores on measures of global child care environment quality (Forry et al. 2013; Porter et al. 2010). Global quality measures prioritize the presence of materials and equipment in FCC settings that may be more available for providers with more financial resources. A review on provider well-being cited research on preschool teachers whose greater financial well-being was correlated with greater emotional availability with children in care (Cumming 2017). One study did not find a link between financial resources and caregiver sensitivity (Forry et al. 2013).

One primary research article reported on two correlational studies of Black FFN caregivers that examined the relationship between provider financial well-being and child outcomes. A correlational study of Black FFN caregivers found that economic well-being for providers with low incomes was indirectly associated with greater attachment security among children in their care (Shivers and Farago 2016). This relationship was

mediated by caregiver beliefs that were “non-restrictive” (p. 75). As the authors explain, caregivers who do not live in economically precarious situations may be able to offer more nurturing, less restrictive care to children.

Like their business practices, providers’ financial well-being is critical to the sustainability of their HBCC work. However, few studies examined this provider characteristic across types of HBCC settings.

Summary of findings

- There was consistent evidence that ECE-specific education—combined with overall level of education—and professional development are associated with quality of caregiving practices in HBCC. Limited evidence was found for positive associations between education level (some college or postsecondary degrees) and quality outcomes.
- Mixed evidence was found linking years of experience to quality outcomes, and some research suggested that experience in center-based ECE may predict quality outcomes in FCC settings.
- Evidence on how provider attitudes are related to caregiving quality is also inconclusive, although there is a small research base that found child-centered motivations and beliefs are linked to more sensitive caregiving practices. Studies in our review also pointed to a link between caregiver beliefs and positive child outcomes. The relationship between specific caregiving beliefs and children’s outcomes may be influenced by the intersection of provider experiences with racism, poverty, and cultural values.
- Our review found a lack of research on professional identity among HBCC providers.
- There is an emerging evidence base indicating that provider psychological well-being is associated with caregiving practices in HBCC settings where the provider is the sole caregiver. We did not identify research that examined a link between provider stress and child outcomes.
- Far less evidence and descriptive research exist on providers’ own physical health or on financial well-being, and how those characteristics may be related to caregiving practices and child outcomes.
- There is a lack of research on the characteristics of FFN providers specifically; most evidence is on FCC and FFN providers combined.
- No studies examined how provider characteristics such as experience, motivation, and beliefs may differ depending on ages of children in care. Our review found some descriptive research on provider beliefs related to inclusion practices and decisions to care for children with disabilities.

B. Neighborhood characteristics

The characteristics of neighborhoods may influence how HBCC providers put quality features into practice. HBCC providers are residents of local neighborhoods and offer care not only within a home-based context but also within the context of a neighborhood block. Because HBCC settings are rooted in neighborhoods, we decided to include neighborhood characteristics as a factor that might influence quality. The relationship between neighborhood context and HBCC is under-researched and an under-recognized aspect of HBCC, yet it may be important for understanding the conditions in which HBCC providers offer care and education.

As described earlier, HBCC providers are more likely to use neighborhood resources such as libraries and parks than other ECE providers. Yet, no articles in this review focused directly on how neighborhood characteristics are related to the work of HBCC providers. To understand how neighborhoods may be a factor in shaping HBCC quality, we looked to the literature on neighborhoods and child development and parenting more generally. Research on neighborhood characteristics and child development identifies several aspects of neighborhoods that are directly linked to child outcomes including neighborhood safety, disorder, and disadvantage, as well as neighborhood social processes such as social control, social cohesion, and engagement (Choi et al. 2018; De Marco and Vernon-Feagans 2013; Dockery et al. 2010). Yet much of this research also finds that the relationship between neighborhood characteristics and child outcomes is mediated by parenting (Cuellar et al. 2015). Fewer studies examine child care quality as a mediator.

Two literature review articles and three primary research articles examined the relationship between neighborhood characteristics, parenting, and child care use and practices (Exhibit IV.3). Because there is a lack of research on the role of neighborhood characteristics and HBCC, we present hypotheses throughout the following section about how neighborhood characteristics could interact with HBCC quality.

Exhibit IV.3. Evidence for neighborhood characteristics (2 literature reviews and 3 primary research articles)

	Theoretical and/or descriptive	Provider types for theoretical and descriptive[1]	Correlational with quality outcomes[2]	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	Provider types for correlational and causal1	Article types for correlational and causal
Neighborhood structural characteristics	—	—	✓✓[3]	—	✓✓	—	—	Centers; Parents	Primary; Review
Neighborhood social processes	—	—	✓✓	—	✓✓	—	—	ECE; Parents	Primary; Review
Grand total	**—**	**—**	**✓✓**	**—**	**✓✓**	**—**	**—**	**ECE; Centers; Parents**	**Primary; Review**

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: Table does not distinguish between studies that included both HBCC and centers compared to studies that only included HBCC.

Key: ✓= Our review found one example of evidence; ✓✓= Our review found two or more examples of evidence; — = No evidence found.

[1] Provider type refers to the focus of the research, not the sample. For example, research on parent's experiences with family child care will be marked as FCC. Parents refers to literature on parenting or the living/home environments where parental care takes place. Parenting does not refer to literature on parental use of HBCC.

[2] Quality outcomes in this table refer to HBCC provider practices or parenting practices. For example, studies that examine how neighborhood characteristics are associated with quality of parenting (responsiveness, warmth) are coded here as quality outcomes. We considered parenting quality here as a proxy for HBCC quality because HBCC providers are caregivers in the neighborhood who might experience neighborhood characteristics in similar ways as other caregivers and parents in the same neighborhood.

[3] Findings about how neighborhood structural characteristics influence parenting practices are inconsistent.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting; Centers = center-based care only; Parents = research focuses on parenting (parents or custodial caregivers) but not ECE or child care; Other = may include after-school programs; intervention programs; family support programs; experimental labs; and home visiting.

1. Neighborhood structural characteristics

Neighborhood structural characteristics include health and safety of neighborhoods, poverty rate, and unemployment. The presence of safe parks, playgrounds, and libraries as well as levels of noise, crime, and abandoned housing could influence HBCC quality by affecting access to and use of community resources and the ability to take children outdoors. Neighborhood health and safety may also be related to HBCC provider levels of stress and well-being. Neighborhood poverty may also affect the quality of ECE if there aren't enough resources available to support high quality programming (Burchinal et al. 2008). We did not identify any research on HBCC specifically, so we looked to four articles (two literature review articles and two primary research articles) from related literature on parenting, child care decision making, neighborhoods, and housing.

Parents who live in neighborhoods they consider dangerous could feel stress about keeping their children safe, which, in turn, may lead to negative child outcomes. Choi et al. (2018) found that neighborhood disorder in large urban cities was associated with lower levels of child behavior; associations with cognitive development were partially explained by higher levels of parenting stress. Dockery et al. (2010) found a link between dangerous neighborhood conditions and children's social-emotional outcomes such as autonomy and exploration. In a review of correlational research on parenting and neighborhood characteristics, Cuellar et al. (2015) found inconsistent evidence for a relationship between neighborhood safety or disadvantage and parenting behaviors, with some studies indicating an association between disadvantaged neighborhoods and low parenting responsiveness due to chronic stress. Other studies in their review found the opposite, however: some parents may engage in parenting warmth and nurturing as a buffer against the dangers of living in neighborhoods with a high crime rate. Still other studies found no associations.

Burchinal and colleagues (2008) examined the relationship between structural neighborhood characteristics such as poverty rate and unemployment and center-based ECE quality, and found high-poverty neighborhoods that also had more negative social processes had lower quality center-based programs as measured by the ECERS. Structural characteristics alone did not predict quality of center-based care.

2. Neighborhood social processes

Neighborhood social processes are aspects of how residents in neighborhoods interact with each other and include what researchers call collective efficacy or the extent to which neighbors know and trust each other, share values, and rely on each other to look out for children and youth (Sampson et al. 1997). Social processes may also include measures of social networks such as the presence of family and friends in the neighborhood (Burchinal et al. 2008). Together, these social processes may influence the experiences of families with young children. For example, parents and child care

providers in neighborhoods with high collective efficacy may have access to more resources and social capital, which may be factors in how they engage in quality features, including interactions with children and learning activities and routines in the home.

HBCC providers are members of a residential neighborhood, and in that role they can contribute to these neighborhood social processes. For example, HBCC providers may contribute to trust or social cohesion among neighbors by informally supervising or "keeping watch" over neighborhood children. We did not identify any research that specifically examines how neighborhood social processes interact with HBCC quality features and practices, or how HBCC providers improve the social characteristics of their neighborhoods. Instead, we examined literature on the relationship between neighborhood characteristics, parenting, and child care usage.

Research on how neighborhood characteristics contribute to parents' decisions about child care found that different social processes at the neighborhood level may have differential relationships with child care decision making. Burchinal et al. (2008) found that parents living in neighborhoods rated high on measures of collective efficacy were more likely to use non-relative HBCC arrangements than they were to use centers or parent-only care. However, in neighborhoods where parents reported having large social networks of family and friends, parents were more likely to rely on relative care, parent-only care, or center-based care, and less likely to use non-relative HBCC care (Burchinal et al. 2008). As the authors explained, parents in neighborhoods with high levels of trust among neighbors may feel more comfortable using non-relatives for child care. On the other hand, parents who report having large networks of family and close friends may be less likely to choose non-relatives for care and more likely to rely on their networks.

