



# Foster Care Alumni and Higher Education: A Descriptive Study of Post-secondary Achievements of Foster Youth in Texas

Toni Watt<sup>1</sup> · Monica Faulkner<sup>2</sup> · Sheila Bustillos<sup>3</sup> · Elissa Madden<sup>4</sup>

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## Abstract

In 1993, Texas became one of the first states to adopt a post-secondary tuition and fee waiver for foster youth. In the present study, we examine the post-secondary achievements of a cohort of foster youth in Texas. Youth formerly in care were followed from age 18 to 24. Academic data reveal that only 1.5% of the youth received a bachelor's degree and 2% received an associate's degree or certificate, despite the state tuition and fee waiver. While we cannot assess causality, our descriptive data indicate potential waiver benefits in terms of post-secondary enrollment, retention, and graduation rates. However, results reveal that a significant percentage of emancipated youth who enroll in college (all waiver eligible), do not utilize the waiver (46%). In addition, the graduation rate for waiver recipients, while higher than non-recipients, is low. Study findings suggest that waivers may be a viable strategy for promoting higher education among foster youth. However, to substantively improve post-secondary outcomes for foster youth, tuition legislation must be supplemented with initiatives specifically designed to promote waiver utilization as well as college retention and graduation.

Foster youth often leave state care with very little social capital. They typically have few resources, marketable skills, or social supports (Perry, 2006). Consequently, they are extremely vulnerable to unemployment, addiction, homelessness, and incarceration (Courtney & Dworsky, 2006; Courtney, Piliavin, Grugan-Kaylor, & Nesmith, 2001; Park, Metraux, & Culhane, 2005; Reilly, 2003). However, if foster youth can transition from state care into higher education and succeed there, they may be able to expand their options and avert these outcomes (Okpsch & Courtney, 2014; Salazar, 2013; USBSL, 2015). For these reasons, there are national and statewide movements underway to increase post-secondary enrollment, retention, and graduation among foster care alumni (FCA). At the Federal level, the Chafee Act created the Education and Training Voucher program (ETV), which provides financial assistance to former foster youth to use for higher education expenses. In

addition, many states have engaged in a number of strategies to improve higher education outcomes, including, but not limited to, tuition and fee waivers, extended foster care, scholarships, higher education collaboratives, and campus support programs (Casey Family Programs, 2016). However, empirical investigations of many post-secondary initiatives are sparse, particularly those focusing on tuition and fee waiver programs.

Texas has engaged in a concerted effort to improve primary, secondary and post-secondary educational outcomes of foster youth. Texas was one of the first states to legislate a tuition and fee waiver for former foster youth (1993). In addition, a collaborative network of post-secondary and child welfare professionals organized in 2010 and eventually became Education Reach for Texans (Reach). Reach is a non-profit organization that aims to reduce barriers to and increase supports for higher education among foster care alumni (FCA). One goal of Reach is to increase utilization of the tuition and fee waiver for eligible youth. Finally, in 2015 the Supreme Court of Texas Children's Commission Foster Care and Education Committee created a Post-Secondary Workgroup to identify strategies to improve higher education outcomes for former foster youth. One priority for the workgroup was to help facilitate the first state-level data exchange (legislatively mandated) between the state higher education and child welfare agencies. The Texas Higher

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✉ Toni Watt  
tw15@txstate.edu

<sup>1</sup> Texas State University, 601 University Drive, 462 UAC, San Marcos, TX 78666, USA

