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Mary Lou LaComb-Davis, Phd, APRN, CPNP-PC
Augusta University, mdavis9@augusta.edu

Michael Patton, MSW
Augusta University, mpatton@augusta.edu

Jean Pawl, PhD, RN, OCN, CNE
Augusta University, jpawl@augusta.edu

Research Article

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Mary Lou LaComb-Davis,
Michael Patton
Jean Pawl
Augusta University

Correspondence can be directed to: Mary Lou LaComb-Davis mdavis9@augusta.edu
Augusta University College of Nursing, 987 St. Sebastian Way, Augusta, GA 30912

Abstract

This pilot study reports the baseline data of a prospective longitudinal study examining the educational achievements of grandchildren being raised by grandparents in parent absent homes. The baseline data includes 117 grandchildren in grades K-12 in two school districts in a Southeastern state. School records reporting 2,230 grades were examined for grade point average (GPA) and attendance for K-12 and conduct in grades K-5. Many of the grandchildren achieved A/B averages. There were no significant differences between gender, pre-care experiences, placement by welfare agencies, or paternal involvement across years of schooling. GPAs were lower in the grandchildren who had been exposed to drugs in-utero across the school trajectory in math, language arts, science, and conduct.

Keywords: kinship, grandparents, educational achievement, children in out of home care, foster care

Promoting academic success and well-being for children in foster care remains an important societal issue that crosses national borders (O'Higgins, Sebba, & Luke, 2015). Academic success in school can be a positive counterbalance for trauma experienced by children and youth in foster care. Of the over 400,000 U.S. children in foster care, there are 270,000 school age children. Although a relatively small subgroup comprising only 0.5 percent of students nationwide, children in foster care require the greatest need for academic support and services (U.S. Department of Education [ED] and U.S. Department of Health and Human Services [HHS], 2016).

Poor educational outcomes in this at-risk subgroup as compared to school age peers not in care include academic achievements and performance (Barrat & Berliner, 2013; Berger, Cancian, Han, Noyes, & Rios-Salas, 2015; O'Higgins, et. al., 2015; O'Higgins, Sebba, & Gardner, 2017; National Working Group on Foster Care and Education (NWGFCE), 2018; Wiegmann, Putnam-Hornstein, Barrat, Magruder, & Needell, 2014), academic growth (Clemens, Klopfenstein, Lalonde, & Tis, 2018), and school engagement (Bramlett, Radel & Chow, 2017; Radel, Bramlett, Chow, & Waters, 2016). Children in foster care are twice as likely to be absent

from school (Zorc et al., 2013), to have repeated a grade (Radel, et al., 2016; Zima et al., 2000), change schools, and receive special education services (NWGFCE, 2018; Radel et al., 2016). Furthermore, children in foster care demonstrate more school behavior problems, have higher rates of expulsions (Kothari et al., 2018; Zima et al., 2000), experience lower graduation rates (Barrat & Berliner, 2013), are more likely to obtain a graduate equivalency diploma (GED), and have lower postsecondary education enrollment and completion (NWGFCE, 2018).

Pre-care traumatic histories have been found to partly explain some of the differences for children in foster care (Szilagyi, Rosen, Rubin, & Zlotnik, 2015; Turney & Wildeman, 2016). To date, the documented literature acknowledges controversy in finding a direct effect of a child being in foster care and poorer educational achievement outcomes (Maclean, Taylor, & O'Donnell, 2018). Furthermore, statistical significance in relation to the degree and strength of the relationship between a child being in foster care and educational achievement outcomes have been difficult to measure (O'Higgins et al., 2015). There are more positive educational outcomes for children in foster care when confounding variables and pre-existing or pre-care experience risk factors are addressed. Poorer educational achievement outcomes are more likely associated with higher levels of adverse childhood experiences and pre-foster care experiences such as maltreatment and poverty rather than a child being in foster care (Berger et al., 2015; Maclean, Taylor, & O'Donnell, 2017).

Placement Types

The number of traditional foster care homes for abused and neglected children is declining. Inversely, the number of children in kinship care in the U.S. (18%) grew six times faster over the past decade than the number of children placed in foster care (3%) (Ellis & Simmons, 2014; Connolly, Kiraly, McCrae, & Mitchell, 2017; The Annie E. Casey Foundation, 2017). When children are placed in foster care, family or other kin is generally the best alternative for permanency, and to maintain family ties and culture. Many states' child welfare agencies are recognizing kinship care as a valuable alternative to placing children in traditional foster care, group homes, or residential care. For every one child in formal kinship care (placed by welfare agencies), there are 19 children being raised by grandparents and other relatives outside of the formal foster care system (Generations United, 2018).