In research on rural neighborhoods where more than half of child care arrangements were HBCC (mostly relative care), De Marco and Vernon-Feagans (2013) found that observational ratings of neighborhood safety were linked to children's receptive language outcomes, and that this relationship was partially mediated by participation in high quality child care, including relative care, FCC, and center-based care, as measured by the HOME. The authors hypothesized that children in safer neighborhoods may have had more opportunities to interact and talk with people in public spaces (for example, playgrounds) than children in unsafe neighborhoods, and that the having and using high quality child care in these neighborhoods partially mediated this relationship by offering children more opportunities to interact with adults and peers (De Marco and Vernon-Feagans 2013). The same study found that parents in unsafe neighborhoods with higher levels of social cohesion were also more likely to use high quality child care that was responsive and supportive of children's language development. The authors hypothesized that high levels of collective efficacy, where residents helped and supported each other may have offset unsafe neighborhood characteristics by making it possible for families to choose high quality care.

Research in our review indicates that neighborhood social processes contribute to parenting behaviors and child outcomes. Cuellar et al. (2015) found some consistent associations between parenting and neighborhood social processes, such as disengagement with neighbors. The authors of the review posit that parents in neighborhoods with low levels of “collective socialization” may feel isolated and alone without opportunities to interact with other parents or adults who could serve as parenting supports. This could, in turn, increase stress and be detrimental to children’s well-being (p. 210). Choi et al. (2018) found that higher levels of neighborhood social cohesion and control in large urban cities were associated with children’s positive social-emotional, cognitive, and health outcomes. These outcomes were partially mediated by both lower parenting quality and parental stress.

Overall, the literature on neighborhood characteristics suggests that both negative and positive neighborhood factors, including neighborhood disadvantage and neighborhood social cohesion, contribute to how parenting is related to children’s outcomes. We extrapolate that this relationship to parenting quality may extend to how HBCC providers enact quality features especially those related to responsive caregiving. Parents’ and caregivers’ experiences in neighborhoods are multifaceted and include access to resources, relationships within a community, and barriers and constraints of neighborhood health and safety. Other aspects of neighborhood life, such as institutional and interpersonal racism, may also be factors that influence caregiving responsiveness. Choi et al. (2018), for example, found that “being white” afforded advantages to both parents and their young children in addition to positive neighborhood structural and process characteristics (p. 488).

Summary of findings

- We reviewed studies with large representative samples and found mixed evidence for links between neighborhood characteristics and parenting and caregiving behaviors, or child outcomes.
- Some studies found a negative relationship between neighborhood characteristics and parenting behaviors; others found a positive relationship. Research suggests that neighborhood characteristics such as observed neighborhood safety, parental perceptions of neighborhood characteristics, or social processes such as collective efficacy have a stronger association with parenting and child outcomes than characteristics such as census-derived neighborhood poverty or unemployment rates (Burchinal et al. 2008; De Marco and Vernon-Feagans 2013).
- The research literature on neighborhood characteristics also indicates that structural characteristics (safety and poverty) and process characteristics (cohesion and trust) may interact and, in combination, contribute to parenting behaviors (Cuellar et al. 2015).
- There was limited evidence on how neighborhoods are related to dimensions of child care practice such as provider-child interactions and learning environments. Some of this research included HBCC providers, but none focused specifically on the practices or quality of HBCC providers.
- No research specifically examined the relationship between neighborhood characteristics and the practices of HBCC providers. However, findings about parenting and child care quality in general may apply to how neighborhood characteristics interact with quality features in HBCC settings. Like parents who live in neighborhoods with high crime rates, HBCC providers in those neighborhoods can experience more stress than they would in a safer neighborhood, which could limit their capacity to engage in responsive caregiving, learning routines, or access to community resources. Similarly, HBCC providers who reside in neighborhoods with low levels of social cohesion and trust may lack access to social supports that could help them offer responsive care to children.
- The research makes clear that there is a need to consider neighborhood context when examining quality of caregiving practices in HBCC and support for caregiving (stress reduction, access to resources) because of how embedded HBCC is in the life of a neighborhood.

V. SUMMARY OF FINDINGS

This literature review examined research on the quality features in HBCC settings and the provider and neighborhood characteristics that are most likely to influence these features. The goal of the review was to inform development of a conceptual model for quality in HBCC, the review and development of quality measurement approaches in HBCC, and an agenda for future research on HBCC.

This chapter summarizes findings from the review and discusses the implications those findings have for research going forward.

A. Summary of components, subcomponents, and quality features

1. What are the components, subcomponents, and quality features in HBCC?

This review identified four components of quality in HBCC (Exhibit III.1): (1) home setting and learning environments; (2) provider-child relationships; (3) provider-family relationships and family supports; and (4) conditions for operations and sustainability. Within these four broad components, we identify subcomponents that group together features hypothesized to address similar aspects of HBCC quality. For example, one of the subcomponents of home setting and learning environments is learning environment and routines. Within learning environment and routines, there are four quality features: materials and organized environment, curricula, intentional learning activities, and opportunities for informal learning.

For all four components, we identified some quality features that are found across ECE settings. Examples are indoor and outdoor space, curricula, support for children's development in different domains, reciprocal communication with families, trust, and program policies (Exhibit V.1). We also found some quality features that may be implemented differently or are more likely to occur in HBCC than in other ECE settings. Examples are family-like settings, opportunities for informal learning, support for mixed-age peer interactions, cultural congruence, flexibility, management of multiple roles, and business practices.

Exhibit V.1. Quality features that are similar across ECE and features that may be implemented differently or are more likely to occur in HBCC

Quality features found across ECE settings	Quality features that are more likely to occur in HBCC than in other ECE settings
Home setting and learning environment	
• Group size and adult-child ratios • Indoor and outdoor space • Health and safety • Materials and organized environment • Curricula • Intentional learning activities	• Use of community spaces as extension of child care • Family-like settings • Care offered during nontraditional hours • Opportunities for informal learning
Provider-child relationships	
• Support for children's emotional development • Support for children's language, literacy, and cognitive development • Support for children's social development • Support for children's physical development	• Close provider-child relationships • Support for mixed-age peer interactions • Continuity of care • Cultural congruence
Provider-family relationships and family supports	
• Trust • Reciprocal communication • Facilitation of family engagement in children's learning • Resources and referrals for families	• Family-like relationships and connections among families • Flexibility • Help with non-child–care tasks
Conditions for operations and sustainability	
• Program policies • Access to and participation in support communities	• Working alone • Work-family balance • Management of multiple roles • Business practices • Access to business supports

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

2. Which types of HBCC providers are included in existing research?

Although the literature is inconsistent in how it categorizes different HBCC settings, more research focused on FCC than on FFN settings. Within research involving FFN caregivers, our review found more studies on child care provided by grandparents than on care provided by neighbors, friends, or other relatives.

In addition to the limited research on different types of HBCC providers, we also found limited research focused on some populations of children in HBCC. Although our review included three existing literature review articles on after-school care for school-age children, these reviews did not examine school-age care in HBCC settings. We found only two studies that focused on how HBCC providers support children with special needs.

3. What types of evidence exist for components, subcomponents, and quality features in HBCC?

Our review found ample descriptive research evidence on quality features in HBCC across the four components. This research focused on describing how HBCC providers implement quality features and the experiences of families that use HBCC with those features. We found fewer examples of correlational research that included HBCC, and found links between some quality features and child outcomes across all four components. Most of this correlational research focused on features of quality that are found across ECE settings, not on features of quality that are more likely to occur or are implemented differently in HBCC settings than in other ECE settings. Some of this research was conducted with samples of HBCC providers and center-based programs, whereas other research only examined center-based programs or parental care settings. Only a handful of studies examined how quality features in HBCC are linked to family outcomes. Few studies examined the relationship between features of HBCC quality and how those features may relate to provider outcomes such as exit from or tenure in the work (see Exhibit V.2).

Exhibit V.2. Summary of evidence and gaps in evidence across components of quality in studies that include HBCC

	Theoretical and/or descriptive	HBCC provider types for theoretical and descriptive	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal	HBCC provider types for correlational and causal
Home setting and learning environments	✓✓	HBCC; FCC; FFN; Relative only; ECE	—	✓✓	—	—	HBCC; FCC
Provider-child interactions	✓✓	HBCC; FCC; FFN; Relative only; ECE	—	✓✓	—	—	HBCC; FCC; FFN; Relative only
Provider-family relationships and family supports	✓✓	HBCC; FCC; FFN; Relative only; ECE	—	✓	✓	—	FCC
Conditions for operations and sustainability	✓✓	HBCC; FCC; FFN; Relative only; ECE	✓✓	✓✓	—	—	FCC, FFN; Relative only; ECE

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This table only includes evidence from research whose primary focus is on HBCC or on families who use HBCC. Some of the evidence was found in samples that included both HBCC and centers. Research on samples that did not include HBCC is not included in this table.

Key: ✓= one example of evidence; ✓✓= two or more examples of evidence; — = no evidence found.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = sample only includes relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings but does not distinguish findings by setting.

a. Descriptive evidence across HBCC quality components, subcomponents, and quality features

This review found ample descriptive evidence[11] on HBCC settings and on providers' experiences caring for children, working with families, and managing a home-based business. Most of the descriptive evidence on quality features comes from studies that used focus groups, interviews, and surveys with small samples of both HBCC providers and parents who use HBCC. Qualitative studies in our review described the ways that continuity of care and mixed-age groups in HBCC create a sense of belonging and community, the close family-like relationships in HBCC, and the working conditions of HBCC. We also found descriptive studies on logistical supports that HBCC providers offer families, and on how families experience flexibility and accommodation of nontraditional hours from their HBCC providers. Although several descriptive studies included samples of providers in different racial, ethnic, and linguistic groups, few of these studies focused on how experiences of racism and racial, ethnic, and linguistic identity intersect with implementation of quality features.

b. Correlational evidence across HBCC components, subcomponents, and quality features: provider, child, and family outcomes

Exhibit V.3 shows only those features of quality where evidence was found for a correlational link to outcomes in studies that included HBCC settings. Quality features where we either found no correlational evidence from HBCC settings or found correlational evidence only in non-HBCC settings (centers, parental care) are discussed in the next section and shown in Exhibit V.4.[12] Exhibit V.3 also shows gaps in the types of outcomes that have correlational evidence in studies of HBCC. Our review found more evidence of links between quality features in HBCC and child outcomes than evidence of links to family or provider outcomes.

