

South Carolina First Steps Child Care Scholarships External Evaluation

Institute for Families in Society
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**External Evaluation of the
First Steps Child Care Scholarship Program
FY17/18-FY21/22**

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Introduction

South Carolina First Steps (First Steps) is the state agency and 501c(3) nonprofit responsible for supporting school readiness for children ages 0-5 in South Carolina. First Steps consists of a state-level office in Columbia, SC, and a network of 46 local partnerships that operate as affiliate nonprofits to meet agency goals. First Steps county partnerships (termed local partnerships in this report) provide programs in key areas related to child school success: early care and education, parenting/family support, transition to kindergarten, and health. Given resource constraints and the important focus of First Steps in supporting families facing disadvantage, eligibility for local partnership services is determined by child- or family-level risk factors that can impact later school success for children. One important and unique aspect of First Steps as an agency

is that the program array provided at the local partnership level is based on local



determination of needs and non-duplicative gaps in services that can be most beneficial to support school readiness for families with infants/young children within that geographic region. Bridging these gaps in the early care and education arena means that local partnerships use a variety of programs to support families with infants and young children.

Early care and education

programs offered by First Steps local partnerships include a variety of training and technical support services for child care centers and family care homes, pre-kindergarten education for young children, as well as child care scholarships. Child care scholarships enable families to access child care for no cost or at a reduced cost, and are implemented as direct tuition payments to child care centers. These child care scholarships are the focus of the current evaluation.

More specifically, this evaluation is designed to examine the reach and impacts of child care scholarships for young children and their families provided by local partnerships over a five

year period, from FY17/18 through FY21/22. During this time frame, child care scholarships were distributed from local partnerships to families/child care centers either through the partnerships purchasing scholarships directly from the South Carolina Department of Social Services, the state agency that receives federal funding for these child care scholarships (SCDSS; termed “public” scholarships), and/or through use of local funding sources for scholarships (termed “in-house” scholarships).

In line with the program’s goal to promote “healthy development and school readiness” for young children at developmental risk, First Steps scholarships are targeted for children under age six before kindergarten entry to have at least two of First Steps’ defined and documented risk factors for early school failure (see



Appendix A). Additionally, scholarships must be used in child care centers that are of high quality, except in geographies which do not have enough high quality programs in which case special exception may be granted to use scholarships for other providers. High quality is defined as meeting at least one of the following: ABC Quality Improvement Rating System level B or above; participating in First Steps quality child care enhancement strategies (Quality Enhancement or Quality Counts); and/or the center having a rating on an observational measure of child care quality, the Environment Rating Scale, at a rating of 4 or above.

In addition to paying the cost of child care, the First Steps scholarship program provides participating children developmental screenings using the Ages and Stages Questionnaire 3rd version (ASQ3) and the Ages and Stages Questionnaire Social-Emotional 2nd version (ASQSE2), with appropriate referral based on screenings as a key program standard. Scholarships are also integrated with other school readiness interventions, which local partnerships may require as a condition of funding, and with a requirement for the provision of at least one hour of parenting training on the benefits of high quality child care to all parents who are new to the program.

The program standards emphasize, across all five years of the evaluation period, that these vouchers may not supplant other public funding available to pay for child care. Specifically,

families participating in TANF or transitional TANF must be referred to SCDSS to enroll in the SC Voucher Program, and age- and income-eligible families are to be given information about their options to access publicly funded child care through Head Start, as well as programs offered through their school district and the First Steps 4K program.

While the overall program standards have remained constant over the years of this evaluation period, there have been some minor changes. Specifically:

- Starting in 2019, the program standards began with the SCFSBOT Designation as “Evidence-based OR Evidence-informed, with definitions of each provided.
- The 2018 list of 20 “targeting criteria” (referred to in this report as risk factors) was supplemented in 2019 with two “additional high-risk characteristics” (recent immigrant or refugee family; child removed for behavioral reasons from one or more child care settings). Starting in 2020 “recent immigrant or refugee family” was formally added to the list of targeting criteria.
- The 2018 requirement for an ASQ-3 developmental screening measure to be conducted within 90 days of receiving a scholarship each year was further clarified in 2021, requiring that the ASQ-3 screening “must be conducted on at least 80% of eligible clients”.

To set the stage for the current evaluation, it is important to note that First Steps scholarships can be categorized in two ways: first, scholarships can vary in the level of support provided to families; second, the source of funding to

support scholarships can vary as noted

above (publicly or in-house

at the local partnership

level). Regarding the

level of support provided,

scholarships can be

provided for full-time care,

part-time care, or “wrap-

around” care. Wrap-around

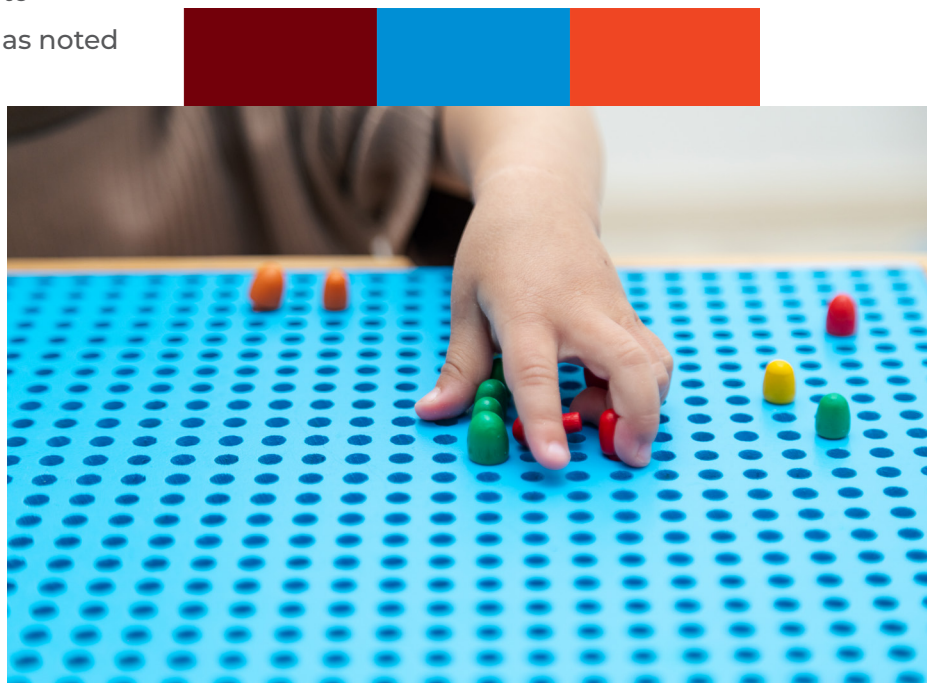
scholarships provide care

during afterschool hours for

children who attend school

during the day and do not

require full-time care.



Relevant Research

The First Steps child care scholarship program is unique in some potentially important ways, but child care scholarships—referred to as vouchers in the research literature—are one key component of a complex national system of early education and child care services. (Note; when summarizing this information, the term “vouchers” will be used). Alongside public child development programs such as Head Start and public Pre-K, and a range of informal/relative care and parental care options, child care vouchers provide many low-income families with greater access to private child care providers. At the federal level, voucher programs funded through the Child Care and Development Fund (CCDF) emerged in tandem with the increased maternal work requirements ushered in with the 1996 Personal Responsibility and Work Opportunity Reconciliation Act. These vouchers aim to facilitate parental employment and economic stability, while also meeting children’s developmental needs by lowering the cost of high quality child care. As described above, the First Steps child care scholarship program focuses specifically on promoting children’s development and school readiness (e.g. rather than parental employment), making it potentially unique in its effects, as will be discussed throughout this evaluation report. At the same time, it is important to understand this evaluation’s findings in the context of existing research on child care vouchers more generally, including those which flow from employment-focused funding, since this body of research points to the challenges of leveraging child developmental gains by helping families afford existing child care options. We summarize this research below.



Vouchers appear to have positive effects on employment and economic outcomes.

Parental employment depends on accessible, affordable, and reliable care for young children, and in general, child care vouchers appear effective in promoting employment. High participant burden to establish and maintain eligibility in some voucher programs can result in both churning (going on and off vouchers, and in and out of child care arrangements) and leaving the program altogether (Ha et al., 2020), but despite these challenges, voucher receipt has been found consistently to be positively associated with parental/maternal employment outcomes (Davis et al., 2018; Hotz & Wiswall, 2019; Tekin, 2005). Additionally, there is evidence that receiving vouchers is associated with improved financial wellbeing (Forry, 2009) while disruptions in voucher receipt are associated with worsened material hardship (Kim & Henly, 2021).

The relationship between vouchers child care quality appears unclear.

Alongside improvements in employment and household financial wellbeing, vouchers are expected to allow parents to select higher quality care than they could otherwise afford. Since



high quality child care is expensive and often out of reach, particularly for lower income families (Child Care Aware, 2017; Workman, 2021), subsidizing the cost of care through vouchers could expand access and exposure to high quality child care for children who are likely to benefit

the most. Promisingly, some studies indicate that families with vouchers are more likely than similar families without vouchers to use licensed and center-based care, and care that is higher quality (Johnson & Ryan, 2015). However, child care that is paid for through vouchers has also been shown on average to be of lower quality than public programs (Head Start and public Pre-k) that are options for some voucher-eligible children (Johnson et al., 2012), and when compared to child care arrangements that do not accept vouchers (Herbst & Tekin, 2016). Recent research on the quality of child care centers that do, versus do not, accept vouchers is also discouraging. Centers that receive vouchers typically have lower global quality than do publicly-

funded centers (Head Start and public Pre-K), and a less supported workforce (lower pay, less coaching) when compared to non-publicly funded centers that do not receive vouchers (Johnson et al., 2020).

Evidence is mixed
—at best—on the
effect of vouchers on
child developmental
outcomes.



High quality child care has been found to be associated with improved child developmental outcomes, particularly for children who are at developmental risk due to factors such as poverty or low parental human capital (Heckman, 2006). Given mixed evidence on the association between vouchers and child care quality, it should not be surprising that the evidence on vouchers and child outcomes is also mixed at best. One recent study found that voucher receipt was associated with improved maternal mental health, parenting, and child outcomes (Choi & Moon, 2020). However, this study compared low-income families who did versus did not receive vouchers, without accounting for voucher eligibility or other selection factors—thus providing limited information about the difference that vouchers may have made to those who received them, or the difference vouchers would make to those who were eligible but did not receive them. Other studies have used methodological strategies to isolate the effect of subsidies (versus selection), and findings in these studies have generally been less optimistic. For instance, two recent reviews of empirical evidence on voucher programs (Forry et al., 2013; Johnson & Ryan, 2015) both concluded that the body of research evidence indicates either neutral or negative effects of child care vouchers on children’s development. These conclusions are echoed in Herbst and Tekin’s study (2016) which found that subsidy receipt during the pre-kindergarten year was associated with children’s lower math and reading scores, increased behavior problems, and higher BMI at kindergarten entry. These effects were stronger for boys and for children in higher SES families, and although effects ameliorated by end of the 1st grade they persisted throughout the kindergarten year. Similarly, Sullivan et al (2019) found that subsidy receipt was associated with worse literacy and numeracy outcomes for children with, or at risk for, special needs.

On a more promising note, Elicker et al (2022) found that within a voucher-receiving population, toddlers in higher Quality Rating and Improvement System (QRIS)-rated settings made bigger developmental gains than those in lower QRIS-rated settings, suggesting potential opportunities to improve voucher effectiveness by directing increased attention on improving child care quality. Additionally, it is possible that the developmental outcomes that

are often the focus of research on child care voucher effectiveness may not be those most important for longer-term education success. Duncan et al (2022) recommend that efforts to improve early development focus not on math or literacy scores, but on what they refer to as “trifecta” skills—those which are malleable, foundational to ongoing development, and on which children would be unlikely to “catch up” without intervention—skills such as regulation, motivation, and the ability to form new social relationships.