Grandparent-headed households are one of the fastest growing family forms in the country, particularly in the South and Southwest states (Ellis & Simmons, 2014). In the U.S., over 2.5 million grandparents are responsible for their grandchildren's care (Generations United, 2018) with over 1 million children living with grandparents with neither parent present (Ellis & Simmons, 2014). Caregiving commonly exceeds five years and often occurs while grandparents are still in the workforce. Almost 20% of these households live below the poverty level and as such, grandparent kinship care households often lack adequate financial resources and require the greatest social and community service support (Generations United, 2018; Kelley, Whitley & Campos, 2011; Littlewood, Strozier, & Whittington, 2014; Littlewood, 2015).

Grandparent Kinship Program

Recognizing the need to support grandparents providing kinship care, a grant funded home and community-based support services program began in 1999 in a Southeastern state. Overtime, anecdotally, the team noticed how well the grandchildren were achieving academic benchmarks. One of the major foci of the grandparent kinship program (GKP) is to support grandparents with the education of their grandchildren. This effort includes helping grandparents to understand the educational system including support services provided by the school such as testing, counseling, and tutoring. Grandparents are provided with information and guidance on accessing resources outside of the school setting that support academic success. The grandparent program coordinator may attend Individual Educational Plan (IEP) meetings with grandparents to help them through the process of identifying problems or needs their grandchildren may be facing in the classroom, as well as identifying solutions to those problems.

Purpose and Aims

The purpose of this pilot study is to describe the first-year baseline data of a prospective longitudinal study examining the educational achievements of children being raised by their grandparents in a formal support program. The study seeks to expand the evidence for the educational outcomes of children in kinship care, as well as to strengthen the understanding of the relationship between children raised by grandparents in parent-absent homes and educational achievement. The baseline aims are: (1) to determine educational achievement of children in grades K through 12, (2) to describe school attendance patterns, and (3) to report the K through 5 conduct grades.

Methods

Design/Measurements

One-year baseline data for a prospective longitudinal study of school performance for grandchildren being raised by grandparents are reported. Baseline educational achievement variables include academic course grades and school attendance patterns for grade levels Kindergarten (K) through 12th grade, and school conduct grades for K through fifth grade. Other variables of interest included demographic information about the grandchildren and grandparents, previous pre-care experiences, placement characteristics and parental involvement.

Sample/Setting

The sample included school records from 117 grandchildren between the ages of 5 to 17 in grades K through 12 of primary education (most records from first grade, $n = 84$) in two Southeastern school districts. Records included end of year report cards (or final report cards) for a total of 570 completed school years. Report cards included final grades on both core and elective subjects, and the number of absences for the school year. Records also included final conduct grades ($n = 424$) for K through fifth grade.

Grandchildren. At the time of the study, the average age of the grandchildren was 12.82 years (range 7 to 27 years). There were 52 (44.4%) boys and 65 (55.6%) girls. The average age of a child when placed into grandparents' care was 3.94 years. At the time of placement, 34 (29%) of the children were of school age. Only 30 children were already in a school system prior to placement; four children, although age appropriate, missed K when they were with their parents. Eleven of these school age children transferred from out of state into grandparent care.

The grandchildren were mostly black (90%) and female (55.6%). Children were in the care of grandparents primarily due to parental drug and alcohol abuse (*n* = 50) and child maltreatment (*n* = 48). Child maltreatment included children who were identified as being abused, neglected, abandoned, and exposed to domestic violence. Other reasons for grandparent care included parental incarceration (*n* = 3), parental mental health problems (*n* = 6), parental death (*n* = 8), and parent was a teenager (*n* = 2) (Table 1). Eighty-three (71%) of the children began living with their grandparent at age 5 or younger. Twenty-nine (25%) of the grandchildren are the only child living in the home with another 53 (45%) living in homes with three or more grandchildren. Of the 88 grandchildren living in homes with multiple grandchildren, one has a different mother than their sibling and 15 have a different father than their sibling. There were no cousins in the homes in this baseline data collection.