The most evidence of a link between quality features and *child outcomes* was found for features within (1) home setting and operations, including group size, program space, health and safety, materials and organized environment, and intentional learning activities; and (2) provider-child interactions, including support for children's development across domains. One study from the obesity prevention literature examined a link between both parent education (conceptualized in our review as part of family engagement) and program policies (a feature in conditions for operations and sustainability) and child outcomes (Benjamin-Neelon et al. 2018).

[11] Our definition of descriptive evidence in this review included studies that used correlational methods to examine how features of quality are linked to global quality. We defined this type of evidence as descriptive because this review focuses on identifying evidence for how quality components and features contribute to positive provider, child, and family outcomes.
[12] Each quality feature is listed in either Exhibit V.3 or Exhibit V.4, but not in both exhibits.

We found a few examples of a correlational link to child outcomes for features of quality that may be implemented differently or are more likely to occur in FFN settings, including close provider-child relationships (Statham 2011) and cultural congruence (Shivers and Farago 2016). Continuity of care was another feature with evidence of links to child outcomes, although one study found mixed results in examining continuity of setting type instead of continuity with a specific provider (Morrissey 2010), and the other cited just one study, which was from 1999 (Ruprecht et al. 2016). We also found mixed results from studies of continuity of care in center-based settings. There was evidence of a link between providers' participation in supports (a feature in conditions for operations and sustainability) and children's cognitive and social-emotional outcomes.

Most of the child outcomes were related to language, literacy, and math skills as well as social-emotional and behavioral outcomes. A few studies we reviewed from the obesity prevention literature examined physical and health outcomes for children. We did not find studies that examined other aspects of children's cognitive development such as executive functioning skills, or aspects of physical development, such as large muscle and fine perceptual motor skills.

In our examination of how HBCC quality features are linked to *family outcomes*, we found only one example: A study of FCC and centers that was cited in a literature review on family-provider relationships found a link between flexible scheduling practices in HBCC and maternal employment stability (Forry et al. 2012). A few studies found that reduced parental stress or positive maternal employment outcomes are associated with use of HBCC in general, and FFN care specifically, but these studies did not examine the features that might explain this correlation (Brady 2016; Craig and Churchill 2018). We would expect quality features within the component of provider-family relationships to contribute to family outcomes; the lack of correlational evidence for these outcomes is a significant gap in the research literature.

Several studies reported a link between quality features that are more likely to occur in HBCC and *provider outcomes*. These features were part of the component of conditions for operations and sustainability. Our review found links between working alone, work-family balance, access to business supports, and participation in support communities and provider outcomes such as stress levels, marital strain, knowledge gains, and increased self-efficacy. We did not find studies that examined links between other components of quality and provider outcomes. However, we expect that some features of home settings, such as group size, and some features of provider-child relationships, such as continuity of care, might contribute to provider outcomes.

Exhibit V.3 also shows that we were more likely to find correlational evidence for quality features that are found across ECE settings than for features of quality that are more likely to occur or implemented differently in HBCC settings than in other ECE settings. Of the 16 quality features identified in Exhibit V.1 as being found across all settings,

Exhibit V.3 lists evidence for 12. In contrast, of the 16 quality features from Exhibit V.1 that are more likely to occur or implemented differently in HBCC settings, Exhibit V.3 only has evidence for 7.

Exhibit V.3. Correlational evidence for associations between quality features and outcomes, and gaps in outcomes, in studies that include HBCC

Quality components, subcomponents, and features with correlational evidence from studies that include HBCC settings	Outcomes		
	Provider	Child	Family
Home setting and learning environments			
Physical environment and setting			
Group size and adult-child ratios	—	✓[1]	—
Indoor and outdoor space	—	✓	—
Health and safety	—	✓	—
Learning environment and routines			
Materials and organized environment	—	✓	—
Intentional learning activities	—	✓	—
Provider-child relationships			
Provider support for children's development			
Support for children's emotional development	—	✓[1]	—
Support for children's language, literacy, and cognitive development	—	✓	—
Support for children's social development	—	✓	—
Support for children's physical development	—	✓	—
Family-like relationships with children			
Close provider-child relationships	—	✓	—
Continuity of care	—	✓[1]	—
Cultural congruence	—	✓	—
Provider-family relationships and family supports			
Relational supports			
Facilitation of family engagement in children's learning	—	✓	—
Logistical supports			
Flexibility	—	—	✓
Conditions for operations and sustainability			
Working conditions			
Working alone	✓	—	—
Work-family balance	✓	—	—
Business practices and caregiving resources			
Program policies	—	✓	—
Access to business supports	✓	—	—
Access to and participation in support communities	✓	✓	—

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This exhibit lists quality features with evidence for a correlational link to outcomes in studies that included HBCC settings. Quality features with no evidence from HBCC settings are listed in Exhibit V.4. Each feature is listed in either Exhibit V.3 or Exhibit V.4, but not in both.

Key: Italics = feature may be more likely to occur in HBCC than in other ECE settings; ✓= at least one example of correlational or causal evidence found in our review of existing literature; — = no evidence found.

[1] Evidence found for association between feature and child outcomes was equivocal (at least one article found a null relationship between feature and outcome).

4. What are the gaps in correlational or causal evidence for components, subcomponents, and quality features in HBCC?

Our review found several gaps in correlational evidence for quality features across the four broad components and their subcomponents (Exhibit V.4). Most of the features for which we found gaps in correlational evidence included those that may be more likely to occur or are implemented differently in HBCC than in centers or other ECE settings; as shown in the first column in Exhibit V.4, there are gaps for nine of these features, compared with gaps for only four features that are found across ECE settings. These included use of community space, family-like settings, care in nontraditional hours, and opportunities for informal learning (home setting and learning environment), support for mixed-age peer interactions (provider-child relationships), family-like relationships and help with non-child–care tasks (provider-family relationships and family support), and management of multiple roles and business practices (conditions for operations and sustainability). For three features of quality (curricula, opportunities for informal learning, and support for mixed-age peer interactions), we found correlational evidence for an association with child outcomes in non-HBCC settings only, including center-based programs and parental care (described below).

On the subject of support for mixed-age peer interactions, we looked to research on center-based ECE, including center-based infant/toddler and Head Start programs. Studies in these settings found mixed results on links between support for mixed-age groups of children and child outcomes. Although mixed-age groups are theorized to help both parents and children because they make it possible for siblings to be cared for in the same setting, we found no research that examined the relationship between this feature and family outcomes such as employment, stress, or well-being.

For the quality feature of opportunities for informal learning, we looked to parenting literature on routines and rituals in homes and family life and to cross-cultural literature on childrearing that examines informal learning as an alternative to school-based learning models. Here we found evidence of correlational links between family and household routines (such as meal time) and children's language, academic, and emotional outcomes, although we did not find correlational evidence for a link between informal learning and children's outcomes in HBCC settings.

Turning to the feature of nontraditional hour care, several studies described families' needs for nontraditional hour care and the likelihood of FFN caregivers meeting these needs. One study described HBCC providers' implementation of nontraditional hours. However, no studies examined outcomes associated with the quality features of HBCC during evening, overnight, and weekend hours.

This review revealed other gaps in correlational evidence for quality features that are frequently examined in center-based programs, but not in HBCC. We did not find any correlational research in HBCC settings that focused on a link between curriculum use (home setting and learning environment) and outcomes, although we did find evidence

of a link between curricula and child outcomes in center-based programs. We did not, however, find correlational evidence of links between features such as trust, reciprocal communication, and resources and referrals for families (provider-family relationships and family supports) and provider, child, or family outcomes.

No causal research examined how HBCC quality features shape provider, child, or family outcomes; this finding is likely a result of the limitations of our review, which did not focus on intervention research, and of the general lack of experimental studies in HBCC settings.

Exhibit V.4 highlights the gaps in correlational evidence by listing the features of quality for which we found *no* correlational evidence in studies that examine HBCC (first column). It also notes which quality features have evidence of correlational or causal links to outcomes from studies of *non-HBCC settings* such as centers or parental care (second column).

Exhibit V.4. Quality components, subcomponents, and features with no correlational or causal evidence in studies of HBCC

Quality components, subcomponents, and features with *no* correlational or causal evidence in studies that examine HBCC (gaps)	Among these gaps, those with evidence from studies that only examine *non-HBCC settings*
Home setting and learning environments	
Physical environment and setting	
Use of community spaces as extension of child care	—
Family-like settings	—
Care offered during nontraditional hours	—
Learning environment and routines	
Curricula	✓[2]
Opportunities for informal learning	✓[2]
Provider-child relationships[1]	
Family-like relationships with children	
Support for mixed-age peer interactions	✓[2,3]
Provider-family relationships and family supports	
Relational supports	
Family-like relationships and connections among families	—
Trust	—
Reciprocal communication	—
Logistical supports	
Resources and referrals for families	—
Help with non-child–care tasks	—
Conditions for operations and sustainability	
Working conditions	
Management of multiple roles	—
Business practices and caregiving resources	
Business practices	—

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This exhibit lists quality features with no evidence for a correlational link to outcomes in studies that included HBCC settings; if there is any evidence, it only comes from studies in non-HBCC settings. Quality features with evidence from HBCC settings are listed in Exhibit V.3. Each feature is listed in either Exhibit V.3 or Exhibit V.4, but not in both.