In many ways the existing research on child care vouchers is sobering—many children receive child care that is subsidized through vouchers, but those vouchers are not assuring high quality care, nor consistently promoting developmental gains. However, the research on the importance of early development and experiences for long term wellbeing remains deeply compelling, making it critically important to continue to learn what works, for whom, and what can be improved to make investments in early education and care more impactful.

Implications for understanding the First Steps Child Care Scholarships Program

The First Steps child care scholarship program is unique in several ways that are important to consider in evaluating the program. First, FS vouchers prioritize child developmental outcomes rather than parental employment. This is reflected in different eligibility criteria (e.g. minimum



of two factors that represent risk for early development), and in program focus (requirement that the child care program meet quality standards, and linking of vouchers to family participation in other evidence-based programming and/or information sessions for parents to learn about child care quality). Additionally, the program participation data that First Steps collects makes possible nuanced analysis of the associations between voucher receipt, child exposure to child care services, and child development over time and into the start of kindergarten.

Evaluation Focus and Research Questions and Aims

For the current evaluation, existing administrative, archival data is being used to describe the population of children and families who received First Steps scholarships, and, similarly, to describe the child care providers who cared for the children served by the First Steps scholarship program over the course of the evaluation time frame from FY17/18 through FY21/22. Existing administrative and archival data is also used to examine both the reach and impacts of the First Steps scholarship program over the evaluation time frame.

Descriptive Evaluation Questions

The first part of this evaluation focused on who was served, what they received, and in what settings. Research questions were for this part of the evaluation were:

RQ1: What were the reach and distribution of the scholarships provided? This includes examination of the number and types of scholarships provided, and where those scholarships were provided over the evaluation time frame.

RQ2: What were the demographic characteristics of the First Steps children and families receiving scholarships? This research question entails examining important individual child characteristics such as gender and developmental level, as well as child and family-level risk factors for poor school performance as identified by First Steps upon entry to the scholarship program.

RQ3: What other types of programs were children and families receiving over the time frame of the evaluation? This includes examination of the other First Steps programs, and especially evidence-based programs, that were provided in conjunction with scholarship receipt.

RQ4: What are the characteristics of the child care providers who served scholarship-receiving children and their families? This includes how many child care providers received a

scholarship for a child connected to the First Steps program, what types of scholarships were received (i.e. full or half-time), and what was the quality level of these providers in the [South Carolina ABC Quality Rating and Improvement System \(QRIS\)](#).

Impact Evaluation Research Questions

In addition to the largely descriptive research questions above regarding the children, families, and providers who received a scholarship, we also sought to examine the impacts of participation in the scholarship program on two important outcomes in Kindergarten: 1) performance on the South Carolina Kindergarten Readiness Assessment (SCKRA), and 2) the level of chronic absenteeism in Kindergarten.

SCKRA. The [SCKRA](#) is a 50-item measure given by day 45 of a child's kindergarten year by qualified teachers. This tool assesses the level of development of foundational skills important for instruction based in kindergarten standards. These foundational school-readiness skills are categorized on the SCKRA as Emerging Readiness (limited foundational skills), Approaching Readiness (demonstrating some foundational skills), or Demonstrating Readiness (foundational skills for instruction are present). The SCKRA was administered state-wide starting in the Fall of 2017. The Fall SCKRA was used in the Fall of 2017, 2018, 2019, and 2021. Importantly, the SCKRA was modified in the Fall of 2020 due to the COVID-19 pandemic; during this administration, two of the dimensions were not administered. As described in Section 1.2, the KRA was modified for the fall 2020 administration. The modified version of the KRA eliminated all 12 items (24 raw points) from the Social Foundations domain. It reduced the Language and Literacy domain by 2 items (4 raw points) and the physical Well-Being and Motor Development domain by 3 items (6 raw points). These modifications resulted in a different distribution of items and score points, as compared to the original KRA blueprint.

Chronic Absenteeism. [Chronic absenteeism](#) is a dichotomous (yes/no) outcome, defined as missing 50% or more of the instructional day for 10% or more of the days that the student is enrolled in a particular school or district. Chronic absenteeism limits learning and can negatively academic performance.



Research questions related to program impact were:

RQ5: How did the school readiness (SCKRA) level and level of chronic absenteeism compare for children who received a scholarship alone to children who received a scholarship and other First Steps programs?

RQ6: How did the school readiness (SCKRA) level and level of chronic absenteeism in kindergarten compare for children who received a scholarship to similar children who did not receive a scholarship?

To answer these questions, administrative data was used to distinguish children who received a scholarship alone from those who received a scholarship plus other First Steps services (Q5), and to create a comparison group of similar children who did not participate in the scholarship program (Q6). This latter approach, known as propensity score matching, allows for comparing each child who received a scholarship to a child who is similar in terms of a range of socio-economic, demographic and family systems factors, but who did not receive a scholarship.

Results—Descriptive Analysis

RQ1: What were the reach and distribution of the scholarships provided?

This includes examination of the number and types (public, in-house, connected to another First Steps evidence-based program) of scholarships provided, and where those scholarships were provided over the evaluation time frame.

Across the five-year evaluation period, there were 2,177 children overall who qualified for scholarships; however, only 2,130 scholarships were used representing 1598

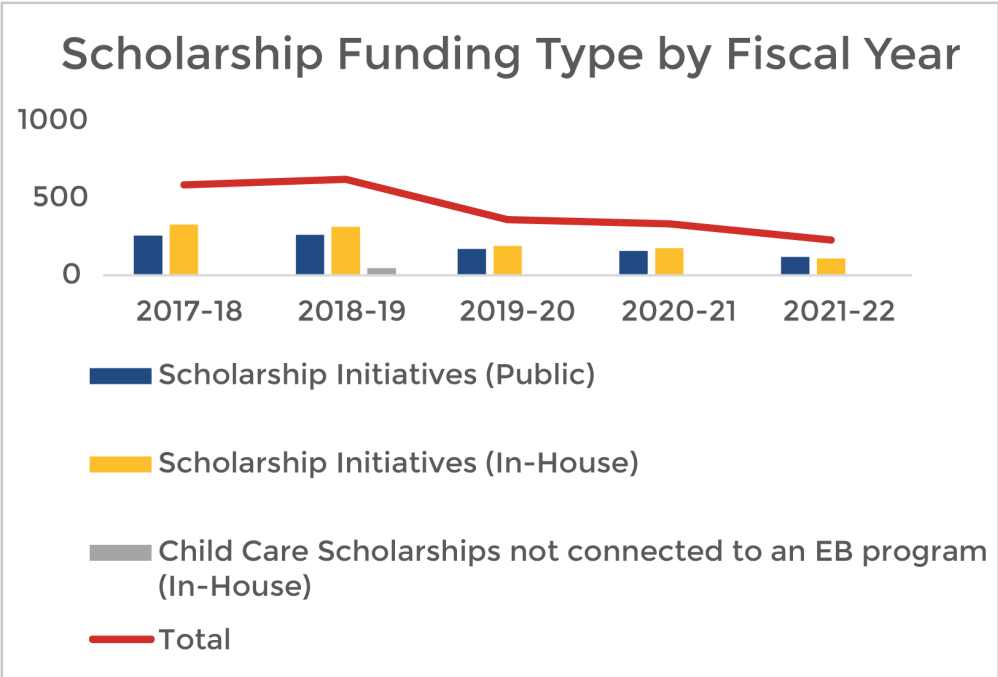


unique children (unduplicated count). Across the five-year evaluation period, 47 children were not connected to childcare providers. While the number of scholarships provided peaked in FY18/19, substantial decreases were seen over time. These decreases are most likely a function of the impacts of the COVID-19 pandemic, reducing the amount of child care that was available and provided. See Table 1 and Figure 1 below for details of the number of scholarships provided by fiscal year.

Table 1. Scholarship Funding Type and Fiscal Year

Scholarship Program	2017-18	2018-19	2019-20	2020-21	2021-22	Total #	%
Public	256	261	171	158	118	964	45%
In-house	328	314	190	175	110	1117	52%
Not connected to an EB program	1	47	0	0	1	49	2%
Total	585	622	361	333	230	2130	100%

Figure 1. Scholarship funding type year



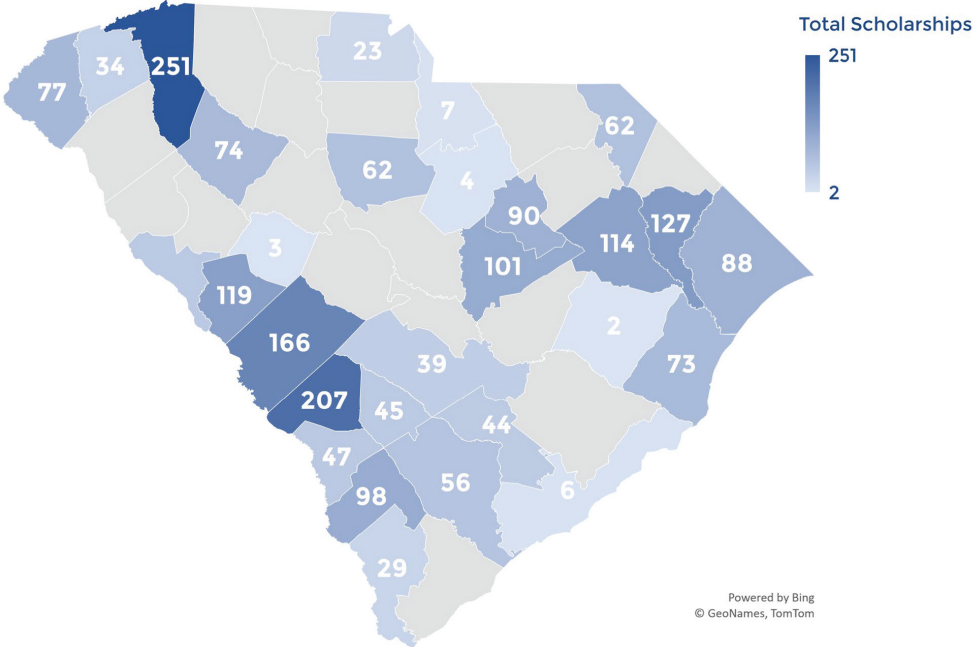
With regard to the type of care provided, the majority of scholarships were for full-time care (n = 1832 or 88%); this remained true even as the number of scholarships provided decreased from FY18/19 to FY 21/22. Please see Table 2 below for details.

Table 2. Scholarships breakdown by fiscal year and scholarship type (i.e., full-time, part-time, and wrap-around)¹.

Scholarship Program	2017/18	2018/19	2019/20	2020/21	2021/22	Total #	%
Full-time	472	564	295	293	208	1832	88%
Part-time	69	42	67	34	21	233	11%
Wrap-around	3	0	0	6	9	18	2%
Total	544	606	362	333	238	2083	100%

Another important question regarding the reach of the First Steps child care scholarship program is how these scholarships were distributed geographically. Over the time frame of the evaluation, a total of 30 local partnerships were represented (See Figure 3-map below). Sixteen local partnerships did not utilize the First Steps scholarship program; this is not entirely unexpected as decisions regarding program selection are made at the local partnership level and are dependent on the county context. Table 3, below, depicts the distribution of the 2,130 scholarships by county and fiscal year.

Figure 3. Scholarship geographical distribution



¹There were 47 scholarships that were not classified as either full-time, part-time, or wrap-around scholarships. Thus, they were excluded from the fiscal year totals.