Table 1
Grandchildren Demographics

Reason In Care			Pre-Care History	
Abandonment	16		Open CPS* Case	65 (56%)
Abuse	6		Placed By CPS*	54 (46%)
			Placed in Foster Care by CPS*	18 (15%)
Alcohol	3		Placed with GP** without CPS* involvement	63 (54%)
Domestic Violence	4		Comorbidities	
Drugs	47		Mental Health (MH) Diagnosis	35 (30%)
Neglect	22		Medication for MH	29 (25%)
Parent's Death	8		Counseling for MH	26 (22%)
Parent's Incarceration	3			
Parent's Mental Health	6		Asthma	26 (22%)
Teen Parent	2		Diabetes	1 (.01%)
			Hearing Loss	1 (.01%)
			Prenatal Drug Exposure	8 (.07%)
			Seizure Disorder	1 (.01%)
			Sickle Cell Disease	2 (.02%)
			Spina Bifida	1 (.01%)

*Child Protective Services
**Grandparent

Age of Child When Placed			Maternal Involvement (N = 117)	
Birth	27		None	27
1 year	12		<1 per month	59
2 years	8		>1 per month	17
3 years	10		Deceased	10
4 years	13		Incarcerated	4

5 years	13		Paternal Involvement (N = 117)	
6 years	9			
7 years	8			
8 years	1		None	51
9 years	7		<1 per month	27
10 years	1		>1 per month	4
11 years	4		Deceased	4
12 years	3		Incarcerated	16
15 years	1		Unknown	15

Of the 117 children included in the study, 65 (56%) had an open case with Child Protective Services (CPS) prior to living with their grandparents. Of those 65 children, 18 (15%) were placed in the formal foster care system prior to being placed with their grandparents. Of the 117 children included in the study, 54 (46%) were placed with their grandparents by CPS, while grandparents assumed the care of the remaining 63 (54%) children on an informal basis without CPS involvement. Thirty-five (30%) of the children have a clinical mental health diagnosis including Attention Deficit Hyperactivity Disorder (*n* = 21, 60%); Oppositional Defiant Disorder (*n* = 2, .06 %); Post-Traumatic Stress Disorder (*n* = 1, .03%), depression (*n* = 9, 26%) and autism (*n* = 2, .06%). Twenty-nine (25%) are taking medications for their mental health diagnoses with 26 (22%) receiving counseling services. One grandchild has physical limitations related to a diagnosis of spina bifida. After placement, 100 (86%) of the children had low or no contact with their biological mother, while 113 (93%) had low or no contact with their biological father. Low contact was measured as less than one contact a month by phone or in person. Incarceration of parents included 16 fathers and four mothers.

Grandparents. There were 113 custodial grandparents caring for the grandchildren with an average age at time of placement of 52.28 years (grandmothers = 52.18 years, grandfathers = 52.44 years). Of the 117 grandchildren included in the study, 47% (55) were being cared for by a single grandparent, with four of the 55 being cared for by a single grandfather. Fifty-eight (50%) of the grandchildren lived in a household with at least one working grandparent (*n* = 68), while 18 (15%) lived in a household where both grandparents (*n* = 15) were working. Of the 113 grandparents, 68 (60%) were still in the workforce. Average length of placement in grandparent care was 8.73 years (Table 2).

Table 2
Grandparent Kinship Family Demographics

Number Of Grandchildren In The Home			Children Raised By	
1	29		Maternal Grandmother	39
2	35		Paternal Grandmother	7
3	26		Maternal Grandparents	51
4	15		Paternal Grandparents	11
5	11		Maternal Great Grandmother	3

6	1		Paternal Great Grandmother	2
Number of Siblings In The Home			Maternal Grandfather	4
			Work Status (113 Grands)	
1	35			
2	26		Full-Time	60
3	15		Part-Time	8
4 or >	12		Both Grands Working	15

Procedures

This study was approved by the institutional human subject review board. After consent, custodial grandparents were asked to request a copy of each child's permanent school records from the school each child attended and deliver the records to the research team. If grandchildren were ages 18 years or older, the consented grandchild was asked to request a copy of their own permanent school records from each school attended, subsequently delivering the records to the research team. The data was de-identified prior to examining the variables. The data collected from the school records included: (1) gender of the child, (2) completed school year grade(s) attended at the time of data collection, (3) academic grade for each of the four core subjects—language arts, math, social studies, and science, (4) number of school absences per year, and (5) conduct grades for K through 5.