Key: Italics = feature may be more likely to occur in HBCC than in other ECE settings; ✓= at least one example of correlational or causal evidence found in non-HBCC settings in our review of existing literature; — = no evidence found.

[1] There were no gaps in evidence for quality features in the subcomponent for provider support for children's development.

[2] Evidence involved child outcomes, but not provider or family outcomes.

[3] Research on centers is equivocal on whether support for mixed-age peer interactions is associated with positive child outcomes.

B. Summary of provider and neighborhood characteristics

1. How do provider and neighborhood characteristics influence quality features in HBCC?

Two broad contextual factors may closely interact with quality features: the characteristics of providers and neighborhoods. We found considerable research on how provider characteristics such as education, professional development, caregiving beliefs, well-being, and support were associated with features of caregiving and environment quality; we found less research on neighborhood characteristics. No literature focused on how neighborhood characteristics contribute to quality features in HBCC settings, and limited literature examined how neighborhoods may contribute to parental choices of ECE settings.

2. Which types of HBCC providers are included in existing research on provider and neighborhood characteristics?

Most of the research on provider characteristics focused on FCC providers. Fewer studies examined characteristics of FFN caregivers. We did not find any studies on neighborhood characteristics that examined HBCC providers as a focal group.

3. What types of evidence exist for how provider and neighborhood characteristics influence quality in HBCC?

As noted and as shown in Exhibit V.5, there was a substantial body of evidence on provider characteristics that includes HBCC, but no research on neighborhood characteristics that had HBCC as a focal point. As noted earlier, our review distinguished between provider outcomes and provider characteristics, although they sometimes overlapped. Provider outcomes can change over time or be related to implementation of quality features. Provider characteristics are those individual experiences or identifications that providers bring to their HBCC work and may influence how they implement quality features. Most research on provider characteristics focused on provider education and professional development, but we also found several studies on caregiving beliefs and psychological well-being. Few studies focused on provider motivations, physical health, or financial well-being. The majority of studies that examined provider characteristics looked at quality outcomes as measured by commonly used assessments (see Chapter II). We created a separate category for

correlational evidence of associations between provider or neighborhood characteristics and quality outcomes.

Exhibit V.5. Summary of evidence and gaps in evidence across provider and neighborhood characteristics in studies that include HBCC

	Theoretical and/or descriptive	HBCC provider types for theoretical and descriptive	Correlational with quality outcomes	Correlational with provider outcomes	Correlational with child outcomes	Correlational with family outcomes	Causal with quality outcomes	HBCC provider types for correlational and causal
Provider characteristics	✓✓	HBCC; FCC; FFN; Relative only	✓✓	✓✓	✓✓	—	✓✓	HBCC; FCC; FFN
Neighborhood characteristics	—	—	✓	—	✓	—	—	ECE

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This table only includes evidence from research whose primary focus is on HBCC or on families who use HBCC. Research on samples that did not include HBCC is not included in this table.

Key: ✓= one example of evidence; ✓✓= two or more examples of evidence; — = no evidence found.

HBCC = research does not specify type of HBCC; FCC = regulated family child care; FFN = friend or neighbor care or combined family, friend, and neighbor care; Relative only = sample only includes relative caregivers, no friends or neighbors; ECE = includes HBCC and center-based settings, but does not distinguish findings by setting.

a. Descriptive evidence across provider and neighborhood characteristics in HBCC

As Exhibit V.5 shows, our review found descriptive studies about HBCC provider characteristics, but none that described neighborhood characteristics of HBCC settings. Several survey-based studies described provider characteristics such as education level, professional development, experience, motivation, beliefs, and psychological well-being. We found only qualitative research on professional identity.

b. Correlational evidence across provider and neighborhood characteristics in HBCC: quality, provider, child, and family outcomes

Exhibit V.6 (like Exhibit V.3) lists the provider and neighborhood characteristics where studies that included HBCC settings found evidence for a correlational link to outcomes. Characteristics without correlational evidence from HBCC settings are discussed in the next section and shown in Exhibit V.7.[13] Exhibit V.6 also shows gaps in the types of outcomes that have correlational evidence in studies of HBCC. There was evidence linking almost all provider characteristics to *quality outcomes* such as responsive caregiving or aspects of the learning environment, and less evidence linking neighborhood characteristics to quality outcomes in HBCC settings. Providers who have a background in and knowledge about ECE (education, professional development, and experience) may understand how to create developmentally appropriate environments and routines for children in care. Providers' attitudes, such as having child-centered or

[13] As in the previous section, each characteristic is listed in either Exhibit V.6 or Exhibit V.7, but not in both exhibits.

culturally, racially, or linguistically responsive caregiving beliefs, and an intentionality about providing care, may contribute to implementing quality features that are more attuned to children's needs. Provider well-being, especially low levels of stress and depression, could be a prerequisite for offering responsive and sensitive care to children.

We found some evidence of links between provider characteristics and *provider outcomes*. For example, one review of the infant/toddler workforce found a link between higher levels of education and fewer authoritarian beliefs (Epstein et al. 2016). Also, providers whose motivations focused on commitment to children had lower levels of stress (Corr et al. 2014).

We found some limited correlational evidence for how provider characteristics may contribute to *child outcomes*. For example, research suggests that providers whose beliefs about caregiving align with children's racial and cultural contexts may create responsive caregiving environments that are associated with positive emotional developmental outcomes for children (Shivers and Farago 2016).

We would not expect to see a link between provider characteristics and *family outcomes,* and none of the studies in our review examined this relationship.

There was limited evidence of a link between neighborhood characteristics and outcomes in HBCC settings. Most studies on neighborhoods and child care either do not include HBCC or do not make a distinction between types of settings if they do include it. We found evidence of *quality outcomes* in HBCC in a study that examined quality of child care across settings in rural communities (DeMarco and Vernon-Feagans 2013). The same study on rural communities found limited evidence for a link, mediated by child care quality, between neighborhood process features and *children's outcomes* in mostly HBCC settings (DeMarco and Vernon-Feagans 2013). We also found evidence of a link between neighborhood characteristics and parental use of different types of ECE, including FFN care (Burchinal et al. 2008; De Marco and Vernon-Feagans 2013). The mechanisms for this link are less clear, but may be partially explained by unmeasured factors such as broader systemic inequities that can shape families' experiences accessing child care.

Exhibit V.6. Correlational evidence for associations between provider and neighborhood characteristics and outcomes, and gaps in outcomes, in studies that include HBCC

Characteristics with correlational evidence from studies that include HBCC settings	Outcomes			
	Quality	Provider	Child	Family
Provider characteristics				
Provider background in ECE				
Sources of knowledge about children and caregiving	✓[1]	✓[1]	✓	—
Professional development	✓	—	—	—
Years of experience	✓[1]	—	—	—
Provider attitudes				
Motivations	✓	✓	—	—
Caregiving beliefs, cultural values, and racial identity	✓	—	✓	—
Provider health and well-being				
Provider psychological health	✓	✓	✓	—
Provider financial and economic well-being	✓	—	✓	—
Neighborhood characteristics				
Neighborhood social processes	✓	—	✓	—

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This exhibit lists characteristics with evidence for a correlational link to outcomes in studies that included HBCC settings. Characteristics with no evidence from HBCC settings are listed in Exhibit V.7. Each feature is listed in either Exhibit V.6 or Exhibit V.7, but not in both.

Key: ✓= at least one example of correlational or causal evidence found in our review of existing literature; — = no evidence found.

[1] Evidence found for association between characteristic and outcome was equivocal (at least one article found a null relationship between feature and outcome).

4. What are the gaps in correlational or causal evidence on how provider and neighborhood characteristics influence quality in HBCC?

There are some gaps in the research on how provider and neighborhood characteristics may influence quality in HBCC. No correlational evidence linked professional identity or the provider's physical health to HBCC practices; environments; or provider, child, or family outcomes (Exhibit V.7). Nor did we find research on how neighborhood characteristics were associated with specific quality features in HBCC.

Most of the research on neighborhoods was focused on how neighborhood characteristics may contribute to parenting stress and responsiveness (Cuellar et al. 2015). Because HBCC providers are themselves often parents, and HBCC settings are rooted in residential neighborhoods, we hypothesize that neighborhood characteristics are a critical factor in how HBCC providers offer care and education to children and families. Yet no research focused specifically on how neighborhoods may contribute to HBCC experiences, quality, or outcomes. The association between neighborhood social processes and parenting quality and stress may be important to understanding how

neighborhoods influence the ways that HBCC providers put *quality features into practice*. For example, responsive and sensitive parenting—an aspect of parenting quality that was found to be associated with neighborhood social processes—is similar to HBCC responsiveness (see Section III.B.a) suggesting the potential for neighborhood factors to similarly shape HBCC providers' interactions and practices with children in their care. We also hypothesize that HBCC providers can positively contribute to a neighborhood's strength and resilience.

Exhibit V.7. Provider and neighborhood characteristics with no correlational or causal evidence in studies of HBCC

Characteristics with *no* correlational or causal evidence in studies that examine HBCC (gaps)	Among these gaps, those with evidence from studies that only examine *non-HBCC settings*
Provider characteristics[1]	
Provider attitudes	
Professional identity	—
Provider health and well-being	
Provider physical health	—
Neighborhood characteristics	
Neighborhood structural characteristics	✓[2]

Source: HBCCSQ literature review, conducted December 2019 through June 2020.

Note: This exhibit lists characteristics with no evidence for a correlational link to outcomes in studies that included HBCC settings; if there is any evidence, it only comes from studies in non-HBCC settings. Characteristics with evidence from HBCC settings are listed in Exhibit V.6. Each feature is listed in either Exhibit V.6 or Exhibit V.7, but not in both.

Key: ✓= at least one example of correlational or causal evidence found in non-HBCC settings in our review of existing literature; — = no evidence found.