<sup>2</sup> University of Texas at Austin, Austin, USA

<sup>3</sup> Texas Women's University, Denton, USA

<sup>4</sup> Baylor University, Waco, USA

Education Coordinating Board (THECB) worked with the Texas Department of Family Protective Services (DFPS) to provide data on post-secondary participation and achievements of a cohort of foster youth. The sample included youth who had ever been in state custody and who turned age 18 between September 1, 2008 and August 31, 2009. The initial goal was to construct a data set with a broadly defined sample of former foster youth. Thus, the youth in this cohort vary on a number of characteristics, including the length of time they were in foster care (some for short periods) and whether they were eligible for the tuition waiver. The longitudinal panel design tracked these youth from 2009 until 2015 in order to follow their educational achievements over time, with a focus on identifying higher education enrollment, retention, and graduation rates. The data set also provided information on which students used the waiver and how their performance varied relative to those who did not access the waiver. The individual level data from the exchange was analyzed by DFPS/THECB and is currently housed at THECB. Academic researchers have not been allowed access to the individual level data. However, both agencies agreed to provide our research team (The Education Reach for Texans Research Collaborative), with univariate and bivariate aggregate statistics from their internal analysis. In the present study, we provide a descriptive analysis of these data, which allow us to address the following research questions about former foster youth in Texas: (1) What are the college enrollment, retention, and graduation rates of former foster youth? (2) What percentage of youth use the tuition waiver? and (3) Are GPAs, retention rates, and graduation rates higher for foster youth who use the waiver relative to foster youth who do not use the waiver? Because we currently do not have access to the individual level data, we are unable to provide multivariate analyses. However, with these unique academic data, we are able to offer the first descriptive analysis of the post-secondary accomplishments of former foster youth residing in a state with a tuition and fee waiver.

## Literature Review

Foster youth have college aspirations similar to non-foster youth (Geiger, Hanrahan, Cheung, & Lietz, 2016; McMillen, Auslander, Elze, White, & Thompson, 2003). However, the path to a post-secondary degree is arduous and foster youth exhibit comparatively poor outcomes each step of the way (Gilliam, Lindsay, Murray, & Wells, 2016). Foster youth are less likely to graduate from high school, less likely to enroll in higher education, and if they enroll, are less likely to graduate with a post-secondary degree than other young adults (Day, Dworsky, Fogarty, & Damashek, 2011). More specifically, studies estimate that about 65% of foster youth

graduate from high school or receive a GED, compared to 87% for all youth ages 18–24 (NCES, 2015a; USDE & USDHHS, 2016). In addition, estimates reveal that among foster youth who complete high school or a GED, 42% enroll in college compared to 69% of the young adult population (BLS, 2015; Courtney, Dworsky, Lee, & Raap, 2010). For the foster youth that enter college, studies find that they have lower GPAs and are less likely to graduate than the general student population or even a subsample of first generation students from low-income families (Day et al., 2011; Courtney et al., 2001; Davis, 2006; Pecora et al., 2006a; Unrau, Font, & Rawls, 2012). And, foster youth progress more slowly through higher education than first generation and low-income students, even as they exhibit good academic standing (Day, Dworsky, & Feng, 2013). These educational disparities accumulate until only 1–11% of foster care alumni obtain a bachelor's degree, compared to 32.5% of the general population (Courtney et al., 2011; Pecora et al., 2006a, b; White et al., 2015; Wolanin, 2005; U.S. Census Bureau, 2016).

The obstacles to foster care alumni post-secondary success have been well-documented. Youth in foster care have disruptive family, school, and neighborhood experiences and this lack of continuity undermines their academic achievement and college readiness (Clemens, Lalonde, & Sheesley, 2016; Okpych, Courtney, & Dennis, 2017; Trout et al., 2008; Unrau et al., 2012). Youth also note that they (and others) typically do not perceive themselves to be “college material” (Watt, Norton, & Jones, 2013, p. 1412). Foster youth also tend to struggle with social, emotional, and behavioral health issues and often receive no or poor quality behavioral health services (Keller, Salazar, & Courtney, 2010; Longhofer, Floresch, & Okpych, 2011; McMillen et al., 2005; Romanelli et al., 2009; Salazar, 2013). Finally, these youth lack financial, instrumental, and emotional supports which are critically important for young adults seeking a college degree (Courtney et al., 2011; Dworsky & Perez, 2010; Hass, Allen, & Amoah, 2014; Hernandez & Naccarato, 2010; Rosenberg & Youngmi, 2017; Wolanin, 2005).