Records were categorized into K through 5th grade; 6th through 8th grade; and 9th through 12th grade to create congruency between the school districts from which the population was sampled. The core variable "language art" included grades in reading, English, and literature. The math variable included grades in algebra, geometry, and calculus, while the social studies variable included history, geography, government and civics, economics, and American government. The science variable included grades in earth science, physical science, life science, astronomy, geology, hydrology, evolution, and biology. Parental involvement was categorized as yes = any involvement or no = none, deceased, or incarcerated.

Analysis

Analysis of all data was performed using the Statistical Package for Social Sciences (SPSS) 25th version. Chi square tests were performed to test the association between variables of interest with a level of 0.05 significance.

Results

Study Aims

Aim 1—Educational Achievement. Core subject grade point averages (GPA) were calculated with A = 4 points, B = 3 points, C = 2 points, D = 1 point and F = 0 points. The core subjects were comprised of language arts, mathematics, social studies, and science. The overall core GPA for grandchildren in grades K through 5 was 3.11 (n = 424); for 6th through 8th grade 2.48 (n = 100), and for 9th through 12th 2.92 (n = 46). These GPAs were calculated on 2, 230 grades collectively from the 570 records (Tables 3 and 4).

Table 3
Grandchildren Demographics from School Records: All Core A/B Grades; Days Absent, and Conduct A/B Grades

School Year	School Variables		
	All Core A/B %	Days Absent from School	Conduct A/B %*
K (*n* =76)	90.2%**	5.4 days	79.2%
1 (*n* = 84)	92.4%	4.1 days	91.8%
2 (*n* = 80)	90.1%	3.7 days	81.5%
3 (*n* = 72)	82.6%	2.9 days	90.3%
4 (*n* = 62)	85.9%	3.2 days	88.7%
5 (*n* = 50)	79.5%	3.6 days	92.0%
6 (*n* = 41)	67.0%	3.2 days	-
7 (*n* = 35)	60.7%	3.8 days	-
8 (*n* = 24)	71.9%	4.0 days	-
9 (*n* =16)	48.4%	3.2 days	-
10 (*n* = 14)	62.5%	5.7 days	-
11 (*n* = 9)	91.7%	3.3 days	-
12 (*n* = 7)	92.8%	2.7 days	-

Note. *Conduct grades not given after grade 5.
** Missing data for 30 records for some of the core grades.

Table 4
Grandchildren Core Grade Point Averages and Conduct Grade Point Averages*

School Year	Number of students	Language Arts - GPA	Math - GPA	Social Studies - GPA	Science - GPA	Conduct – GPA**
Kindergarten	76	2.88	2.87	2.96	3.85	2.79
1st Grade	84	3.45	3.39	3.68	3.69	3.42
2nd Grade	80	3.35	3.14	3.49	3.57	3.31
3rd Grade	72	3.11	3.03	3.14	3.39	3.38
4th Grade	62	3.06	2.94	3.08	3.47	3.32
5th Grade	50	3.14	3.02	2.9	3.12	3.56
6th Grade	41	2.78	2.71	2.68	2.61	---
7th Grade	35	2.57	2.46	2.57	2.57	---
8th Grade	24	2.67	2.71	2.79	3.00	---
9th Grade	16	2.38	2.25	2.06	2.19	---
10th Grade	14	2.57	2.79	2.93	2.5	---
11th Grade	9	3.22	3.44	3.11	3.44	---
12th Grade	7	3.57	3.43	3.57	3.29	---

Note. *Grade Point Averages = GPA, **Conduct grades not given after grade 5.

Aim 2—School Attendance. Of the attendance recorded across the years of data collected, there were 88 instances of no absences. On average the grandchildren in grades K through 5 (n = 424) were absent 3.80 days; grades 6 through 8 (n = 100), 3.69 days; and grades 9 through 12 (n = 46), 3.72 days (Table 3).

Aim 3—Conduct Grades. Using the same scale as for core subject grade calculation, the conduct grade for grades K through 5 were calculated. For grandchildren in grades 6 through 12, conduct grades were not given. The average conduct grade for K through fifth grade (n = 424) was 3.30 (Tables 3 and 4).