[1] There were no gaps in evidence for characteristics involving provider background in ECE.

[2] Evidence involved quality and child outcomes, but not provider or family outcomes. Quality outcomes for this feature refer to quality in center-based programs and parenting practices. Findings about how neighborhood structural characteristics influence parenting practices are inconsistent.

C. Discussion

We defined a quality feature as an aspect of the ECE setting that is linked to, or hypothesized to be important for, the outcomes of providers, children, or families. Solid evidence from center-based studies linked some features in ECE settings to children's development and learning. Because these features were also likely to occur in HBCC, they could also be considered quality features in HBCC settings. However, many features of quality identified in this review have not been included in correlational studies of quality or in measures of quality commonly used in ECE (see Section II.C and Doran et al. forthcoming), probably because they are implemented differently or are more likely to occur in HBCC than in other ECE settings. A possible explanation for prior research findings about the low quality of HBCC compared to centers (Porter et al. 2010) is that quality features that are implemented differently or are more likely to occur in HBCC have not been measured or otherwise studied, and that accounting for these features would show higher levels of quality in HBCC settings.

This review identified *quality features* across ECE settings that were supported by research, including: adequate indoor space that supports children's learning and academic readiness; intentional learning activities that contribute to children's cognitive and behavioral outcomes; health and safety practices that prevent harm and support children's physical development; provider-child interactions that support children's social-emotional, language, and cognitive development; and continuity of care and cultural congruence.

We found descriptive evidence and some correlational evidence from related settings for other features that were implemented differently or more likely to occur in HBCC settings than in centers or other ECE settings: opportunities for informal learning, supporting groups of children of different ages, logistical supports for families, sustainable working conditions, and business practices. Although the research examined provider and family experiences with these features in HBCC, we did not find research that examined associations between these features in HBCC and provider, child, or family outcomes. For some of these features, such as opportunities for informal learning and supporting mixed-age peer interactions, we found evidence of associations with child outcomes in related settings such as parental care and center-based programs. Given that these features of quality have not been measured or included in previous studies on HBCC, these features could be considered *potential* features of quality in HBCC.

Still other features that were more likely to occur or implemented differently in HBCC had only descriptive or exploratory research. These included close family-like relationships, nontraditional hours, a provider working alone, and management of the balance between child care work and the needs of a provider's own family. No studies examined correlational evidence for links between these features and outcomes. Nor did we find correlational evidence for these features in related settings or fields. Consequently, the links between these features and provider, child, and family outcomes are largely unknown. Some research also suggests that these features could be linked to outcomes that are not commonly studied, such as a sense of belonging and community or provider financial sustainability. We acknowledge that some of these features might just be *characteristics of HBCC settings* and not quality features.

Many features across the quality components were related to each other. Researchers looking at quality across ECE settings noted that "good things go together" (Raikes et al. 2013), suggesting that quality features operated in combination and were more likely to have a relationship to outcomes when they were all present. For example, features of the home setting and learning environment, such as group size and intentional learning activities, were closely related to provider-child interactions such as support for children's language, literacy, and cognitive development. Some studies used profile analyses to examine how multiple features of quality and provider characteristics interact and together contribute to high quality care and child outcomes (for example, Iruka and Forry 2018).

Quality features could also be interdependent. For example, on their own, small group size or continuity of care might not benefit children and families unless other quality features such as responsive, supportive provider-child relationships are in place. Similarly, for FCC providers who run a small business, an engaging learning environment and supportive and responsive provider-child relationships might not benefit children if a provider lacks the skills and knowledge to sustain the business.

HBCC providers might be confronted with trade-offs between certain quality features that could indirectly shape child outcomes in these settings and features of care that could negatively impact providers' own well-being. For example, HBCC providers might offer logistical supports such as flexibility to families and forge closer relationships with families than centers do, but these features could also negatively impact working conditions and impose more stress and burden by expanding the provider's role. Added stress and negative working conditions, in turn, could lead to less responsive care for children. The multiple roles that HBCC providers take on might ultimately lead them to leave the child care field, which might negatively impact continuity of care and families' and children's access to care. However, this review did not examine literature on factors that might lead to provider exit from HBCC.

Quality features in HBCC might also vary depending on children's age and other characteristics. Preschool and school-age children may benefit more from formal and sequenced activities and curriculum, but infants and toddlers may thrive with predictable routines and informal opportunities for learning. A mixed-age group could be a good environment for children with disabilities because it gives children at different developmental levels opportunities to play and learn together. Our review did not find many research studies that focused on infants, school-age children, or children with special needs, so there is much we do not know about the developmental progression of children's care in HBCC.

Similarly, features of quality in HBCC might vary depending on family characteristics. Families working nontraditional hours—many of them in retail and food industries—likely need a provider who can accommodate a flexible schedule and offer care outside of traditional hours.

We found a strong and consistent relationship between provider characteristics and quality features in HBCC. Specifically, the finding that providers' professional development and specialized education were associated with higher quality care and could promote positive child outcomes suggests the importance of the provider and the opportunities accessible to all providers in conceptualizing quality care in HBCC settings.

Our review also highlighted how racial, ethnic, and linguistic characteristics of HBCC providers, children, and families might intersect with how quality is implemented in HBCC. For example, a provider's engagement in family-like relationships with children and families might be partially determined by the provider's own cultural beliefs and

values around the role of extended families in caregiving. Providers' experiences living in poverty—or their experiences with racism—might also affect the types of activities and values they offer children in care. Although our review included some research on quality in HBCC that used a cultural lens or racial equity frame, most of the studies we reviewed did not consider contextual factors that could intersect with how providers deliver care and the associated outcomes for children and families.

The relationship between provider characteristics and quality features might also reveal more than one pathway to child and family outcomes. For example, some quality features such as working conditions and business practices may contribute to provider-level outcomes such as stress or well-being. On the other hand, providers' beliefs and motivations could play an important role in how providers engage with children and families in care.

Neighborhood characteristics might also contribute to how providers implement quality features in HBCC. Neighborhood safety and collective efficacy, for example, might determine how comfortable providers are about using their community to enhance the child care they offer or their access to supports and resources. Some of the research on neighborhoods suggested other areas where neighborhood characteristics might contribute to quality, provider, child, and family outcomes. HBCC providers could experience the same stress parents do from living in unsafe neighborhoods, so stress experienced by HBCC providers living in neighborhoods that are considered disadvantaged (high poverty rates) and disengaged (low levels of neighborhood trust and cohesion) could, in turn, have a negative impact on children's development. The presence of social networks and the level of residents' engagement in neighborhoods might also be related to the ways providers access social capital (for example, connecting with other adults who care for children or creating connections among families of children in care) for the benefit of children and families.

D. Gaps in the literature and directions for future research

Current research on HBCC lacks an explicit focus on the experiences of people of color—whether providers, families, or children–including those from Indigenous and other marginalized communities. The disproportionate numbers of women of color who offer HBCC and the number of families of color who rely on these arrangements necessitates that future research is intentionally designed to understand the experiences of these providers, families, and children. Although some studies in our review included providers from these groups, few focused exclusively on providers or families and children of color. Future research should include within-group studies to better understand how race, class, and culture intersect to influence provider experiences and equitable outcomes for children and families. These studies could also examine how broader contextual factors such as state and local policies and systemic inequities influence the implementation of quality features in HBCC settings. Systemic

racism, for example, is a documented challenge that likely shapes the everyday experiences of HBCC providers of color and the children and families in these settings.

We also found gaps in research on infants, school-age children, and children with disabilities in HBCC settings. Small sample sizes, low response rates, and single-method studies also limited the generalizability of findings. More research is needed to understand the opportunities and constraints for high quality care for these different groups of children in HBCC. Many studies focused on specific geographic communities, although the differences between urban, rural, and suburban HBCC are still not well understood.

Most research to date was cross-sectional, meaning studies that looked at one point in time. Few studies looked at provider practices and outcomes over time. More longitudinal research and experimental designs are needed to understand how quality features in HBCC impact child and family outcomes. Large-scale experimental designs might be necessary to help distinguish the effects of different features or combinations of features—and how features interact to shape child and family outcomes.

The lack of causal evidence is not surprising, because it is difficult to manipulate features experimentally. Most causal evidence is likely to result from research on the effects of interventions and supports for quality, which were included in this review but were not its focus. However, investigating quality features and how they mediate child and family outcomes is critical to understanding which features would be most important to vary in experimental studies of interventions. Causal evidence on family engagement, for example, from related fields such as home visiting may suggest directions for future research on these quality features in HBCC.

More research is needed on how HBCC quality features may be associated with family outcomes such as maternal well-being, work-family balance, fulfillment of material needs, and parental employment. Similarly, there is a gap in research on HBCC sustainability, which is linked to employment stability and economic sustainability in families because HBCC makes it possible for them to work or go to school. More research is needed to understand how supporting HBCC providers' management of their business can support implementation of quality features such as responsive learning environments for children and meaningful supports for families in these arrangements. More research is also needed on the factors that predict turnover and exit from the field among HBCC providers.

Finally, future research should focus on quality features in FFN settings. Features such as family-like care given during nontraditional hours, logistical supports, and close, co-parenting relationships with families may be implemented differently or are more likely to occur in FFN care than in FCC settings. Yet most of the descriptive research on quality features in HBCC takes place in FCC settings. Research involving FFN caregivers is especially important, because many more children are cared for in these settings than in FCC.

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In this bibliography, we include references for three groups of research literature: (1) the 29 existing literature reviews we selected for this review, (2) the 59 articles we selected from the primary literature for this review, and (3) other literature cited. Eight of the 29 existing literature reviews were found at the second stage, in the search for primary articles. Those are identified here with an asterisk (*).