Table 3. Scholarships breakdown by fiscal year and county

County	2017–18	2018–19	2019–20	2020–21	2021–22	Total #	%
AIKEN	37	34	30	44	21	166	8%
ALLENDALE	9	18	14	6	0	47	2%
BAMBERG	8	11	7	9	10	45	2%
BARNWELL	33	47	36	62	29	207	10%
BERKELEY	18	8	3	5	3	37	2%
CHARLESTON	0	6	0	0	0	6	0%
COLLETON	12	18	14	5	7	56	3%
DORCHESTER	22	9	5	5	3	44	2%
EDGEFIELD	23	26	26	22	22	119	6%
FAIRFIELD	20	14	17	0	11	62	3%
FLORENCE	45	16	14	22	17	114	5%
GEORGETOWN	1	18	32	22	0	73	3%
GREENVILLE	129	121	1	0	0	251	12%
HAMPTON	30	27	19	11	11	98	5%
HORRY	27	39	20	2	0	88	4%
JASPER	8	9	4	8	0	29	1%
KERSHAW	81	3	0	0	0	4	0%
LANCASTER	0	0	0	0	7	7	0%
LAURENS	19	20	16	8	11	74	3%
LEE	19	17	20	22	13	91	4%
MCCORMICK	20	21	4	0	0	45	2%
MARION	31	18	18	35	25	127	6%
MARLBORO	12	15	14	8	13	62	3%
OCONEE	15	29	19	7	7	77	4%
ORANGEBURG	14	11	7	7	0	39	2%
PICKENS	15	15	2	2	0	34	2%
SALUDA	0	3	0	0	0	3	0%
SUMTER	9	43	16	16	16	100	5%
WILLIAMSBURG	0	2	0	0	0	2	0%
YORK	8	4	4	4	3	23	1%
Total	585	622	362	332	229	2130	100%

While variation by county in terms of the number and type of scholarships provided is important to consider, how these scholarships vary in terms of their geographic connection to specific school districts may also be of interest. The number of school districts within counties varies from one to

five; each district is unique in terms of available resources. It is possible that impacts of scholarships on child academic outcomes in Kindergarten could vary or interact with school district resources; limitations in the number of children receiving scholarships by school district prohibited further examination of this question in the current evaluation. Please Appendix B for a detailed breakdown of the number of scholarships by school district and fiscal year.

RQ2. What were the demographic characteristics of the First Steps children and families receiving scholarships? This research question entails examining important individual child characteristics such as gender and developmental level, as well as child and family-level risk factors for poor school performance as identified by First Steps upon entry to the scholarship program.

What are the characteristics of the children who received a scholarship?

There were a total of 1,598 unique children who were eligible and used First Steps Child Care Scholarships to enroll in a childcare facility. The average age children were connected to



The average age children were connected to scholarships across the evaluation period was 27.17 months (standard deviation = 15.03, range 1 month of age to 73 months of age).



scholarships across the evaluation period was 27.17 months (standard deviation = 15.03, range 1 month of age to 73 months of age). Slightly more males (n = 840, 53%) than females (n = 758, 47%) received scholarships. With regard to racial/ethnic categories, the largest number of children who received a scholarship (1,184) were identified as African American; 344

children were identified as White, Non-Hispanic; 82 as Hispanic; 13 as Asian American or Pacific Islander, and 4 as American Indian. There were 29 children identified as two or more races.² Please see Tables 4 and 5 below for available demographic details of the sample.

Table 4. Overall Demographic Details for Children in the Scholarship Program

Demographic Table	N	%
Gender		
Female	758	47.43%
Male	840	52.57%
Racial/Ethnic Categories		
African American	1184	74.09%
Hispanic	82	5.13%
White, Non-Hispanic	344	21.53%
Asian American or Pacific Islander	13	0.81%
American Indian	4	0.25%
Two or More Races	29	1.81%

Table 5. Demographic Breakdown by Scholarship Year

	2017-2018		2018-2019		2019-2020		2020-2021		2021-2022	
	N = 585		N = 622		N = 362		N = 332		N = 229	
Demographic Table	N	%	N	%	N	%	N	%	N	%
Average Age	27.16 (15.13)		27.59 (15.73)		26.29 (14.14)		26.85 (14.56)		27.92 (14.93)	
Gender										
Female	282	48.2%	310	49.8%	176	48.6%	155	46.7%	112	48.9%
Male	303	51.8%	312	50.2%	189	52.2%	177	53.3%	117	51.1%
Racial/Ethnic Categories										
African American	436	74.5%	474	76.2%	290	80.1%	270	81.3%	182	79.5%
Hispanic	30	5.1%	25	4.0%	13	3.6%	15	4.5%	14	6.1%
White, Non-Hispanic	118	20.2%	135	21.7%	78	21.5%	75	22.6%	55	24.0%
Asian American or Pacific Islander	2	0.3%	9	1.4%	2	0.6%	1	0.3%	1	0.4%
American Indian	2	0.3%	2	0.3%	3	0.8%	0	0.0%	0	0.0%
Two or More Races	3	0.5%	23	3.7%	24	6.6%	29	8.7%	23	10.0%

²These numbers do not add up to 1,598 as 29 families indicated multi-racial identities.

Because the duration of exposure to high-quality child care is likely important to promoting child development, an important factor to consider when evaluating the First Steps scholarship program is the length of time that children are enrolled. Over the evaluation time frame, children were enrolled in scholarships for a range of 1 to 5 years, averaging 1.42 years (SD = .705). The most common length of time that children were enrolled was one year (calculated



using the mode, or the most frequent length of care). This finding is not surprising as scholarships, once awarded, are for 52 weeks of care.

Another important question involves the developmental level of the children who received scholarships over the evaluation time frame. To examine this question, data from the Ages and Stages Questionnaires: Third Edition (ASQ-3), were used. The ASQ-3 is a caregiver completed screening measure to assess children's development. It is comprised of questions that address children's development in five discrete domains: communication, gross motor, fine motor, problem solving, and personal social skills. Scores on the measure below the designated age cut-offs may identify areas where either a child may need more support or would benefit from an in-depth evaluation for developmental delays.

First Steps scholarship program standards require that the ASQ-3 be administered within the first 90 days of a child receiving a scholarship for the program year, with results reported to parents. If this initial assessment indicates a delay in development, a second ASQ-3 should be given within 90 days and referrals made to BabyNet or other resources as needed. Thus, an ASQ-3 screening should ideally occur in each program year of scholarship receipt. No requirement for follow-up

administration is noted in the First Steps program standards beyond that required for children when a delay is noted.

For this data set, 1226 children had an initial ASQ-3 assessment, representing 76.72% of the total sample of 1598 children (unduplicated count) who received scholarships over the evaluation period. Furthermore, of the 1226 children, between 690 and 705 children had a second ASQ-3 assessment (the number of children with a second assessment differed by the developmental domain examined). In sum, 23.28% of the sample was missing an initial ASQ-3 and between 56.28% and 57.5% of all children did not get a second administration of the ASQ-3. Most of the data appeared to be missing at random with no discernable pattern for its exclusion.

Given that a portion of the sample did receive an ASQ-3 at two time points, for these children, we used this information to explore potential changes over time by developmental domain. These analyses are reported below, and are considered exploratory only.

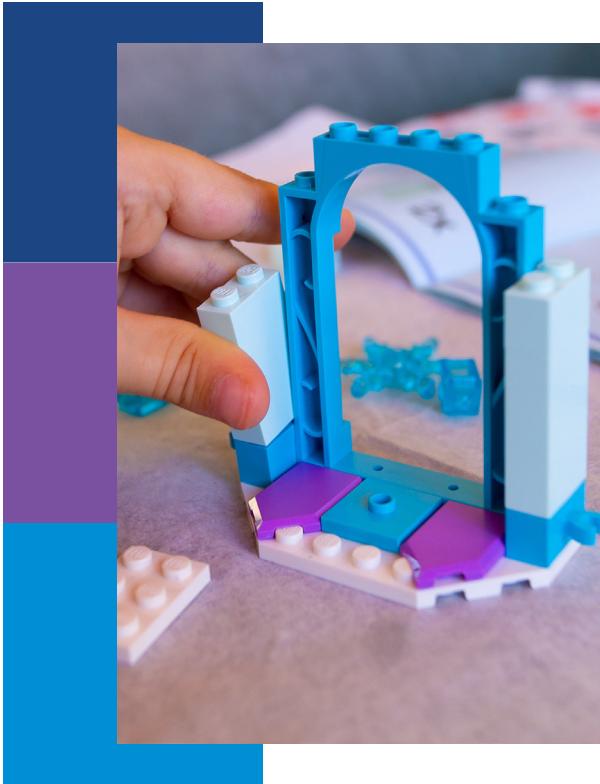
ASQ-3 COMMUNICATION

The Communication subscale on the ASQ-3 assesses children’s receptive (the spoken language that children can understand) and expressive (the words and sentences children’ can say) language skills. There was a statistically significant difference ($x^2 = 25.39, p < .01, d = .102$) between the percentage of children in this sample who were classified as having a delay on the ASQ-3 Overall Communication on the first (n = 1226) and last administration (n = 690). In addition, the percentage of children that were “on-track” was higher at the last administration of the ASQ-3 than during the first administration.

ASQ-3 GROSS MOTOR

The Gross Motor subscale measures those physical skills which require whole body movement and involve the core stabilizing muscles of the body used to perform everyday functions such as standing and walking, running, and jumping, and sitting upright at the table. They also include eye-hand coordination skills such as ball





skills (i.e., throwing, catching, kicking) as well as riding a scooter or tricycle. There was a statistically significant difference ($\chi^2 = 12.03$, $df = 2$, $p = .002$, $d = .13$), between the percentage of children in this sample who were classified as having a delay on the ASQ-3 Gross Motor scale on the first ($n = 1296$) and last administration ($n = 705$). The percentage of children that were “on-track” was higher at the last administration of the ASQ-3 than during the first administration.

ASQ-3 FINE MOTOR

The Fine Motor subscale measures the use of the smaller muscles within the hands in activities such as using a spoon, a pencil, or scissors, constructing with Legos or Duplos, buttoning, and opening lunch boxes. There was a statistically significant

difference ($\chi^2 = 22.23$, $df = 2$, $p < .001$, $d = .10$), between the percentage of children in this sample who were classified as having a delay on the ASQ-3 Fine Motor scale on the first ($n = 1169$) and last administration ($n = 681$). The percentage of children that were “on-track” was higher at the last administration of the ASQ-3 than during the first administration.

ASQ-3 CONCEPTS

The Concepts Domain on the ASQ-3 assesses whether a child can meet his/her own self-help needs in an age-appropriate manner. There was a statistically significant difference ($\chi^2 = 37.27$, $df = 2$, $p < .001$, $d = .13$), between the percentage of children in this sample who were classified as having a delay on the ASQ-3 Personal-Social scale on the first ($n = 1253$) and last administration ($n = 699$). The percentage of children that were “on-track” was higher at the last administration of the ASQ-3 than during the first administration.

ASQ-3 PERSONAL-SOCIAL

The Personal-Social Domain on the ASQ-3 assesses whether a child can meet his/her own self-help needs in an age-appropriate manner. There was a statistically significant difference ($\chi^2 = 20.65$, $df = 2$, $p < .001$, $d = .09$), between the percentage of children in this sample who were classified as having a delay on the ASQ-3 Personal-Social scale on the first ($n = 1253$) and last administration ($n =$

699). The percentage of children that were “on-track” was higher at the last administration of the ASQ-3 than during the first administration.

We also explored whether there were differences across the subscales on the ASQ-3 and between the type of scholarship children received. Both public and in-house scholarships demonstrated similar effects across evaluation years.

The data for the subset of children in this sample that had multiple ASQ screenings showed growth across all subscales of the ASQ-3 in the areas of communication skills, gross motor skills, fine motor skills, and person-social development (Table 6).

Table 6. ASQ-3 Subscale Data for Children With Multiple ASQ Screenings

Area Assessed	N	On Track	Potential Delay	Delay
Communication				
First Administration	1226	84%	7%	9%
Last Administration	690	92%	4%	4%
Gross Motor				
First Administration	1296	89%	4%	7%
Last Administration	705	94%	3%	4%
Fine Motor				
First Administration	1169	80%	8%	12%
Last Administration	681	87%	7%	6%
Problem-Solving				
First Administration	1253	80%	9%	11%
Last Administration	699	90%	5%	5%
Personal-Social				
First Administration	1253	86%	6%	8%
Last Administration	699	93%	3%	4%

While there is evidence for fewer delays observed across the subscales of the ASQ-3 for the children receiving scholarships in the data, we cannot know if a similar pattern would be observed for the majority of children for whom observations were missing, and thus cannot make definitive conclusions regarding the impact of the program on child developmental level. Maturation of children over time is a powerful alternative explanation for changes observed, and given lack of a comparison group, this explanation cannot be ruled out.