Associations with Variables of Interest

Educational achievement and absences in grades K through 12, and K through 5 for conduct, were examined for associations with gender, in-utero drug exposure, pre-care, placement by Child Protective Services (CPS), and parental involvement. Significant associations with gender were found in absences from K and first grade (Table 5 for χ^2 statistics); conduct in K and second grade; and course content in social studies for grades 5 and 6. In K, boys were more likely to be absent and have lower conduct grades and this finding is seen in first grade absences and second grade conduct. Boys had lower GPAs in fifth grade and sixth grade social studies.

Parental involvement had few and varying significant associations (Table 5). Maternal involvement was significant only for social studies in grade 6. Paternal involvement or lack thereof was only significant for absences in K, first grade science, and fourth grade social studies. When mothers were involved, the grandchildren did better in sixth grade social studies. Whereas when the fathers were not involved, the grandchildren were absent less in K, did better in first grade science, and did better in fourth grade social studies.

Placement by CPS with the grandparent was significant for math in grade 2 (Table 5) as well as absences in grade 2. For those grandchildren placed by CPS, their GPAs in second grade math were lower than their peers, yet, they were less likely to be absent than their peers in the second grade. Significant associations were found between pre-care in fostering situations with K social studies; grade 2 math; grade 3 math and science; grade 4 math; and grade 5 math. Grandchildren who had experienced foster care prior to placement with their grandparents performed better in school than their peers who had not been in foster care prior to placement in K social studies, grade 2 math, grade 3 math, grade 3 science, grade 4 math, and grade 5 math.

Drug exposure in-utero was associated with grade 4 language arts; grade 5 language arts, math, science, and conduct; and grade 6 science (Table 5). Grandchildren who were exposed in-utero to drugs consistently had lower GPAs than their non-exposed peers.

All core classes were combined as was absences and conduct grades. There were no significant differences between genders, pre-care, placement by CPS or paternal involvement across years of schooling. However, significant associations were found with maternal involvement and in-utero exposure (Table 5). Maternal involvement across time was important for social studies, with higher GPAs in grandchildren who had maternal involvement. In-utero exposure to drugs was associated with math, language arts, and science. Across all grades K through 5, in-utero drug exposure was associated with conduct as well. GPAs were lower in the grandchildren who had been exposed to in-utero drugs across the school trajectory in math, languages arts, science, and conduct.

Table 5
*Characteristics of Grandchildren and Variables of Interest with Significance**

Variables	Association with Variable	*n (%)* Categorical Result	GPA	χ^2 Value**	df	Asym Sign (2 Sided)
Gender Boys = 52 (44.4%) Girls = 65 (55.6%)	Kindergarten Absences (*n* = 76)	Boys - 31 (40.8%) Girls - 45 (59.2%)		25.265	15	.046
	Kindergarten Conduct (*n* = 76)	Boys - 31 (40.8%) Girls - 45 (59.2%)	2.65 2.89	11.292	3	.010
	Grade One Absences (*n* = 84)	Boys – 35 (41.7%) Girls – 49 (58.3%)		26.469	14	.023
	Grade Two Conduct (*n* = 80)	Boys – 37 (46.3%) Girls – 43 (53.8%)	3.11 3.49	9.318	3	.025
	Grade Five Social Studies (n = 50)	Boys – 20 (40%) Girls – 30 (60%)	2.65 3.07	10.174	4	.038
	Grade Six Social Studies (*n* = 41)	Boys – 15 (36.6%) Girls – 26 (63.4%)	2.47 2.81	8.414	3	.038
Biological Mother's Involvement with Child (N = 117)	Grade Six Social Studies (*n* = 41)	Yes = 23 (56.1%) No = 18 (43.9%)	2.57 2.83	8.439	3	.039
	All Social Studies Core (*n* = 116)	Yes=75 (64.7%) No=41 (35.3%)	2.93 2.76	14.010	4	.007
Biological Father's Involvement with Child (N =107)	Kindergarten Absences (*n* = 76)	Yes = 21 (27.6%) No = 55 (72.4%)		24.780	15	.025
	Grade One Science (*n* = 84)	Yes = 25 29.8%) No = 59 (70.2%)	3.96 2.52	9.806	2	.007
	Grade Four Social Studies (n = 62)	Yes = 15 (25.8%) No = 46 (74.2%)	2.80 3.17	9.772	4	.044
Was the Child Placed with Grandparent's by CPS (N = 57)	Grade Two Math (*n* = 80)	Yes=32 (40%) No=48 (60%)	3.03 3.17	10.508	4	.033
	Grade Two Absences (*n* = 80)	Yes=32 (40%) No=48 (60%)		24.881	13	.024
Was the child in Foster Care Before	Kindergarten Social Studies (*n* = 45)	Yes=6 (13.3%) No=39 (86.7%)	3.16 2.92	7.008	2	.030