The existing literature reviews are further grouped into reviews of HBCC quality, other reviews of quality (reviews of ECE quality, parental perceptions of quality, and specific domains such as provider-family relationships), and reviews of interventions and supports (to which we devoted less attention because they were not the focus of the review).

The primary literature is further grouped by our evidence categories (theoretical and descriptive, followed by correlational and causal). If an article included more than one type of evidence, we used the predominant evidence type here.

The "other literature cited" is not grouped further. We cite it mainly in the contextual sections on HBCC prevalence/use and quality.

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APPENDIX A.

INFORMATION ON SEARCH AND REVIEW PROCESS

Exhibit A.1. Search parameters and sources

Search parameter	Sample terms and resources
Database searches	
Keywords	• Set A (HBCC terms): child minder; community caregiver; exempt child care; family child care; family day care; family, friend, and neighbor; fictive kin; grandmother care; grandparent care; group child care home; home-based child care; home business; home day care; informal care; in-home child care; kith and kin care; license-exempt care; listed care; neighborhood care; othermothering; relative care; small group home; unlisted care; unlicensed care • Set B (early childhood education [ECE] terms): child care; day care; early care and education; early childhood education; Early Head Start; Head Start; homeschool; infant care; infant-toddler care; pre-kindergarten; preschool; school-age care; school-aged care; after-school child care; after-school care • Set C (quality and outcome terms): continuity; mixed age interactions; peer interactions; school age; family support; family-centered; family-sensitive; flexible; logistical support; nontraditional hours; work-family balance; culturally responsive; open-ended materials; curriculum; business practices; caregiving beliefs; childrearing attitudes; economic stability; family engagement; parent satisfaction; physical development; physical health; reduced stress; school readiness; school transition; supportive friendships • Set D (related fields terms): out of school time; family support; family systems; parenting; disabilities; cultural studies; school-age care; school-aged care; after-school child care; after-school care • Set E (modified version of Set C, dropping some terms and adding others): continuity; mixed age interactions; peer interactions; flexible; logistical support; work-family balance; culturally responsive; curriculum; business practices; family engagement; parent satisfaction; reduced stress; supportive friendships; parent wellbeing; parent-child relationships; cognitive development; language development; literacy development • SET F (literature review terms): review within 3 words of (literature OR studies OR interventions OR systematic OR scoping) OR "meta-analy*" OR metaanaly* OR "meta-regression" OR metaregression OR "research synthesis" Terms including “child care” or “day care” were repeated with one-word versions (childcare and daycare); hyphenated terms were repeated without the hyphen, and truncations were used (such as repeating a term without the “s” at the end). Unless otherwise noted, using a set meant the article had to match at least one of the terms in the set.
Searches run	Unless otherwise noted, search time frames were 2010 to present, and searches were run on titles, abstracts, and keywords, but not on full text. During later searches, articles already found in earlier searches were automatically dropped from the later search to avoid duplication. • Search 1: Set A AND Set B AND Set C • Search 2: Set A AND Set B AND quality • Search 3: Set A AND Set B • Search 4: Set D AND Set E AND Set F • Search 5: (home-based OR informal OR license-exempt) within 3 words of a term in Set B • Search 6: (sibling NOT twin) AND (Set B OR parenting) AND Set F • Search 7: mixed-age AND Set B

Appendix A. Information on search and review process

Search parameter	Sample terms and resources
Sources	Academic Search Premier; Education Resources Information Center (ERIC); Education Resource Complete; SocINDEX; CINAHL; MEDLINE; Scopus; PsycINFO; EconLit; Business Source Corporate Plus
Websites	
Keywords	• Set WA: family child care; family day care; family, friend, and neighbor; home-based child care • Set WB: exempt care; informal care; unlicensed care; grandmother care; relative care • Set WC: child care; day care; early care; early childhood • Website search: Set WA OR (Set WB AND Set WC)
Organizational websites searched	Group 1: American Institutes for Research; BUILD Initiative and Quality Rating and Improvement System (QRIS) National Learning Network (two sites); Center for Law and Social Policy (CLASP); Center for the Study of Social Policy; Center for the Study of Child Care Employment; Child Trends; Early Childhood Learning and Knowledge Center (ECLKC); Education Development Center; Harvard Family Research Project Group 2: Institute for Education Sciences (IES); National Association for the Education of Young Children (NAEYC); National Association of Social Workers; National Center for Children in Poverty; National Center on Early Childhood Quality Assurance; National Head Start Association; National Home Visiting Resource Center; National Institute of Child Health and Human Development (NICHD); National Science Foundation; National Women's Law Center Group 3: National Institute for Early Education Research (NIEER); National Workforce Registry Alliance; Packard Foundation; RAND Corporation; RTI International; SRI International; Urban Institute; WestEd; Wellesley Center for Women; ZERO TO THREE
Conference websites searched	American Educational Research Association (AERA); American Sociological Association; Association for Public Policy Analysis and Management (APPAM); Child Care and Early Education Policy Research Consortium (CCEEPRC); National Research Conference on Early Childhood; Society for Research in Child Development (SRCD); Society for Social Work and Research
Child care and Early Education Research Connections	
Website link	https://www.researchconnections.org/childcare/search/resources
Keywords and parameters	"home child care family friend neighbor" Exclude peer-reviewed journal articles; include those published since 2016
Resource lists examined	• Quality Improvement in Home-Based Child Care Settings: Research Resources to Inform Policy (February 2016) • Early Care and Education Workplace Conditions and Teacher Stress: Research-to-Policy Resources (November 2017) • Building High-Quality After School Systems: Research-to-Policy Resources (July 2017)

Exhibit A.2. Key dimensions summarized for each source: Existing reviews

Field	Response categories/information required
Literature review type	• Peer-reviewed • Grey literature
Types of HBCC	Describe the types of HBCC included, especially family child care (FCC; also known as licensed, regulated, paid, group care) and family, friend, and neighbor (FFN; also known as unregulated, license-exempt, relative care, informal care, kith and kin care, grandparent care, unpaid child care).
Definition of HBCC	Describe the definition of HBCC used.
Research questions	Describe the research questions
Review sample and criteria	Describe the number of articles in the review; dates of the review; whether the settings involved were in the United States or international; which other exclusion or inclusion criteria were used.
Demographics of providers	Describe the demographic characteristics of the providers in the articles reviewed, such as race/ethnicity, language, etc. (if specified).
Ages of children	Describe the age range of children in the articles reviewed (if specified)
Analytic method	Describe the analytic method of the review (for example, literature review with qualitative coding of articles; meta-analysis with statistical combination of effect sizes; research synthesis with no discrete methodology).
Types of articles reviewed	Describe the types of articles reviewed, including whether they are peer-reviewed, grey literature, or both.
Literature fields	Describe the literature fields involved
Quality measures	List any quality measures used in the articles reviewed.
Outcome measures	List any outcome measures used in the articles reviewed.
Findings	Describe the findings of the review.
Gaps	Describe any gaps identified by the authors, including areas mentioned by the authors as those that might relate to quality but lack research.
Authors and affiliations	List the authors' full names and institutions as of when the article was published.
Notes	List any notes involving the review of the existing review, including any concerns about the technical quality of the existing review.

Exhibit A.3. Key dimensions summarized for each source: Primary literature

Field	Response categories/information required
Study/source background and context	
Literature type	• Peer-reviewed • Grey literature
Definition of HBCC	• Family child care (FCC) only • Family, friend, and neighbor (FFN) care only • FCC and FFN • Relative only • Other • None
Detailed definition of HBCC	Describe the definition used
Field of study	• Out-of-school care • Family support • Family systems • K–12 education • Early care and education • Nutrition • Parenting • Pediatrics • Disabilities • Cultural studies
Research is exclusively focused on HBCC?	Yes/No
Article type	• Empirical • Theoretical/conceptual • Literature review • Meta-analysis
Research questions	Describe the research questions
Study setting	Describe the geographic, organizational, site, and community characteristics
Study design and data sources	
Study design	• Descriptive • Case study • Ethnographic • Implementation • Correlational • Quasi-experimental • Experimental • Not applicable (if theoretical)
Study sample/participants	Describe characteristics and sample size
Quantitative data sources?	Yes/No
Description of quantitative data sources	Describe the quantitative data sources used (surveys, assessments, etc.)
Qualitative data sources?	Yes/No

Field	Response categories/information required
Description of qualitative data sources	Describe the qualitative data sources used (interviews, focus groups, etc.)
Analytic methods	Describe the analytic methods used (regression analysis, narrative analysis, grounded theory, etc.)
Strengths	Describe the strengths of the study design (author-described or reviewer-noted)
Limitations	Describe the limitations of the study design (author-described or reviewer-noted)
Measures of quality and outcomes	
Any measure of quality used?	**Yes/No**
CLASS	Yes/No
FCCERS	Yes/No
ITERS	Yes/No
CC-HOME	Yes/No
Other measure used	Describe other measures of quality used
Any child outcome used?	**Yes/No**
Social-emotional	Yes/No
Cognitive	Yes/No
Language	Yes/No
Physical	Yes/No
Other domains	Yes/No (if yes, write in the domain)
Child outcomes used	Describe more about the child outcomes used (list measures/ assessments)
Any family outcome used?	**Yes/No**
Family well-being	Yes/No
Family-child relationship	Yes/No
Satisfaction with program	Yes/No
Engagement in child's learning	Yes/No
Engagement in program	Yes/No
Work-related	Yes/No
Other domain	Yes/No (if yes, write in the domain)
Family outcomes used	Describe more about the family outcomes used (list measures/assessments)
Conceptualization of quality	
Conceptual framework used?	Yes/No
Description of conceptual framework	Describe the conceptual framework used (domains, constructs, indicators, etc.)
Lasting provider-child relationships?	Yes/No
Description of lasting provider-child relationships?	Describe the quality features included that involve provider-child relationships
Lasting provider-family relationships?	Yes/No

Field	Response categories/information required
Description of lasting provider-family relationships	Describe the quality features included that involve provider-family relationships
Home setting and operations?	Yes/No
Description of home setting and operations	Describe the quality features included that involve home setting and operations
Foundations for sustainability?	Yes/No
Description of foundations for sustainability	Describe the quality features included that involve foundations for sustainability
Other quality features	Describe any other quality features included that do not fit into one of the above categories
Analysis and findings	
Study described/identified distinct features of HBCC?	Yes/No
Study empirically linked quality features to outcomes?	Yes/No
Evidence/findings	Describe (1) evidence of how each component/feature is linked to outcomes and (2) evidence of the process by which quality features led to child and family outcomes
Gaps/directions for future research	Describe gaps and directions for future research
Implications for policy and practice	Describe implications identified by the study authors

CLASS = Classroom Assessment Scoring System; FCCERS = Family Child Care Environment Rating Scale; ITERS = Infant/Toddler Environment Rating Scale; CC-HOME = Child Care Home Observation for Measurement of the Environment

APPENDIX B.