While foster care alumni possess few resources and face numerous obstacles, there is a national movement underway to address these issues and help them pursue their educational goals. In fact, scholars urge educators to increase their efforts to encourage foster youth to attend post-secondary schools (Harris, Jackson, O'Brien, & Pecora, 2009; Okpych & Courtney, 2014; Pecora, 2012; Pecora et al., 2006a, b; Shin, 2003; Sim, Emerson, O'Brien, Pecora, & Silva, 2008). At the Federal level, the Chafee Foster Care Independence Program established the Education and Training Voucher Program (ETV) in 2002, which provides former foster youth up to \$5000 in aid for higher education expenses. In addition, there have been local, state, and federal efforts to expand upon the Chafee program. While not focused specifically

on post-secondary education, several states have adopted extended foster care, which has improved post-secondary outcomes (Courtney & Hook, 2017; Dworsky & Courtney, 2010). Despite these federal and state efforts, gaps in support remain. To address these gaps, many colleges and universities have developed campus support programs.

Campus support programs are quite diverse, but they generally include some combination of mentoring/coaching, academic support, social networks/activities, and financial assistance (Dworsky & Perez, 2010; Geiger et al., 2018; Hernandez & Naccarato, 2010). There is process data on how to construct a campus support program and the associated challenges (Geiger & Beltran, 2017; Geiger, Piel, Day & Schelbe, 2018) and some programs have documented academic outcomes (Watt et al., 2013). However, there have been no rigorous academic or applied evaluations of campus support programs (Geiger et al., 2018). In addition to campus support programs, states such as Texas and Florida have developed legislation to designate foster care liaisons on university campuses. A liaison is not the equivalent of a campus support program. However, liaisons do provide a direct point of contact for former foster youth from enrollment through graduation. There have been no empirical studies of foster care liaisons in higher education. However, professionals have made a compelling case for liaisons in education systems (Casey Family Programs, 2010; Okpych & Courtney, 2017; National Association for the Education of Homeless Children and Youth, 2016; Weinberg, Oshiro, & Shea, 2014).

A number of states have also created collaborative networks that bring together colleges/universities, child welfare workers, and other advocates to identify strategies to remove obstacles and increase supports for post-secondary education among former foster youth. California College Pathways Program, Education Reach for Texans, Ohio Reach, Florida Reach/Positive Pathways Program and Fostering Success Michigan are statewide initiatives that have engaged in pioneering efforts to support foster care alumni in post-secondary education. The Casey Family Programs Resources guide (2016) provides links to the most organized statewide collaborative initiatives. In addition, Fostering Academic Achievement Nationwide (FAAN) is a national collaborative that works to organize states in developing systematic approaches and best practices for serving foster youth in higher education ("Fostering Academic," n.d.).

All of the initiatives described are designed to diminish the barriers to higher education faced by foster youth. However, one of the most significant obstacles is the high and rising cost of college tuition. Research reveals that an inability to pay for college is one of the primary reasons that students don't enroll (Hahn & Price, 2008). Foster youth are particularly likely to struggle with the high cost of post-secondary education because they are less likely to have

family contributions to help them pay for college and/or a safety net in times of financial crisis (Davis, 2006; GAO, 2016; Gross & Geigher, 2017; Wolanin, 2005). To address these financial barriers, many states have legislated tuition waivers for foster youth. It is estimated that 22 states now offer some form of tuition and fee waiver for former foster youth (Cohen, 2013). Waivers have been used to promote post-secondary achievement among other populations (e.g. veterans) (Steele, 2015) and appear intuitively beneficial for foster youth. However, there is little information on their efficacy. In fact, the few studies available suggest that collectively, state waiver programs have not yet fulfilled the promise of substantively improving foster youth post-secondary outcomes. For example, Hernandez, Day, and Henson (2017) find that state legislative mandates waiving tuition for former foster youth vary dramatically in eligibility criteria and the number of waivers distributed. Their investigation revealed that in 2014–2015, Texas distributed a large number of waivers (3195) which is second only to Florida. However, of the remaining 16 states for which data were available, each state distributed less than 500 waivers and nine states distributed less than 50 waivers. With regard to outcomes, Watt, Kim, and Garrison (2018), using the National Youth in Transition Database, found that states with waivers had higher rates of post-secondary enrollment among foster youth. However, there was wide variation among states and the overall effect size was small (7%). The authors attribute this, in part, to the significant differences in how states define, implement, and support their tuition waiver policies. Thus, it appears that waivers have the potential to improve educational outcomes for former foster youth. However, whether that has occurred for each state that has legislated them, and the degree to which they have improved foster youth post-secondary outcomes, is not yet evident.