Being placed with Grandparent (N = 18)	Grade Two Math (*n* = 80)	Yes=12 (15%) No=68 (85%)	3.83 2.99	10.546	4	.032
	Grade Three Math (*n* = 72)	Yes=13 (13%) No=59 (81.9%)	3.76 2.88	11.196	4	.024
	Grade Three Science (*n* = 72)	Yes=13 (18.1%) No=59 (81.9%)	4.30 3.25	8.403	3	.038
	Grade Four Math (*n* = 62)	Yes=12 (19.4%) No=50 (80.6%)	3.75 2.72	13.203	5	.022
	Grade Five Math (*n* = 50)	Yes=13 (26%) No=37 (74%)	3.54 2.84	8.723	3	.033
In-Utero Exposure to Drugs (N = 8)	Grade Four l Language Arts (*n* = 62)	Yes=5 (8.1%) No=57 (91.9%)	2.00 2.90	23.788	4	.000
	Grade Five Language Arts (*n* = 50)	Yes=4 (8.0%) No=46 (92.0%)	2.50 3.20	8.786	3	.032
	Grade Five Math (*n* = 50)	Yes=4 (8.0%) No=46 (92.0%)	1.75 3.13	15.466	3	.001
	Grade Five Science (*n* = 50)	Yes=4 (8.0%) No=46 (92.0%)	1.50 3.26	26.708	4	.000
	Grade Five Conduct (*n* = 50)	Yes=4 (8.0%) No=46 (92.0%)	2.75 3.63	15.300	3	.002
	Grade Six Science (*n* = 41)	Yes=4 (9.8%) No=37 (90.2%)	1.50 2.73	13.146	4	.011
	All Math Core (*n* = 117)	Yes=8 (6.8%) No=109 (93.2%)	1.88 2.81	10.040	4	.040
	All Language Arts Core (*n* = 110)	Yes=7 (6.4%) No=103 (93.6%)	1.71 2.97	14.100	4	.007
	All Science Core (*n* = 116)	Yes=7 (6.0%) No=109 (94.0%)	1.71 3.03	20.761	4	.000
	All Conduct K-5th (*n* = 106)	Yes=6 (6.4%) No=100 (94%)	2.67 3.42	13.466	4	.009

Note: * Variables with non-significance available upon request due to volume
**Pearson Chi-square value

Discussion

The first-year demographic data of children being raised by their grandparents enrolled in a formal support program are consistent with the characteristics of kinship families in the literature. Grandparent kinship caregivers are older at the time the grandchild entered the home, as well as being more likely to be non-Hispanic black, female, and still in the workforce. Grandparents provide care for more than 5 years and are raising more than one grandchild. The literature also reports grandparent kinship providers are usually of lower socioeconomic status and as a whole have lower educational levels (Harrington & Kandic, 2017; Hayslip, Fruhauf, & Dolbin-MacNab, 2017). The study population reflects the geographic area in which the study was conducted where most study children (91%) reside, mean household income of $39,430, poverty rate of 23.7%, 83% of residents with a high school education, and 34.4% with a bachelor's degree or higher. The racial composition of the geographic area includes 56.7% black, 38.2% white, 5% Hispanic, 1.8% multiracial, and 1.8% Asian (Quick Facts, 2018).

Similar to the literature, grandchildren are entering into kinship grandparent care at younger ages (Font, 2014) with more than 80% of the grandchildren in this study placed in grandparent care at an average age of 3.94 years and before the formative education years. The reasons why the study grandparents are raising their grandchildren mirror the findings in the literature including child abuse/neglect and parental drug/alcohol abuse in order to keep grandchildren out of foster care (Ellis & Simmons, 2014). The study findings also reflect the growing trend of social problems related to parental substance use and abuse (Generations United, 2018); of the 27 grandchildren placed at birth with grandparents 8 were exposed to drugs in utero.