Ages and Stages Questionnaire: Social-Emotional (ASQ:SE)

The Ages and Stages Questionnaire: Social Emotional (ASQ:SE, 2015) is a caregiver completed measure that is designed as a screening measure to determine delays in children’s self-regulation, compliance, communication, adaptive behaviors, autonomy, affect, and interaction with people. The second edition of the ASQ-SE was published in 2015. However, some centers continued to utilize the first edition throughout the evaluation period. Thus, in the administrative data used for this evaluation, it was not possible to explore children’s performance over time on this measure and in this domain.

While it is noted that the ASQ-SE is not required for screening children for the scholarship program, and that only an initial ASQ is required, consideration should be given to repeating ASQ and possibly ASQ-SE annually for children enrolled in the scholarship program. Repeated screening would offer the opportunity to identify children whose developmental trajectory is not on track over time.

What are the characteristics of the families involved in the scholarship program?

In order to qualify for the scholarship program, upon program entry families must possess at least two risk factors for early school failure, as both defined and identified by First Steps (please see Appendix A for the full list of risk factors). Table 7 below shows the prevalence of risk factors identified in our sample. The most prevalent risk factors are associated with challenges to meeting basic needs—low-

income and lack of a medical home. Additionally, it is important to note that 28.8% of the children receiving scholarships had a family member with a mental health challenge or indication of substance abuse during this 5-year period. Another 8.82% of these children have come from families where interpersonal violence (domestic violence) is present. In contrast to risk factors



that are static or difficult to modify (e.g. low maternal education or having a teenage custodial parent), mental illness, substance abuse, and domestic violence are modifiable and amenable to intervention. The high rates of these risk factors among families receiving First Steps child care scholarships represents an important opportunity for supporting child and family wellbeing. Linking families to high quality child care, along with services designed to address safety, mental health, and/or substance use challenges, is likely to yield a stronger impacts on child development and school readiness.

Table 7. Risk Factors

Risk Factor	Number	Percentage
Supplemental Nutrition Assistance Program	1224	76.60%
Single parent household and has need of other services	1072	67.08%
TANF Eligibility (50% of Federal or below)	618	38.67%
Exposure to parental/caregiver depression	280	17.52%
Low Maternal Education (less than high school graduation)	248	15.52%
Teenage Custodial Parent	209	13.08%
BabyNet (IDEA Part C) or local school district (IDEA Part B)	162	10.14%
Low Birth Weight	161	10.08%
Exposure to domestic violence	141	8.82%
Exposure to substance abuse by a caregiver	107	6.70%
Transient/ numerous family relocations and/or homeless	99	6.20%
Developmental Delay	89	5.57%
Exposure to parental/caregiver mental illness	73	4.57%
Multilingual Learner	79	4.94%
Referral Neglect	56	3.50%
Incarcerated Parent	54	3.38%
Death in the Immediate Family	51	3.19%
Exposure to parental/caregiver intellectual disability	35	2.19%
Foster Child	36	2.25%
Referral Abuse	29	1.81%
Military Family	6	0.38%
Child was removed for behavioral reasons	1	0.06%

In addition to risk factors required for program eligibility, participating families also vary in the prevalence of protective factors which can both buffer against the harms associated with risk factors, and represent a strength upon which to build with effective intervention. These protective

factors, along with the risk factors above, are assessed at program entry; that said, the protective factors examined by First Steps represent a limited set from among the many protective factors known to promote optimal long-term outcomes for children. This is expected, given that the focus of First Steps is on factors primarily related to child academic outcomes and not child development in general. The protective factors available for examination in the administrative data include having regular medical care from a routine provider, as well as parent academic achievement and academic aspirations (see

**40 percent
of the children
receiving childcare
scholarships were
living in deep poverty,
with a total
family income
of less than \$10,000.**




Table 8). The fact that nearly 40% of children served by the voucher program have a medical home is both positive and important; supporting linkages to a medical home would be quite beneficial for families involved in the scholarship program. (Of note, having a medical home is tracked for children whose families are receiving Parents As Teachers (PAT), the most common home visitation program used by First Steps; as will be noted later in this report many children in the scholarship program are also involved in PAT). Adult education for parents/caregivers to assist in completing a GED or high school diploma would also appear as an important area for continued focus and development.

Table 8. Protective Factors

Protective Factors	Number	Percentage
Child has a medical home	639	39.99%
Client has the goal of obtaining a High School Diploma	104	6.51%
Client has the goal of obtaining a GED	3	0.19%
Client received a High School Diploma	25	1.56%
Client received a GED	4	0.25%

In addition to risk and protective factors, we examined the income distribution for families involved in the scholarship program. Consistent with the income eligibility requirement for public scholarships during the majority of the evaluation time frame (<150% poverty level), a large share

of families served are low-income, as would be expected in a program that provides assistance paying for child care. Nearly three quarters of participating children lived in families that received benefits through the Supplemental Nutrition Assistance Program, which generally caps eligibility at household income of 130% of the Federal Poverty Line (A Quick Guide to SNAP Eligibility and Benefits | Center on Budget and Policy Priorities, 2015). Moreover, about 40 percent of the children receiving childcare scholarships were living in deep poverty, with a total family income of less than \$10,000.³ Thus, assuring that families have access to services and supports to meet basic needs is critical to this large percentage of families who are enrolled in the child care scholarship program. Table 9, below, provides additional detail regarding the income level of families in the scholarship program over the evaluation time frame.

Table 9. Number of families by income level

Total Family Income	Frequency	Percent
<10,000	628	39.3
10,000 - 14,999	281	17.9
15,000 - 19,999	198	12.3
20,000 - 24,999	106	6.6
25,000 - 29,999	41	2.7
30,000 - 34,999	21	1.4
35,000 - 39,999	12	0.7
40,000 - 44,999	4	0.2
45,000 - 49,999	4	0.2
>50,000	4	0.2

RQ3: What other types of programs were children and families receiving over the time frame of the evaluation? This includes examination of the other First Steps programs, and especially evidence-based programs, that were provided in conjunction with scholarship receipt.

Child care scholarships are typically offered in conjunction with other First Steps programs, with the rationale that school readiness is impacted by a multitude of factors operating at child, family, and community levels of the social ecology. In particular, provision of high-quality, evidence-based parenting and family supports have known outcomes and can improve both child and family functioning (e.g. Eyberg et al., 2001; Lahti et al., 2019; Sanders et al., 2014) Scholarships provide economic support for child care, relieving family stress and reducing economic trade-offs

³ Data missing for 299 children.

that many low-income families face when paying out of pocket for care, and hopefully exposing infants and young children to higher quality child care environments as well. To the extent that scholarship act as a bridge to additional supportive services, these economic and child care related impacts may be augmented. Thus, for this research question, we examined what additional First Steps programs children and families received over the time frame of the evaluation.

Table 10, below, lists the additional programs that families received by fiscal year. The most common additional program that families were enrolled in is the Parents as Teachers (PAT) program, a home visiting program with evidence of impacts on important child academic and parenting outcomes (Lahti et al., 2019). The PAT program is the most widely used parenting and family support intervention across local partnerships in the state; it is unsurprising that in this sample and time frame that it is the most common program used in conjunction with child care scholarships. In this sample, Nurturing Parenting was the second most common parenting program used with child care scholarships. Please also see Appendix C for a more detailed breakdown of the types of First Steps programs that families receiving scholarships were involved in by county and fiscal year.

Table 10. Program Involvement by Fiscal Year

Program	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Parents as Teachers	86	107	90	75	76	434
Nurturing Parenting	13	1	8	17	39	78
Early Identification and Referral	1	9	3	6	0	19
Early Steps	1	9	0	1	0	11
Incredible Years	0	0	0	0	7	7
Triple P Positive Parenting Program Level 4	0	0	0	3	0	3
Facility Quality Enhancement	0	0	0	2	0	2
Raising a Reader Enhanced	0	0	0	2	0	2
Healthy Families	0	1	0	0	0	1
Head Start Programming	0	0	0	1	0	1
Early Education for children under 4	0	0	0	0	1	1
Total	101	127	101	107	123	559

RQ 4: What are the characteristics of the child care providers who served scholarship-receiving children and their families? This includes how many child care providers received a scholarship for a child connected to the First Steps program, what types of scholarships were received (i.e. full or half-time), and what was the quality level of these providers in the [South Carolina ABC Quality](#)

How many providers received what types of scholarships, and in what locations?

Overall, 207 unique registered childcare providers, spanning 28 counties, received a First Steps scholarships at some point during the five-year evaluation period. Figure 4 below shows the number of providers who received a scholarship by fiscal year; because many providers received scholarships in more than one year, the total of these year-by-year numbers exceed the total number of unique providers (499 versus 207). As indicated Figure 4, the number of providers dropped considerably once the COVID-19 pandemic was under way. Table 11, below, provides details regarding the number of providers involved in the scholarship program by fiscal year as compared to the total number of providers in the First Steps data base used for this evaluation.

Figure 4. Providers receiving First Steps scholarships by fiscal year

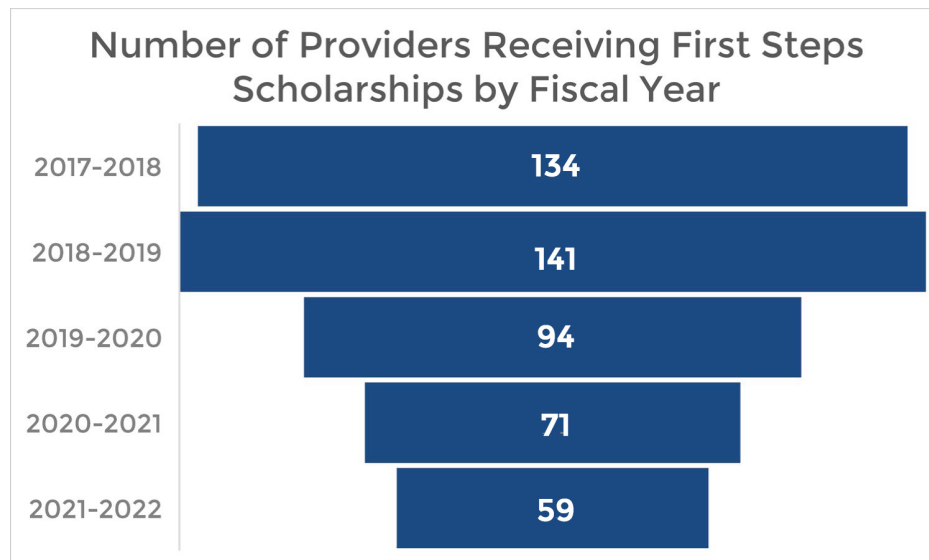


Table 11. Number of Available Providers vs. Number of Providers Receiving Scholarships

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Number of Providers	561	599	353	318	225
Number of Providers Receiving Scholarships	134	141	94	71	59

The vast majority of providers received full-time scholarships (n = 195); an additional 48 providers received scholarships for part-time care and four received scholarships for wrap-around (after school) care. Note, providers may have received more than one type of scholarship. In addition, the majority of providers received publicly-funded scholarships (n = 130) as compared to a total of 94

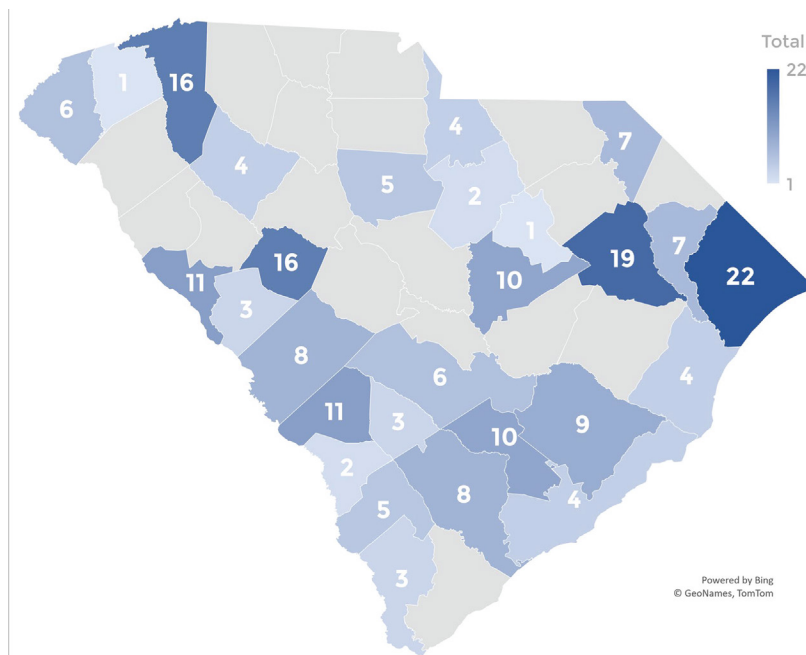
receiving in-house scholarships.