Texas was one of the first states to pass tuition and fee waiver legislation in 1993, and it distributes a large number of waivers relative to other states with tuition waiver programs (Hernandez et al., 2017). Thus, the Texas tuition and fee waiver policy has received sufficient time and resources to warrant an examination of its impact. The Texas waiver provides tuition and fees at state supported vocational schools, community colleges, or 4-year universities. Youth qualify for the waiver if any of the following applied while they were in DFPS conservatorship: (1) they took courses that provide high school and college credit; (2) turned 18; (3) were age 14 and older and eligible for adoption; (4) received their high school diploma or GED; (5) permanent managing conservatorship was granted to an individual other than their parent on or after 9/1/09; (6) were adopted before 9/1/09 and had an adoption assistance agreement for monthly benefits and Medicaid; or (7) were adopted on or after 9/1/09. Additional specifications exist for youth who were age 14 and older on or after 06/01/16, but these do not apply to the

cohort of youth in our study. The youth must use the waiver before age 25 to remain eligible.

As with most states, there has been no formal evaluation of the Texas tuition legislation. However, in 2015, the Children's Commission created a Foster Care and Post-Secondary Education Workgroup. One accomplishment of the workgroup was to partner with The Department of Family and Protective Services (DFPS) and the Texas Higher Education Coordinating Board (THECB) in order to analyze a cohort of foster youth in order to better understand their educational attainment. These data are unique in that they do not represent survey data (which is subject to social desirability and non-response bias), but rather track actual enrollment, retention, and graduation data of a cohort of former foster youth at Texas colleges and universities. The present study provides a summary of the key findings from these data. We identify the percent of former foster youth that enroll in higher education, describe their academic performance, and assess their retention and graduation rates. We also examine the extent to which the tuition and fee waiver is utilized and describe the post-secondary accomplishments of youth who use the waiver.

## Methods

The Texas Department of Family and Protective Services (DFPS) and Texas Higher Education Coordinating Board (THECB) have separate data systems that do not share information. Multiple laws protecting confidentiality of foster youth and higher education students complicate data sharing across agencies. Thus, this was the first attempt to share data across these two agencies. Limitations of this study are largely centered on the complex nature of sharing data and accessibility of that data by researchers.

## Sample

The sample for this study is a prospective cohort of foster youth who were: (1) ever in foster care; and (2) turned 18 between September 1, 2008 to August 31, 2009. This time-frame was chosen because it allowed enough time to pass to examine traditional 6-year graduation rates.

DFPS identified 4035 youth who met the criteria of turning 18 years old between September 1, 2008 and August 31, 2009 and who were in DFPS conservatorship, or legal custody, at some point prior to their 18th birthdays. DFPS then transmitted the data to the THECB via secure networks. Of the 4035 youth identified by DFPS, 3855 were matched by the THECB by name and social security number. Of those youth who were not matched ( $n = 180$ ), 147 had no social security number and 33 had duplicate social security numbers. For these 180 youth, the THECB staff attempted to

use name and date of birth to match youth to their database; however, staff were unable to find a match in the THECB data system. Overall, the match correctly identified 95.5% of youth between systems. The lack of social security numbers is likely due to the fact that DFPS had to access data systems that are no longer used. In some cases, this meant staff had to visually check data elements from older data systems.