CHARACTERISTICS OF PRIMARY ARTICLES

Exhibit B.1. Characteristics of primary articles selected for review

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Ang and Tabu 2018	Y	ECE	International: England and Jap4an	DES	Qualitative (interviews, observations, and document analysis)	5 HBCC programs (2 in England and 3 in Japan)	Not described	Not described	Reiterative process of analyzing data with codes and themes	HSLE PCR PFRFS	NA
Ansari and Purtell 2018	Y	ECE	United States: A nationally representative survey	COR	Quantitative (surveys)	1,073 children from 402 Head Start classrooms across 118 centers	37% Latinx 34% Black 20% White	Mean income to poverty ratio was 2.52	OLS regression framework	PCR	NA
Bassok et al. 2016	Y	ECE	United States: A nationally representative study	COR	Quantitative (surveys)	Sample size varies by model: 1,400 to 6,000 childcare arrangements; all child care types	Not described	Not described	OLS and logistic regression models	HSLE	PC
Benjamin-Neelon et al. 2018	Y	ECE	United States: One state (North Carolina)	COR	Quantitative (observations and other)	496 children in 166 FCC programs	Providers: 74% Black 18% White Children: 63% Black 27% White	Not described	Mixed-effects linear regression model	PCR PFRFS COS	NA
Brady et al. 2016	Y	ECE	International: Australia	ETH	Qualitative (longitudinal interviews)	30 single mothers with children younger than age 7, all child care types	Not described	All mothers participated in a "welfare-to-work" program	Inductive thematic analysis	HSLE PFRFS	NA
Bromer and Henly 2009	Y	ECE	United States: One state (IL)	DES	Qualitative (interviews)	29 providers (7 FCC, 16 FFN, and 6 center-based)	69% Black 21% Latinx 10% White	28% received public assistance, and 52% reported at least one indicator of economic hardship; providers served families with low incomes	Cross-case and inductive analytic approaches	PFRFS COS	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Buell et al. 2018	Y	ECE	United States: Multistate (DE and KY)	COR	Quantitative (administrative data and observations)	66 licensed FCC programs	51.6% Black, 31.3% White, 15.6% Latinx	90.1% of programs received child care subsidy	**All bivariate analysis** Pearson correlations, multivariate analysis of variance (MANOVA), Scheffe post hoc analysis	PCR	NA
Burchinal et al. 2008	Y	ECE	United States: One state (IL)	COR	Quantitative (surveys, observations, and Census data)	1,121 families with toddlers and preschoolers, all child care types	39% Latinx 29% Black 18% White	Median household income from $20,000–$30,000	Multinomial and multilevel regression analyses	NA	NC
Choi and Wang 2018	Y	Related	United States: National sample, not representative	COR	Quantitative (surveys and observations)	3,656 mothers and their children	47.9% Black 25.8% Latinx 22.6% White	90% had an annual income below $30,000, with 36% with an annual income below $5,000	Correlations, structural equation modeling	NA	NC
Craig and Churchill 2018	Y	ECE	International: Australia	COR	Quantitative (surveys)	7,682 working parents (3,443 men and 3,442 women), all care types	Not described	Not described	Panel random-effects regression models	PFRFS	NA
De Marco and Vernon-Feagans 2013	Y	ECE	United States: Multistate (NC and PA)	COR	Quantitative (surveys, observations, and Census data)	217 children, all child care types	53% Black 47% White	On average, 230% of the federal poverty line	Regression analyses, including moderation and mediation analyses	NA	NC
Diebold and Perren 2019	Y	ECE	International: Switzerland	COR	Quantitative (observations)	54 children in 4 child care centers	Not described	Not described	Multilevel structural equation modeling	PCR	NA
Doherty 2015	Y	ECE	International: Canada	DES	Qualitative (focus groups)	62 regulated and unregulated family child care providers	Not described	Not described	Coding for key themes	HSLE PCR PFRFS COS	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Engage R+D 2018	N	ECE	United States: One state (CA)	DES	Qualitative (not described)	5 grantee organizations that work with FFN providers	Not described	Not described	Not described	HSLE PCR	NA
Etter and Cappizano (2018)	N	ECE	United Sates: One state (CO)	IMPLEMENT	Quantitative (observations and other)	17 center-based programs and 15 family child care programs	Not described	Not described	**All bivariate analyses** Pre-post comparison using chi-square analyses	PCR PFRFS COS	NA
Figueroa et al. 2019	Y	ECE	United States: One state (in Midwest)	DES	Mixed Methods (GIS data and interviews)	GIS portion: 342 licensed FCC providers Qualitative portion: 21 licensed FCC providers	71% White 24% Black	Household income: 19% at $35,000 or less; 52% at $35,000 to $75,000; 19% at 75,000 or more	Sociospatial grounded theory; analytic induction	HSLE COS	PC
Forry et al. 2013	Y	ECE	United States: Multistate (CA, IA, MN, NB, NC)	COR	Quantitative (surveys, assessments, and observations)	182 FCC providers and 451 children	Provider: 71% White 12% Black 12% Latinx Children: 66% White 16% Latinx 11% Black	Provider: Not described Children: 22% had subsidized care	Multilevel modeling using maximum-likelihood estimation	HSLE PCR COS	PC
Forry and Wessel 2012	N	ECE	United States: One state (MD)	DES	Qualitative (focus groups)	33 center directors, 30 FCC providers, and 22 kindergarten teachers	100% of FCC, 85% of center directors, and 50% of kindergarten teachers were Black	Not described	Thematic analysis	HSLE PCR PFRFS	NA
Freeman 2011	Y	ECE	Not described	DES	Qualitative (interviews, journal entries, and observations)	4 family child care providers	75% White 25% Black	Not described	Narrative inquiry design	HSLE	PC

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Fuligni et al. 2012	Y	ECE	United States: One state (CA)	DES	Quantitative (observations and assessments)	125 classroom settings (53 public preschool, 47 private preschool, and 25 FCC homes) and 206 target children	Not described	Providers: Not described Children: From primarily families with low incomes, with a median income-to-needs ratio of 1.21	Multilevel regression models	HSLE	NA
Gerstenblatt et al. 2014	Y	ECE	United States: One state (TX)	DES	Qualitative (focus groups)	11 licensed and registered FCC providers	Not described	Not described	Grounded theory	COS	NA
Groeneveld et al. 2012	Y	ECE	International: Netherlands	COR	Quantitative (surveys, salivary cortisol, and observations)	101 female caregivers (55 from home-based child care; 46 from centers)	Not described	Not described	Pearson correlation, MANOVA, MANCOA, binary logistic regression, multivariate regression, linear regression	NA	PC
Gunnar et al. 2010	Y	ECE	Not described	COR	Quantitative (observations and salivary cortisol)	151 children at 120 licensed family-based child care programs	Children: 85% White 12% Black	Children: Mean income in range of $51,000–$76,000	Repeated measures ANOVA, hierarchical regression	HSLE PCR	NA
Guo et al. 2014	Y	ECE	Not described	COR	Quantitative (assessments and observations)	130 children in 16 Head Start and state prekindergarten classrooms	72% White 21% Black	Children had a mean family income of $38,062	Hierarchical linear modeling	PCR	NA
Hooper 2019	Y	ECE	United States: One state (DE)	DES	Qualitative (interviews)	29 licensed and unlicensed home-based child care providers	52% White 41% Black	Not described	Grounded theory with inductive, open coding	PCR PFRFS COS	PC