Scholarships were received by providers in 28 of South Carolina's 46 counties. (Note, scholarships follow children; thus, while 30 local partnerships participating in the scholarship program during the evaluation time frame providers were clustered in 28 counties). Please see the Figure 5 map below for the number of providers by county location. The largest numbers of providers receiving scholarships were located in Florence, Greenville, Horry, Saluda, and Sumter counties. Counties with fewer providers appear to be less populous and more rural. It is also notable that some metropolitan areas have fewer providers than would be expected based on population alone (e.g. 4 providers in Charleston County) and other metro areas had no providers receiving scholarships (e.g. Richland and Lexington counties). This is most likely due to local differences in the constellation of other resources and supports to promote access to high quality child care, but such an analysis is outside the scope of this evaluation.

Scholarships were received by providers in 28 of South Carolina's 46 counties.



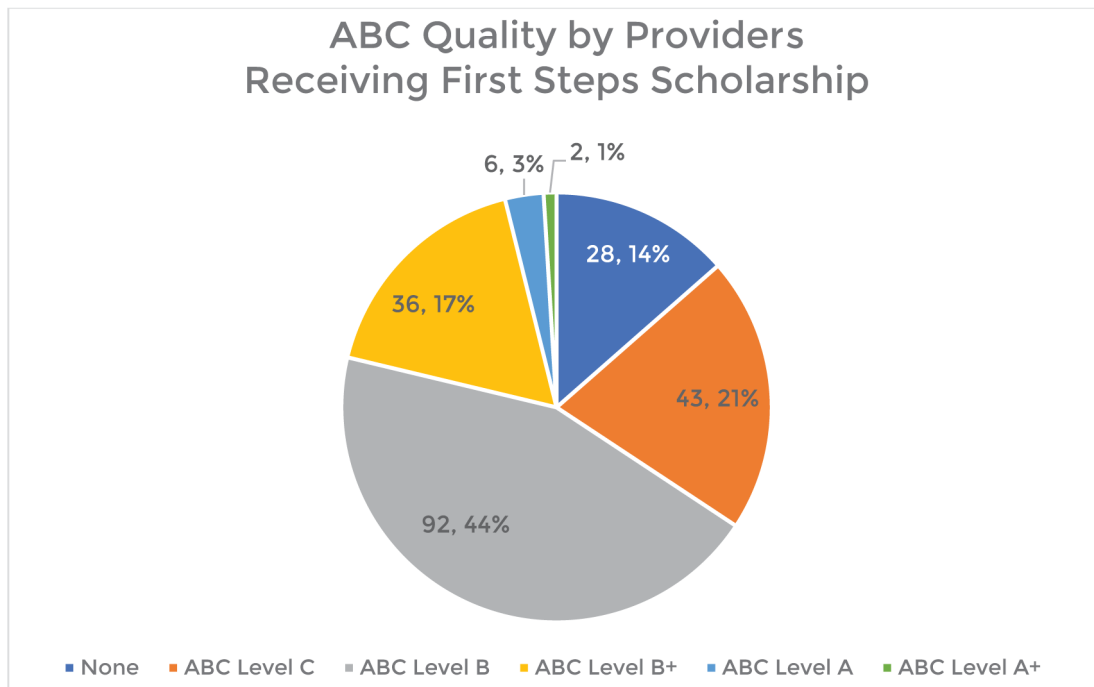
Figure 5. Providers by county location



What was the quality of care among participating providers?

First Steps program standards require that scholarships can only be used in high quality child care settings, except when that requirement is waived because high quality settings are either unavailable to or far away from a participating family. A high quality setting is defined as one that is participating in First Steps childcare technical assistance, or which is rated as having an ABC quality level of “B” or better, or an aggregate Environmental Rating Scale score of 4 or better within the past 12 months. As shown in Figure 6 below, the majority of providers (136/207 or 65.7%) were categorized as ABC quality level B or above. That said, a total of 28 providers did not have an ABC quality rating, and a total of 43 providers were at quality level C. Supporting these centers to prepare for and enroll in the ABC quality program, as well as supporting continuous quality improvement, is important; of note, this is one of the key goals of the First Steps child care technical assistance program (for further information please see the prior IFS evaluation of these programs completed in 2022).

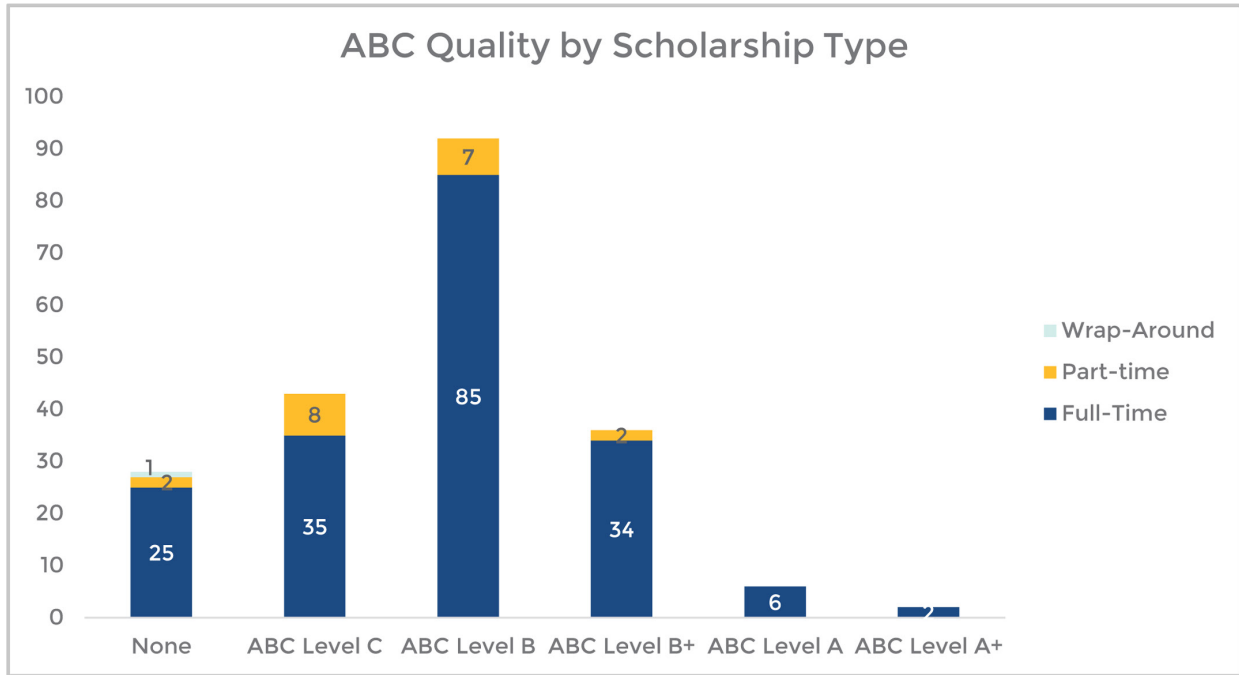
Figure 6. ABC quality by providers receiving First Steps scholarship



To further explore the distribution of scholarships by type and provider, Figure 7 below illustrates the ABC quality level by type of scholarship (full time, part-time, wrap-around). The majority of scholarships are for full-time care and were primarily utilized at centers with quality ratings of B or

above, as noted earlier; there does not appear to be an interaction between quality level and type of scholarship.

Figure 7. ABC quality by scholarship type



We also examined child care quality in relation to the funding source of scholarships (public versus in-house; see Table 12); of note, while more public scholarships were provided, the pattern of distribution across source of funding and quality level are similar.

Table 12. Quality of providers by scholarship program funding source

ABC Quality Rating	Public	In-House	Total
None	12	16	28
ABC Level C	29	14	43
ABC Level B	62	30	92
ABC Level B+	23	13	36
ABC Level A	1	5	6
ABC Level A+	1	1	2
Total	128	79	207

Results–Impact Analyses

The remaining research questions were designed to examine the impacts of participating in the child care scholarship program on two important outcomes in Kindergarten: 1) performance on the South Carolina Kindergarten Readiness Assessment (SCKRA), and 2) the level of chronic absenteeism in Kindergarten.

These analyses involved three types of comparisons: 1) children who received a public scholarship versus those who received an “in-house” scholarship; 2) children who received a scholarship only versus those who received a scholarship plus other First Steps evidenced-based programs; and 3) children who received a scholarship versus a matched sample of children who did not receive a scholarship.

The first two comparisons aim to clarify whether differences within the program experiences are associated with differences in outcomes. The last comparison, which examines the impact of receiving the program versus not receiving it, was conducted using propensity score matching.



In this method, a child who received a scholarship is compared to a child who did not receive the scholarship but had a similar propensity to do so, based on a series of socio-economic, demographics, and family/household characteristics. The goal of this approach is to estimate the impact of the program itself on chronic absenteeism and KRA data.

It is important to note that this propensity score matching was done post-hoc after data collection had ended. Since the matching process was not integrated into the research design and was not conducted during data collection, the resulting sample cannot be classified as a matched pair sample. Consequently, the study does not utilize matched pairs data.

Nevertheless, the utilization of propensity scores in this analysis represents a statistical approach aimed at reducing selection bias and known confounding in an observational study. Integration of propensity scores into the design and analysis of the study helps mitigate confounding by indication and improve internal validity by estimating the probability that an individual would have received the program based on observed baseline characteristics.

The quality of the resulting data is contingent upon the adequacy of the propensity score model and the chosen analysis method. Propensity scores can be employed in various ways, such as matching, stratification, inverse probability of treatment weighting, or covariate adjustment in regression. However, it is essential to recognize that while propensity scores are a valuable tool in observational studies, they are not a substitute for randomization. Randomization remains the only approach that guarantees balanced distributions of both known and unknown confounders between study groups, enabling causal statements regarding the treatment effect. As randomization to receive scholarships or not is neither feasible nor desirable, use of propensity scores as an analytic tool to create groups of children who are similar to each other, and to then compare them on outcomes of interest, was used as the analytic approach.

All statistical analyses were conducted using SPSS Version 29.0.1.0(171) and standard analytical approaches were used (ANOVA for comparison of sample means; chi-square for comparisons of prevalence on categorical variables) with a traditional threshold of $p < .05$ for determining statistically significant differences.



Kindergarten School Readiness–SCKRA

To evaluate potential impact of the First Steps Child Care Scholarship Program on participating children’s school readiness, the following analyses compared the school readiness of participating children to a sample of similar peers. The sample was matched on a set of characteristics that are typically associated with kindergarten readiness - child age, race/ethnicity, school district, ELA status, whether not the child had an Individual Education Plan (IEP) (this indicates whether the child had an identified disability), and household poverty. For these analyses, there was a two-to-one match of 1,232 children who did not receive scholarships matched with 616 children who received either public or private scholarships. Please note that there were no KRA/FS Scholarship matches for the school year 2017/2018. This is because there were no children in our sample that began kindergarten in 2017/2018 due to their age being less than five that year.