School Performance

The baseline data of the grandchildren's school performance in the four core subjects of language arts, mathematics, social studies, and science over the trajectory supports the research teams' anecdotal findings of the grandchildren achieving academic success. The majority of the grandchildren achieved A/B averages. In contrast to our findings, children in kinship care were found to have decreased reading scores (Font, 2014) and lower success in academic achievements for grandparent kinship households (Solomon & Marx, 1995). Unlike the literature, study children with previous foster care placements had higher GPAs; however, it was a small sample (NWGFCE, 2018; O'Higgins et al., 2017).

The age and timing of the child's development when placed into the grandparents' care may have served as protective factors for educational outcomes. In this sample, 71% of the grandchildren were under 5 years of age when placed in the grandparents' care, and thus prior to school entry. This finding may be suggestive that grandparent kinship care providers value and support grandchildren school preparedness, learning, and successes similar to findings of Littlewood et al. (2014).

Across the entire school trajectory, gender associations were not found. Girls performed just as well as boys. However, gender associations and educational achievements in the literature have been mixed depending on the type of placement studied. In a systematic review examining foster and kinship care populations, no significant gender differences on cognitive, reading, or math test scores were identified, yet other studies in the review found that girls outperformed boys on varied educational achievement measures such as reading and school performance (O'Higgins et al., 2017).

As a whole, grandchildren in this study were present at school. On average grandchildren K through 12 missed less than four days during a school year even when confounding factors were considered. This result is in contrast to the literature findings that report increased risk for higher levels of absenteeism for children in out-of-home care and for those children experiencing more frequent school changes (NWGFCE, 2018; Zorc et al., 2013). These sample populations are reported as aggregate populations of children in out-of-home care rather than disentangling out-of-home care placement types. The attendance associations found in this study conceivably could be related to placement stability and permanency of the study population (Winokur, Holtan, & Batchelder, 2018). Additionally, while attending school, the study grandchildren have better conduct grades. Grandparents may be serving as a role model for their school age grandchildren by articulating the importance of receiving an education and making school attendance a priority (Hayslip et al., 2017).

Our finding that exposure to drugs in utero had negative associations with academic achievements reflects the literature (Ross, Graham, Money, & Stanwood, 2015). The grandchildren exposed to drugs in utero had lower educational achievement especially in the math, language arts, and sciences and in grades K-5 lower conduct grades.

There is a significant amount of published research and literature on the poorer educational achievements for children in foster care, however, less is known about children placed in care with relatives. Results of the grandchildren's final grades for K through 12th grade, their attendance patterns, and conduct grades for K through fifth grade expand the limited evidence of the relationship between children raised by grandparents in parent-absent homes and educational achievement. Early secure and loving attachments are fundamental for a child's future success, especially during critical periods of brain development and educational instruction (Hagan, Shaw & Duncan, 2017; The Annie E. Casey Foundation, 2013). The baseline data suggest that these children in grandparent kinship care have favorable educational achievements even with pre-care adverse childhood experiences.

Limitations and strengths

A limitation of this pilot study includes the small cohort sample size of academic records; therefore, the findings may not be generalizable. However, the study is novel in that quantitative academic grades, attendance patterns, and conduct grades are analyzed. Another limitation is that data was not collected on grandparent(s) socioeconomic status or educational attainment which may have been mitigating factors for the results of our study.

A strength of our study is that we have examined educational achievements for grandparent kinship care households. This data may provide support for why grandparents may be an optimal choice for kinship placement.

Future directions

Over the past two decades, a vast amount of national and international attention concerning grandparent kinship care has resulted in important changes to policy, program development, and interventions that support the health and well-being of these grandparents. Undoubtedly, grandparent well-being is key to maintaining the caregiver role and providing a safe, nurturing, and loving home for the grandchildren in their care. With the increase in children being placed in the care of grandparents, this study provides a baseline to understanding school age grandchildren development toward positive academic achievements.

The current kinship care literature highlights deficiencies in methodology, selection bias and lack of objective measurements for reporting school age children academic achievements (O'Higgins et al., 2017; Winokur et al., 2018). Research recommendations highlight the importance of utilizing objective measurements and quantifiable longitudinal data captured from school age children report cards, transcripts, or academic archived databases to improve the strength of the studies (Maclean et al., 2018). Other data collected should include graduation rates for grandchildren and completion of post-secondary education. A better understanding of the factors impacting educational achievements for grandchildren being raised by grandparents, in parent absent homes will support future practices of care for this vulnerable population.

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