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Horm et al. 2018	Y	ECE	United States: Multistate (9 cities)	COR	Quantitative (observations and assessments)	851 children at 11 center-based programs	49% Black 38% Latinx 6% White	Not described, but programs served children from families with low incomes	Hierarchical linear models, sensitivity analyses	PCR	NA
Hughes-Belding et al. 2012	Y	ECE	Not described	COR	Quantitative (interviews and observations)	257 FCC providers	78% White 12% Black 7% Latinx	Not described	Multivariate linear regression	NA	PC
Iruka and Forry 2018	Y	ECE	United States: Nationally representative study	COR	Quantitative (surveys and observations)	1,400 preschool-age children in centers; 350 in FCC	58% White 17% Hispanic 13% Black	24% of children living in households below poverty threshold	Multiple analytic methods: Latent Profile Analysis, multinomial logistic regression, multiple regression	HSLE	PC
Jarrett et al. 2011	Y	Related	United States: One state (IL)	DES	Qualitative (interviews, GIS data, Census and other data)	13 mothers or surrogates	100% Black	All participants had income at or below 185% of federal poverty level	Grounded theory	HSLE	NA
Jeon et al. 2018	Y	ECE	United States: Multistate (40 states)	COR	Quantitative (surveys)	888 small licensed FCC providers	75% White 15% Black 6% Latinx	Average annual household income: $50,001–75,000	Bivariate correlations, multivariate multiple regression	PFRFS COS	PC
Kirby et al. 2012	Y	ECE	Not described	DES	Qualitative (focus groups)	14 grandparents	100% White	Income varied from less than $30,000 to over $100,000	Inductive thematic analysis	PFRFS COS	NA
Lehrer et al. 2015	Y	ECE	International: Canada (Montreal, Quebec)	COR	Quantitative (observations and interviews)	179 4-year-old children (38 in home-based settings, 141 in centers)	Not described	24% of families were considered to have low incomes	**All bivariate analyses** Spearman's rank order correlations, chi-square analyses	PFRFS	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Linting et al. 2013	Y	ECE	International: Netherlands	QUASI	Quantitative (noise level, assessments, and observations)	103 children and their caregivers from HBCC settings	Not described	Not described	Categorical regression analysis	HSLE	NA
Longo et al. 2017	Y	Related	United States: National, not representative	COR	Quantitative (longitudinal assessments, observations, and surveys)	528 mothers and children	60% White 26% Black 9% Latinx	All participants lived in a household with low income (below 200% U.S. Census poverty threshold)	OLS regression, multilevel growth modeling (longitudinal analysis)	PCR	NA
Morrissey 2010	Y	ECE	United States: National, not representative	COR	Quantitative (interviews, surveys, assessments, and observations)	1,364 children and families	24% "ethnic minority"	40% with low incomes	Multiple regression using Maximum Likelihood Estimation	HSLE PCR	NA
Neshteruk et al. 2018	Y	ECE	United States: One state (NC)	COR	Quantitative (surveys, observations, and physical activity levels)	166 FCC providers and 496 children	Providers: 74% Black Children: 63% Black	Providers: 54% had income in range of $25,000–$50,000 Children: Not described	General linear models (GLMs)	HSLE	NA
Paredes et al. 2018	Y	ECE	United States: One state (CA)	CASE	Qualitative (interviews, surveys, and other)	36 licensed FCC providers	46% Latinx 23% Black 17% White	54% had income less than $15,000	Raters classified the providers into groups based on the Love and Affection Cultural model; transcripts were reviewed to examine themes	PCR PFRFS COS	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Phillips and Morse 2011	Y	ECE	United States: One state (FL)	COR	Quantitative (surveys)	Sample size varied: 118–170 licensed or registered FCC homes	49% White 48% Black 18% Latinx	Not described	**All bivariate analyses:** Bivariate correlation, ANOVA	HSLE PCR	PC
Plotka 2016	Y	ECE	United States: One state (NY)	QUASI	Quantitative (surveys and observations)	308 teachers in center-based Head Start preschool classrooms	Not described Children in classrooms: 46% Latinx 33% White 25% Black	Not described	MANOVA through GLMs	PCR	NA
Rogoff 2014	Y	ECE	NA	CON	NA	NA	NA	NA	NA	HSLE	NA
Ruprecht et al. 2016	Y	ECE	United States: One state	QUASI	Quantitative (surveys and observations)	115 children in center-based care with 59 lead caregivers	Not described	20–25% of children with household income below $25,000	Hierarchical linear modeling	PCR	NA
Rusby et al. 2013a	Y	ECE	United States: One state (OR)	COR	Quantitative (surveys and observations)	155 registered and certified home-based child care providers	64% White 12% Latinx 8% Black	Not described	Pearson's r correlation, multiple regression	COS	PC
Rusby et al. 2013b	Y	ECE	United States: One state (OR)	COR	Quantitative (surveys and observations)	198 registered and certified home-based child care providers	67% White 11% Latinx 6% Black	Not described	Pearson product-moment correlation, Spearman correlation, linear regression models	HSLE PCR	PC
Rusby et al. 2017	Y	ECE	United States: Multistate (Pacific Northwest)	COR	Quantitative (observations)	133 registered and certified home-based child care providers	74% White 8% Latinx 8% Black	Homes selected from neighborhoods with lower-than-average income	**All bivariate analyses** Pairwise t-tests, Pearson/Spearman correlations	HSLE	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Sandstrom et al. 2018	N	ECE	United States: One state (DC)	DES	Mixed (administrative data, surveys, and Interviews)	Varying samples: (1) 444 full-time licensed facilities; (2) 63 providers licensed for nontraditional hours (NTH); (3) 2 nationally representative surveys (American Community Survey; Survey of Income and Program Participation); (4) child care referral ticket records; (5)12 providers not licensed for NTH; (6) 35 key stakeholders	Not described	Not described	Various descriptive methods	HSLE PFRFS	NA
Satkowski et al. 2016	Y	ECE	United States: National, not representative	COR	Quantitative (surveys)	278 Latina mothers or expectant mothers	100% Latinx	Not described	Correlations, chi-square test for association, independent samples t-test, hierarchical multiple regression, hierarchical logistic regression	PCR PFRFS	NA
Schaack et al. 2017	Y	ECE	United States: Nationally representative study	COR	Quantitative (surveys, interviews, and observations)	250 children and their HBCC providers (57% licensed, 43% unregulated paid)	Providers: 72% White Children: Not described	Not described	Ordinary least squares regression	NA	PC
Shivers et al. 2016a	N	ECE	United States: One state (AZ)	DES	Quantitative (surveys)	4,121 FFN providers	89% Latinx; 94% reported Mexican heritage	68% reported household incomes at or below federal poverty line for a family of four	Descriptive analysis	HSLE PCR PFRFS COS	PC

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Shivers et al. 2016b	N	ECE	United States: One state (AZ)	IMPLEMENT	Quantitative (observations and assessments)	Sample varies: 142 FFN provider-child dyads; 74 children; 38 FFN providers	Provider: 100% Latinx All children spoke Spanish	Not described	Paired sample t-tests	PCR	NA
Shivers and Farago 2016	N	ECE	United States: Multistate (PA and CA)	COR	(1) Quantitative (observations and interviews) (2) Quantitative (observations and interviews)	(1) 45 grandmothers and aunts providing child care (2) 50 unlicensed child care providers and the children they cared for	(1) 100% Black (2) 100% Black	(1) Live in communities with low incomes (2) Children eligible for child care subsidies	Methods not fully explained: (1) Principal component analysis, correlations (2) Structural equation modeling	PCR	PC
Siddiqui et al. 2017	N	ECE	United States: One state (MI)	DES	Qualitative (interviews)	24 parents using informal care and 27 informal child care providers	About 50% Black	Not described	Qualitative eco-mapping	HSLE PFRFS	NA
Stoll and Alexander 2015	N	ECE	United States: One state (IL)	DES	Qualitative (interviews)	50 single mothers	No percentage given, but participants were predominantly Black	All mothers qualified for child care subsidies, and most reported annual income under $23,000	Not described	HSLE PFRFS	NA
Stoney and Blank 2011	N	ECE	United States: Multistate	DES	Qualitative (interviews)	15 stakeholders	Not described	Not described	Not described	COS	NA
Svinth 2018	Y	ECE	International: Denmark	CASE	Qualitative (written narratives)	13 practitioners from 10 ECE settings (7 pedagogues for nurseries for toddlers; 6 FCC providers)	Not described	Not described	Thematic analysis	PCR	NA
Tonyan 2017	Y	ECE	United States: One State (CA)	ETH	Qualitative (interviews)	30 licensed FCC providers (pilot); 54 licensed FCC providers (second study)	Not described	Not described	Not described	HSLE	NA

Appendix B. Characteristics of primary articles

Article	Under peer review?	Study focus	Setting detailed	Type of study[1;2]	Primary data types	Sample description	Race/ethnicity	Income	Analytic methods	Component[3]	Factors[4]
Weber et al. 2018	Y	ECE	United States: One state (OR)	COR	Mixed methods (survey and interviews)	Quantitative sample: 580 parents Qualitative sample: 44 parents	Quantitative: 64% White 16% Latinx 11% Black Qualitative: 72% White 14% Latinx 8% Black	Majority receiving child care subsidy, 72% had household income below $18,000	Multinomial logit model Interviews analyzed for themes	PFRFS	NA
Weglarz-Ward et al. 2019	Y	ECE	United States: One state (large Midwestern state)	DES	Quantitative (surveys)	991 participants: 620 child care (27% FCC) and 371 early intervention	Not described	Not described	Descriptive and comparative analysis (independent sample t-tests)	HSLE	PC
Wong and Cumming 2010	Y	ECE	International: Australia	DES	Mixed Methods (survey, interviews, and focus groups)	39 agency coordinators/staff, 54 FDC "carers"	Carers: 48% "culturally and linguistically diverse" Coordinators/ staff: Not described	Not described	Various descriptive methods, including grounded theory	HSLE PFRFS COS	PC
Zeng et al. 2020	Y	ECE	United States: One state (MA)	IMPLEMENT	Quantitative (surveys)	34 small child care business owners	21% Black 17% White 48% "Another race"	Not described	**All bivariate analyses** Descriptive analyses and paired t-tests	COS	NA

[1] Study type was determined according to analytic methods. This may vary from evidence type; see Exhibit III.2 for how evidence types were defined.

[2] Type-of-study key: DES = descriptive; COR = correlational; ETH = ethnography; CASE = case study; CON = conceptual; QUASI = quasi-experimental; IMPLEMENT = implementation study.

[3] Components key: HSLE = home setting and learning environments; PCR = provider-child relationships; PFRFS = provider-family relationships and family supports; COS = conditions for operations and sustainability.

[4] Factors key: PC = provider characteristics; NC = neighborhood characteristics.

NA = not available.

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