Based on these limited data, there were no statistically significant differences noted between those who received a scholarship (n = 616) and those who did not receive a scholarship(n = 1232) ($\chi^2 = 2.26, df = 2, p = .32$) on the SCKRA (see Table 13).

Table 13. SC KRA Data Propensity Matched Sample

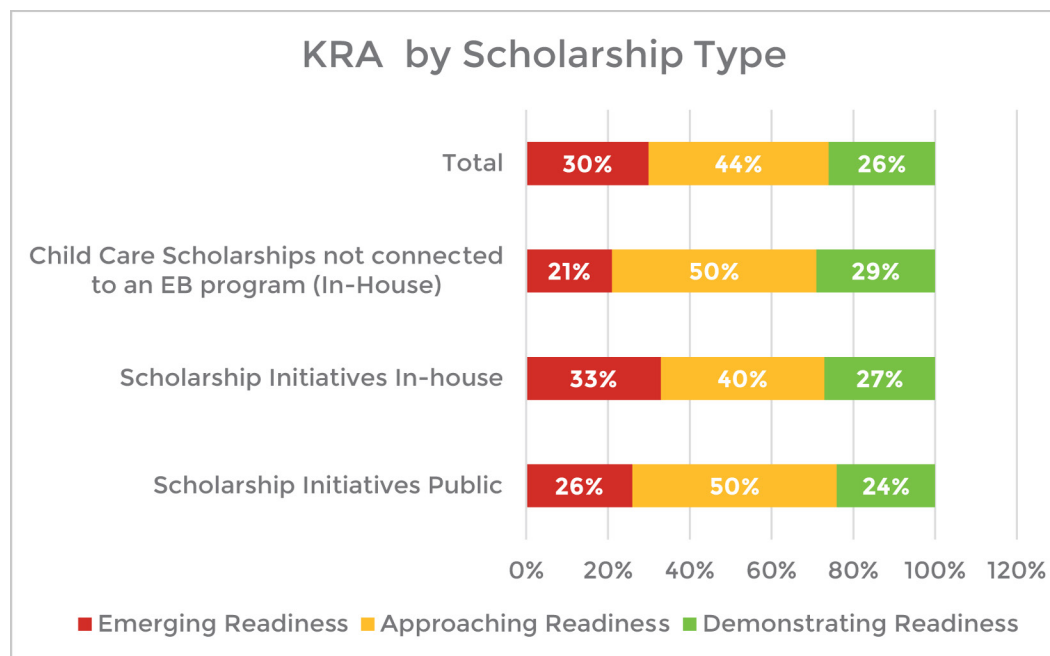
Scholarship Type	N	Emerging Readiness	Approaching Readiness	Demonstrating Readiness
No Scholarship	1232	32%	42%	26%
Scholarship	616	30%	44%	26%
Total	1848	31%	43%	26%

We also examined the types of scholarships received and SCKRA level of performance. Overall, we found no statistically significant difference between the types of scholarship received and kindergarten readiness categories during the years of the evaluation ($\chi^2 = 6.281, df = 4, p = .179$), see Table 14.

Table 14. SCKRA Category by Type of Scholarship Funding Source

Scholarship Type	N	Emerging Readiness	Approaching Readiness	Demonstrating Readiness
Scholarship Initiatives Public	255	26%	50%	24%
Scholarship Initiatives In-house	343	33%	40%	27%
Child Care Scholarships not connected to an EB program In-house	18	21%	50%	29%
Total	616	30%	44%	26%

Figure 8. KRA by scholarship type



While no statistically significant difference was found between the types of scholarship received and kindergarten readiness categories during the years of the evaluation, the ABC rating of centers did have a statistically significant impact ($\chi^2 = 18.98, df = 8, p = .02$), with children that attended centers that were not rated having lower scores on the SC KRA (see Table 15). It is important to

note, however, that fewer children in this sample were attending programs that were not rated or programs that were at ABC Level A as compared the number of children attending centers rated at Levels BB, B, or C. Thus, this finding should be interpreted with caution.

Table 15. Child care rating by SC KRA category

	N	Emerging Readiness	Approaching Readiness	Demonstrating Readiness
None	52	42%	26%	32%
ABC Level C	129	36%	41%	23%
ABC Level B	233	38%	33%	29%
ABC Level BB	170	22%	53%	25%
ABC Level A	32	28%	56%	16%
Total	616	30%	44%	26%

In addition to examining the impacts of scholarship on level of SCKRA performance, we also examined whether the type of scholarship impacted the overall SCKRA average scores. A one-way ANOVA was conducted to determine if SCKRA was different between those children who did not receive childcare scholarships. Participants were classified into two groups: scholarship recipients ($n = 616$) and not scholarship recipients ($n = 1232$). Data is presented as mean \pm standard deviation. Although KRA scores were higher for those that received a scholarship (263.09 ± 12.12) than those who did not receive a scholarship (262.28 ± 13.38), the differences between these groups were not statistically significant, $F(1, 1847) = 0.95, p = .686$. (See Table 16).

Table 16. Impact of scholarship type

Scholarship Type	Mean (Standard Deviation)
No Scholarship	262.28 (13.38)
Scholarship	263.09 (12.12)

Follow-up analysis examined the impact of type of scholarship type on overall SCKRA performance. A one-way ANOVA was conducted to determine if SCKRA scores were different based on the type of scholarship the child received. Participants were classified into three groups: public scholarship recipient ($n = 255$), in-house scholarship recipient ($n = 343$), and scholarship not connected to an evidence-based program ($n = 18$). Data is presented as mean \pm standard deviation. Although KRA score was higher for those that received a scholarship not connected to a evidence based program (264.67 ± 17.24) and those who received a public scholarship (263.23 ± 10.86) or those who received an in-house scholarship (261.37 ± 13.03), the differences between these groups was not statistically significant, $F(2, 614) = 0.71, p = .491$. (See Table 17).

Table 17. Impact by scholarship type

Scholarship Type	Mean (Standard Deviation)
Scholarship Initiatives Public	263.23 (10.86)
Scholarship Initiatives In-house	261.37 (13.03)
Child Care Scholarships not connected to an EB program In-house	264.67 (17.24)

Chronic Absenteeism

We first examined whether chronic absenteeism during the kindergarten year was present for students who received a scholarship compared to similar students who did not participate in the scholarship program. A chi-square test of homogeneity indicated statistically significant differences between students who did not receive a scholarship and those that did receive scholarships, $\chi^2(1) = 5.417, p = .023, d = .05$. Children whose families received scholarships ($n = 616$) had a lower rate of chronic absenteeism than did similar children whose families did not receive scholarships ($n = 1232$) (20% versus 24%); also see Table 18. This is an important finding; that said, some caution is warranted in interpretation given the earlier finding in this evaluation that scholarships can be accompanied by other First Steps programs such as PAT.

Children whose families received scholarships ($n=616$) had a lower rate of chronic absenteeism than did similar children whose families did not receive scholarships ($n = 1232$) (20% versus 24%)



Table 18. Program participation and chronic absenteeism in kindergarten

	N	No	Yes
No Scholarship	1232	76%	24%
Scholarship Recipient	255	80%	20%
Total Sample	1848	78%	22%

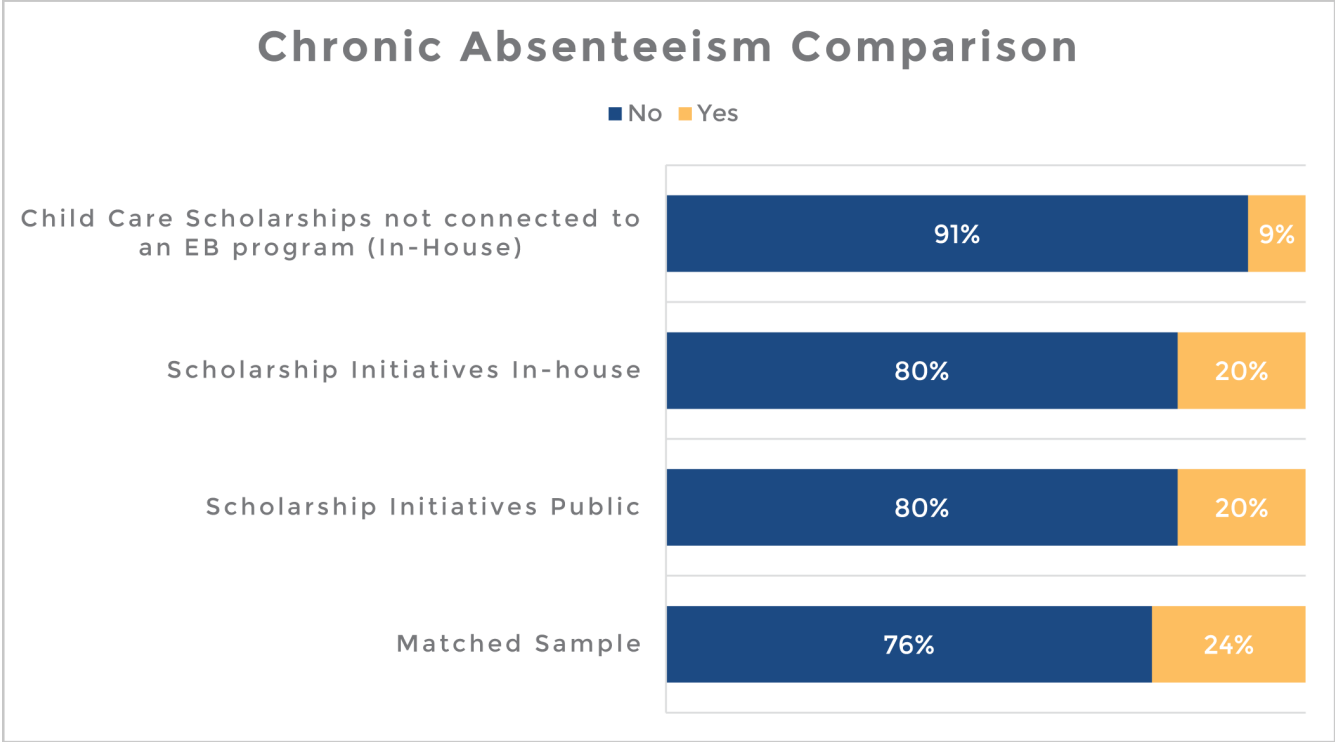
We also examined whether the type of scholarship received impacted rates of chronic absenteeism. Children who received public versus in-house scholarships had similar rates of chronic absenteeism in kindergarten (20% for both groups) (see Table 19). A chi-square test of homogeneity indicated that there were no statistically significant differences between the type of scholarship children received and chronic absenteeism ($\chi^2(2) = 3.019, p = .22, d = .02$).

While children who received child care scholarships not connected to an evidence-based program ($n = 18$) did appear to have lower rates of chronic absenteeism (9%) than those who received a public scholarship ($n = 255$, 20%) and those that received in-house scholarship ($n = 343$, 20%), the small sample size limits power to detect any statistically significant differences between groups and significant caution is warranted in interpretation of this finding. See Table 19 and Figure 9.

Table 19. Type of scholarship and chronic absenteeism in kindergarten

Scholarship Type	N	No	Yes
Scholarship Initiatives Public	255	80%	20%
Scholarship Initiatives In-house	343	80%	20%
Child Care Scholarships not connected to an EB program in-house	18	91%	9%
Total Sample	616	78%	22%

Figure 9. Chronic absenteeism comparison



Finally, we examined the impact of ABC child care rating on chronic absenteeism. No statistically significant difference was found between the ABC child care rating and chronic absenteeism during the years of the evaluation ($\chi^2 = 3.551$, $df = 4$, $p = .47$) (see Table 20).

Table 20. Chronic Absenteeism by Child Care Rating

	N	No	Yes
None	52	82%	18%
ABC Level C	129	76%	24%
ABC Level B	233	83%	17%
ABC Level BB	170	79%	21%
ABC Level A	32	84%	16%
Total	616	78%	22%

In sum, regarding the important educational outcomes of performance on the SCKRA and chronic absenteeism in kindergarten, we were unable to detect an impact on SCKRA performance. That said, we did find a lower rate of chronic absenteeism for children who received a scholarship as compared to similar children who did not. While this finding appears promising, we cannot say for certain that scholarships alone caused the reduction in chronic absenteeism in kindergarten, as most children receiving scholarships are also involved in other First Steps programs.

Overall Summary

Early care and education programs offered by First Steps local partnerships include a variety of training and technical support services for child care centers and family care homes, pre-kindergarten education for young children, as well as child care scholarships. Child care scholarships enable families to access child care for no cost or at a reduced cost, and are implemented as direct tuition payments to child care centers. Given the substantial investment in the child care scholarship program by First Steps local partnerships during the evaluation time frame (FY17/18 through FY21/22), the current evaluation examined both the reach and impacts of these scholarships for young children and their families.

During the evaluation time frame, child care scholarships were distributed from local partnerships to families/child care centers either through the partnership purchase of scholarships directly from the South Carolina Department of Social Services (SCDSS), termed “public” scholarships, and/or through use of local funding sources for scholarships, termed “in-house” scholarships.

In line with the goal of First Steps to promote “healthy development and school readiness” for young children at developmental risk, First Steps scholarships are targeted for children under age five who have at least two of First Steps’ defined and documented risk factors for early school

failure. Additionally, scholarships must be used in child care centers that are of high quality; special exceptions may be made when high quality programs are lacking within the local partnership service area. High quality is defined as meeting at least one of the following: ABC Quality Rating Improvement System level B or above; participating in First Steps quality child care enhancement strategies (Quality Enhancement or Quality Counts); and/or the center having a rating on an observational measure of child care quality, the Environment Rating Scale, at a rating of 4 or above.

In addition to paying the cost of child care, the First Steps scholarship program provides participating children developmental screenings using the Ages and Stages Questionnaire 3rd version (ASQ3) and the Ages and Stages Questionnaire Social-Emotional 2nd version (ASQSE2), with appropriate referral based on screenings as a key program standard. Scholarships are also integrated with other school readiness interventions, which local partnerships may require as a condition of funding, and with a requirement for the provision of at least one hour of parenting training on the benefits of high quality child care to all parents who are new to the program.

This evaluation found that the First Steps Child Care scholarship program reached a sizable number (n = 1598) of children and families, across 207 unique child care settings,



spanning more than half of counties in SC over the focal years. Participation declined during the COVID-19 pandemic, as would be expected given the many child care, employment and other closures that required most families with young children to shift child education and caregiving to the home setting. The longer term social, emotional, developmental, and academic impacts of this disruption to typical supports for children and families are unknown and are just now being examined; as the pandemic affected only the latter years of this evaluation sample we are unable to draw conclusions to this important question in this evaluation.

For the sample of children and families who were in the scholarship program during the evaluation time frame, most participated in full-time child care, for at least 1 year duration, and many families also received at least one additional First Steps evidence-based service – most frequently the

Parents as Teachers program. Combining scholarships with other forms of parent/family support is likely to have a greater impact

on child development and school readiness; that said, given the small numbers of children and families who were not involved in other programs, we were unable to closely examine these potential combined impacts in this evaluation.

Scholarships were applied mostly to high quality child care settings, with about 66% of participating providers being rated at an ABC quality level of “B” or better. However, a sizable minority of settings either did not participate in the ABC rating system (n = 28) or had a “C” rating (n = 43). This is likely reflective of broader challenges in



developing, sustaining, and ensuring even access to an adequate supply of high quality child care. We note that First Steps works to address these challenges through a range of their other programs, and that over time these efforts may coalesce to improve how frequently high quality child care exposure can be leveraged through this scholarship program. We note as well that improving the supply of high quality child care depends at least in part on economic and structural conditions, many of which are outside the scope of any First Steps program.

The children served by the scholarship program had a wide range of risk factors associated with early school failure, with the highest prevalence of risk related to household poverty, including nearly 40% living in deep poverty. After economic risk, the next more common type of risk involved parental mental and/or behavioral health challenges. While some of the evidence-based programs that families access in tandem with child care scholarships may tangentially address parental mental and behavioral health, we do not see evidence of this being the primary focus of any; without attending to mental and behavioral health problems, take up and effectiveness of other interventions may be limited.

These descriptive evaluation analyses suggest that the Scholarship Program is reaching the intended group of children, and exposing many of them to both high quality care integrated with other evidence-based programs. Our analyses also suggest opportunities for improvement in how frequently scholarships are applied to high quality settings, and in the alignment of integrated evidence-based programs with the specific risk factors that characterize the families receiving services.

This evaluation found more mixed news when estimating the impact of the scholarship program on children’s developmental outcomes. We found a modest but significant decrease in chronic absenteeism when comparing scholarship-participating children to a sample of similar



children. However, we found no differences in kindergarten readiness as assessed using the SCKRA associated with program participation. While the analytic approach of comparing children who received a scholarship to similar children who did not is helpful in isolating program effects, it is possible that the scholarship sample was different in unobserved ways (i.e. for which we do not have adequate measures) and that those differences may have either contributed to or masked meaningful program impacts. Nonetheless, the observed lower rate of chronic absenteeism suggests that this program prepares both children and parents for consistent engagement with the child's learning environment, and is consistent with prior findings (2019 evaluation) of First Steps programs conducted by IFS.

The lack of observed effect on kindergarten readiness as assessed using the SCKRA is disappointing, but consistent with other research showing that child care scholarship (voucher) programs are not reliably associated with improved developmental outcomes. That said, lack of an observed effect of the child care scholarship program on SCKRA performance in the sample used for this evaluation is inconsistent with prior findings from an overall evaluation of First Steps programs conducted by IFS in 2019. In the 2019 evaluation, First Steps served children who were not receiving special education services were more likely to have been categorized as demonstrating vs emerging school readiness skills in the SCKRA. In the current evaluation, we included eligibility for special education services



as one criteria in the propensity score matching process and did not analyze outcomes separately for children based on special education status. In addition, we selected children for this analysis based primarily on scholarship status. Thus, it is possible that methodological differences in the analytic approach between the 2019 and current evaluation could help explain differences in findings.

For the current evaluation, we did hope to examine changes in child development over the course of participation in the scholarship program using existing data from the ASQ screening measure. However, while a total of 1226 children (76.72%) had an initial ASQ-3 assessment within the time frame noted in the

program standards, over 50% of this group did not receive a second ASQ administration. Thus, we are unable to draw conclusions regarding developmental impacts of the scholarship program in this evaluation.

Recommendations

Based on the current evaluation, we offer the following recommendations for First Steps to consider moving forward:

- Given the substantial barriers to academic performance evident in the number and type of risk factors at the child/family level of the social ecology, further consideration of methods to target malleable risk factors among families in the scholarship program is warranted. Collection of data on risk factors assessed at the point of examining eligibility for First Steps services is commendable; that said, it will be important to use this information to provide specific referrals for community programs that can address parent/caregiver mental health, substance use, and interpersonal violence. Tracking if such referrals are made, and the outcomes of these referrals, is recommended.
- Given the substantial portion of families in the child care scholarship program who are identified as living in deep poverty, formal assessment and referral for expected challenges, such as food insecurity and housing permanence, as well as educational and vocational supports for parents/caregivers living with this level of poverty is recommended.
- Given the large portion of children in this sample (approximately 60%) who do not have a medical home, and the importance of well-child medical care for infants and young children, elevating and supporting family connections to a medical home provider is warranted.
- It is understood that First Steps is moving toward a program standard requiring that scholarships be used in conjunction with other evidence-based services for children and families.



Importantly, in this sample, the majority of children and their families are also enrolled in a parenting support program. Moving forward, it will be important to clearly assess what other programs could be most beneficial to support school readiness for specific children and their families.

- It is recommended that First Steps continue to support child care centers in both enrolling in the ABC Quality Rating Improvement System and in advancing the quality of care provided. In this evaluation, over one third of centers receiving scholarships were either not enrolled in the ABC system or were operating at a quality level of C.
 - For future evaluations, it will be important to empirically evaluate whether children with child care scholarships in centers with no quality rating or who are at ABC quality level C have differences in outcomes as compared to children who were supported by scholarships to attend centers of ABC quality level B or above.
- Future evaluations of the scholarship program should consider inclusion of adult/parent level outcomes found in the extant literature, such as parent educational or vocational outcomes.
- For the current evaluation, we identified areas where data were missing or incomplete. Thus, the following recommendations are offered with regard to the quality of data obtained for the current evaluation:
 - Improvements in collection of ASQ-3 data are recommended. While a majority of children did get an ASQ (76.72%), it is understood that new program standards will require administration of the ASQ within the mandated time frame to 80% of children involved in the scholarship program. This is an important goal. We would add that consideration be given to using to the ASQ-3 at least twice for each child, considering the recommendations for this instrument as a guide (i.e., at 2 months, at 4 months, then at 4-month intervals up to 24 months old, and at 6-month intervals until the child reaches 5 years of age).
 - Improvements in completion of all required data fields for children and families within the First Steps data system are needed. Data were noted to be missing, incomplete, or incorrect.





References

- A Quick Guide to SNAP Eligibility and Benefits* | Center on Budget and Policy Priorities. (2015, October 1). <https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits>
- Child Care Aware. (2017). *Parents and the high cost of child care*. Child Care Aware.
- Choi, J.-K., & Moon, S. K. (2020). The effects of child care subsidies on children's health and developmental outcomes. *Journal of Family Studies*, 26(3), 405–421. <https://doi.org/10.1080/13229400.2017.1410209>
- Davis, E. E., Carlin, C., Krafft, C., & Forry, N. D. (2018). Do Child Care Subsidies Increase Employment Among Low-Income Parents? *Journal of Family and Economic Issues*, 39(4), 662–682. <https://doi.org/10.1007/s10834-018-9582-7>
- Duncan, G., Kalil, A., Mogstad, M., & Rege, M. (2022). *Investing in Early Childhood Development in Preschool and at Home* (Working Paper 29985; NBER Working Paper Series). National Bureau of Economic Research.
- Elicker, J., Gold, Z. S., Mishra, A. A., & Lane, S. F. (2022). Toddlers' Developmental Trajectories as a Function of QRIS Rated Child Care Quality. *Child & Youth Care Forum*, 51(3), 633–660. <https://doi.org/10.1007/s10566-021-09643-z>
- Eyberg, S. M., Funderburk, B. W., Hembree-Kigin, T. L., McNeil, C. B., Querido, J. G., & Hood, K. K. (2001). Parent-child interaction therapy with behavior problem children: One and two year maintenance of treatment effects in the family. *Child & Family Behavior Therapy*, 23(4), 1–20. https://doi.org/10.1300/J019v23n04_01
- Forry, N. D. (2009). The Impact of Child Care Subsidies on Low-Income Single Parents: An Examination of Child Care Expenditures and Family Finances. *Journal of Family and Economic Issues*, 30(1), 43–54. <https://doi.org/10.1007/s10834-008-9135-6>
- Forry, N. D., Daneri, P., & Howarth, G. (2013). *Child Care Subsidy Literature Review* (Issue Brief OPRE 2013-60). Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Ha, Y., Joshi, P., Schneider, K. G., & Hardy, E. (2020). Can Administrative Changes Improve Child-Care Subsidy Stability? *Social Service Review*, 94(2), 285–338. <https://doi.org/10.1086/709444>

- Heckman, J. (2006). Skill Formation and the Economics of Investing in Disadvantaged Children. *Science*, 312(5782), 1900–1903. <https://doi.org/10.1126/science.1128898>
- Herbst, C. M., & Tekin, E. (2016). The Impact of Child-Care Subsidies on Child Development: Evidence from Geographic Variation in the Distance to Social Service Agencies. *Journal of Policy Analysis and Management*, 35(1), 94–116. <https://doi.org/10.1002/pam.21860>
- Hotz, V. J., & Wiswall, M. (2019). Child Care and Child Care Policy: Existing Policies, Their Effects, and Reforms. *The ANNALS of the American Academy of Political and Social Science*, 686(1), 310–338. <https://doi.org/10.1177/0002716219884078>
- Johnson, A. D., Martin, A., & Schochet, O. N. (2020). Inside the classroom door: Understanding early care and education workforce and classroom characteristics experienced by children in subsidized center-based care. *Early Childhood Research Quarterly*, 51, 462–472. <https://doi.org/10.1016/j.ecresq.2020.01.006>
- Johnson, A. D., & Ryan, R. M. (2015). The Role of Child-Care Subsidies in the Lives of Low-Income Children. *Child Development Perspectives*, 9(4), 227–232. <https://doi.org/10.1111/cdep.12139>
- Johnson, A. D., Ryan, R. M., & Brooks-Gunn, J. (2012). Child-Care Subsidies: Do They Impact the Quality of Care Children Experience? *Child Development*, 83(4), 1444–1461. <https://doi.org/10.1111/j.1467-8624.2012.1780.x>
- Kim, J., & Henly, J. R. (2021). Dynamics of child care subsidy use and material hardship. *Children and Youth Services Review*, 124, 105979. <https://doi.org/10.1016/j.childyouth.2021.105979>
- Lahti, M., Evans, C. B. R., Goodman, G., Schmidt, M. C., & LeCroy, C. W. (2019). Parents as Teachers (PAT) home-visiting intervention: A path to improved academic outcomes, school behavior, and parenting skills. *Children and Youth Services Review*, 99, 451–460. <https://doi.org/10.1016/j.childyouth.2019.01.022>
- Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review*, 34(4), 337–357. <https://doi.org/10.1016/j.cpr.2014.04.003>
- Sullivan, A. L., Thayer, A. J., Farnsworth, E. M., & Susman-Stillman, A. (2019). Effects of child care subsidy on school readiness of young children with or at-risk for special needs. *Early Childhood Research Quarterly*, 47, 496–506. <https://doi.org/10.1016/j.ecresq.2018.07.005>

Tekin, E. (2005). Child care subsidy receipt, employment, and child care choices of single mothers. *Economics Letters*, 89(1), 1–6. <https://doi.org/10.1016/j.econlet.2005.03.005>

Workman. (2021, June 28). The True Cost of High-Quality Child Care Across the United States. *Center for American Progress*. <https://www.americanprogress.org/article/true-cost-high-quality-child-care-across-united-states/>

Appendices

Appendix A: Risk Factors—Criteria Used for Targeting Clients At-Risk Of Early School Failure

Readiness Risk Factors:

- A preschool-aged child has been abused
- A preschool-aged child has been neglected
- A preschool-aged child has been placed in foster care
- Eligibility for the Supplemental Nutrition Assistance Program (SNAP, e.g. Food Stamps) or Free School Lunches (130% of federal poverty level or below – with first priority given to TANF-eligible families whose annual family income levels fall at 50% of federal poverty level or below)
- Eligibility for services under the Individuals with Disabilities Education Act, Parts B (Pre-school Special Education, ages 3-5) or C (BabyNet, ages 0-3)
- A preschool aged child with a developmental delay as documented by a physician or standardized assessment (not screening tool)
- Teenage mother/primary caregiver at or under the age of 20 (at the time of the focus child’s birth)
- Low maternal/primary caregiver education (less than high school graduation at the time of focus child’s birth)
- A preschool-aged child has been exposed to the substance abuse of a caregiver
- A preschool-aged child has been exposed to parental/caregiver depression
- A preschool-aged child has been exposed to parental/caregiver mental illness
- A preschool-aged child has been exposed to parental/caregiver intellectual disability
- A preschool-aged child has been exposed to domestic violence within the home
- Low birth weight (under 5.5 lbs.) in association with serious medical complications.
- English is not the primary language spoken in the home.
- Single parent household and has need of other services
- Transient/numerous family relocations and/or homeless

- Incarcerated Parent(s) (parent(s) is incarcerated in federal or state prison or local jail or was released from incarceration within the past year)
- Death in the Immediate Family (death of a parent/caregiver or sibling)
- Military Deployment (Parent/guardian is currently deployed or is within 2 years of returning from a deployment as an active-duty member of the armed forces. Deployment is defined as any current or past event or activity that relates to duty in the armed forces that involves an operation, location, command or duty that is different from his/her normal duty assignment.)
- Recent Immigrant or Refugee Family - One or both parents are foreign-born and entered the country within the past 5 years.

The following condition, while not considered part of SC First Steps' targeting criteria, is an additional characteristic that can put children at potentially higher risk for early school failure.

Additional high-risk characteristic tracked by First Steps-funded programs:

- Child was removed for behavioral reasons from one or more childcare, Head Start or pre-school setting.

Appendix B: Scholarships by School District

School District	2017-18	2018-19	2019-20	2020-21	2021-22	Total #	%
Aiken	37	32	30	45	21	165	7.7%
Allendale	9	19	13	6	0	47	2.2%
Anderson 3	0	1	0	0	0	1	0.0%
Bamberg 1	8	10	7	7	7	39	1.8%
Bamberg 2	0	1	0	2	2	5	0.2%
Barnwell 19	9	17	13	24	9	72	3.4%
Barnwell 29	5	1	5	4	2	17	0.8%
Barnwell 45	19	30	18	33	17	117	5.5%
Berkeley	18	8	3	5	1	35	1.6%
Charleston	0	7	0	0	0	7	0.3%
Cherokee	0	0	1	0	0	1	0.0%
Colleton	12	17	13	5	7	54	2.5%
Dorchester 2	20	8	5	4	5	42	2.0%
Dorchester 4	2	1	0	1	0	4	0.2%
Edgefield	22	25	25	21	21	114	5.3%
Fairfield	21	14	19	3	12	69	3.2%
Florence 1	42	14	14	18	11	99	4.6%
Florence 2	0	0	0	3	1	4	0.2%
Florence 3	0	2	0	1	0	3	0.1%
Florence 4	2	0	0	0	1	3	0.1%
Florence 5	1	0	0	0	0	1	0.0%
Georgetown	1	19	30	22	0	72	3.4%
Greenville	129	121	3	1	0	254	11.9%
Greenwood 50	1	1	0	0	0	2	0.1%
Hampton 1	22	20	13	9	11	75	3.5%
Hampton 2	7	6	5	0	1	19	0.9%
Horry	27	37	18	2	1	85	4.0%
Jasper	9	11	4	8	0	32	1.5%
Lancaster	1	0	0	0	8	9	0.4%
Laurens 55	17	16	14	5	7	59	2.8%
Laurens 56	2	3	2	2	4	13	0.6%
Lee	20	22	22	22	14	100	4.7%
Marion	29	17	17	34	25	122	5.7%

Marlboro	12	15	14	8	13	62	2.9%
McCormick	21	22	5	0	0	48	2.3%
Newberry	0	1	0	0	0	1	0.0%
Oconee	15	29	19	7	7	77	3.6%
Orangeburg	0	2	2	6	1	11	0.5%
Orangeburg 3	6	1	2	0	0	9	0.4%
Orangeburg 4	3	0	0	1	0	4	0.2%
Orangeburg 5	5	8	4	1	1	19	0.9%
Pickens	15	15	2	2	0	34	1.6%
Saluda	0	3	0	0	0	3	0.1%
Spartanburg 2	1	0	1	0	0	2	0.1%
Sumter	7	41	15	16	16	95	4.5%
Union	0	1	0	0	0	1	0.0%
York 3	8	4	4	4	3	23	1.1%
Total	585	622	362	333	228	2130	100.0%

Appendix C: Other Program enrollment by County and Fiscal Year

County	Evaluation Fiscal Year					Total	
	2017-18	2018-19	2019-20	2020-21	2021-22		
AIKEN	Parents as Teachers	13	13	4	18	10	58
	Total	13	13	4	18	10	58
ALLENDALE	Parents as Teachers	9	18	14	0		41
	Nurturing Parenting	0	0	0	6		6
Total	9	18	14	6			47
BAMBERG	Parents as Teachers	8	11	7	9	10	45
	Total	8	11	7	9	10	45
BARNWELL	Parents as Teachers	0	1	0	24	0	25
	Early Steps Public	2	11	0	2	0	15
Total	2	12	0	26	0	0	40
BERKELEY	Parents as Teachers	18	8	0	0	0	26
	Total	18	8	3	5	3	37
COLLETON	Parents as Teachers	12	18	14	5	7	56
	Total	12	18	14	5	7	56
EDGEFIELD	Nurturing Parenting	0	0	1	16	17	34
	Early Education for children under 4 Public	0	0	0	0	1	1
Total	0	0	1	16	18	18	35
FAIRFIELD	Parents as Teachers	20	14	17	0	11	62
	Total	20	14	17	0	11	62
GEORGETOWN	Parents as Teachers	0	9	0	0	0	9
	Total	0	9	0	0	0	9
GREENVILLE	Nurturing Parenting	0	10	1	0	0	11
	Total	0	10	1	0	0	11

County	Evaluation Fiscal Year					Total
	2017-18	2018-19	2019-20	2020-21	2021-22	
HAMPTON	Parents as Teachers	0	0	1	4	5
	Early Identification and Referral	2	1	0	0	3
	Total	2	1	1	4	8
HORRY	Parents as Teachers	0	32	18	0	50
	Facility Quality Enhancement	0	0	0	2	2
	Total	0	32	18	2	52
JASPER	Parents as Teachers	2	1	1	2	6
	Early Identification and Referral	1	8	3	6	18
	Total	3	9	4	8	24
LANCASTER	Incredible Years	0	0	0	0	7
	Total	0	0	0	0	7
	Parents as Teachers	19	20	16	8	74
LAURENS	Total	19	20	16	8	74
	Parents as Teachers	5	2	4	0	11
	Total	5	2	4	0	11
MARLBORO	Parents as Teachers	12	15	14	8	62
	Total	12	15	14	8	62
	Healthy Families Public	0	1	0	0	1
OCONEE	Triple P Positive Parenting Program Level 4	0	0	0	7	7
	Total	0	1	0	7	8
	Early Steps	0	0	0	1	1
ORANGEBURG	Total	0	0	0	1	1

County	Evaluation Fiscal Year					Total	
	2017-18	2018-19	2019-20	2020-21	2021-22		
PICKENS	Raising a Reader Enhanced	0	0	0	2	0	2
	Total	0	0	0	2	0	2
SALUDA	Nurturing Parenting	0	3	0	0	0	3
	Total	0	3	0	0	0	3
SUMTER	Parents as Teachers	9	15	16	17	16	73
	Total	9	15	16	17	16	73
WILLIAMSBURG	Parents as Teachers	0	1	0	0	0	1
	Total	0	1	0	0	0	1
YORK	Parents as Teachers	8	4	4	4	3	23
	Total	8	4	4	4	3	23
Total	Early Education for children under 4 Public	0	0	0	0	1	1
	Early Identification and Referral	3	9	3	6	0	21
	Early Steps Public	2	11	0	3	0	15
	Facility Quality Enhancement	0	0	0	2	0	2
	Head Start Programming	0	0	0	1	0	1
	Healthy Families Public	0	1	0	0	0	1
	Incredible Years	0	0	0	0	7	7
	Nurturing Parenting	0	13	2	22	17	53
	Parents as Teachers	135	182	130	99	81	627
	Raising a Reader Enhanced	0	0	0	2	0	2
	Triple P Positive Parenting Program Level 4	0	0	0	7	0	7
	Total	140	216	135	142	106	737