## Variables

The data provided to researchers contained a number of variables useful to the analysis of educational achievement and waiver use. However, data were not provided which would indicate how long the youth spent in DFPS care. The variable of waiver eligibility was also not included in the data set. However, some subgroup analyses allowed the researchers to examine outcomes for a subset of youth, namely emancipated youth, where it can be determined that all youth in the subgroup would have been waiver eligible.

Both DFPS and THECB contributed unique variables to the combined dataset. In addition to the variables used to match data (social security numbers, birthdates and names), DFPS included demographic variables of race/ethnicity and gender. *Race/ethnicity* was a categorical variable which combined race and ethnic categories into the following categories: (1) Anglo; (2) African American; (3) Hispanic; and (4) Other. *Gender* was categorized as: (1) male or (2) female. The data system does not have categories for non-binary genders at this time. The data also included the type of placement categorized as aged out of care (emancipated), kinship care, adoptive home, returned home to family of origin, or state conservatorship not established.

The variables that came from the THECB's database focused on educational outcomes. First, THECB was able to create a variable indicating *high school completion*. Categories include: (1) not graduated/no GED; (2) graduated high school; and (3) GED awarded. *Ever enrolled* is a dichotomous variable indicating whether a youth had ever enrolled in higher education by the date of August 31, 2016. THECB then created a variable *Fall 2009 Cohort* which was a dichotomous variable indicating whether a youth had or had not enrolled in a "traditional" college cohort. A traditional cohort is one in which a youth graduates in May and enrolls in college in August of that same year. First and second year retention rates indicate the number of youth who return to college 1 year after enrollment (2010) and the second year after enrollment (2011). The variable, *freshman GPA*, represents the grade point average of the youth at the end of his or her freshman year. Highest degree awarded is an ordinal variable indicating the highest degree awarded by August 31, 2016. Categories include: (1) Certificate; (2) Associate; (3) Bachelor; and (4) Master. Graduation rates were represented by the *6-year graduation rate*. Finally,

*waiver use* was a dichotomous variable indicating whether a youth had ever used Texas' tuition waiver or never used the tuition waiver.

## Data Analysis

The data in the DFPS/THECB exchange was individual level data. However, DFPS and THECB did not provide researchers with the individual level data due to security, confidentiality and legal considerations. Thus, researchers could only work in conjunction with agency staff to decide how to best run analyses and structure findings. DFPS and THECB ran frequency distributions and bivariate analyses and made these findings available to the research team. For this analysis, three subgroups of youth were created. First, all youth were examined to see who ever enrolled in higher education and who had not enrolled. Next, those who had enrolled in higher education, were split into two subgroups: those in the traditional college cohort (enrolled in 2009) and those who enrolled after the traditional college cohort.

DFPS provided the research team with frequency distributions and bivariate analyses. From these analyses our research team was able to assess post-secondary enrollment, waiver use, GPAs, retention, and graduation rates for all the youth in the sample, those who enrolled in 2009, those who enrolled later (2010–2015), and those who emancipated from care (the only subgroup where all youth would have been waiver eligible). We were also able to examine post-secondary outcomes for the traditional cohort (enrolled in 2009) for those who used the waiver compared to those who did not access the waiver. Because the data was only accessible to researchers in an aggregate form, no multi-level modeling was possible. However, researchers did ask for and receive basic t-tests and Chi square tests for the bivariate statistics.

## Findings

Table 1 presents descriptive data on the cohort of youth in the study. It provides information on demographic and household characteristics as well as post-secondary measures gathered during the 6-year follow-up period.

One of the most noteworthy findings in Table 1 is that post-secondary achievement is low for former foster youth in Texas. Only 1.5% of the youth in this cohort obtained a bachelor's degree within 6 years of turning 18. It is important to note that we do not know how long these youth were in care and if they qualified for the waiver. We also examined whether students received a certificate or associates degree from a community college in the 6-year follow-up period. This figure is also low (2%). Ultimately, 96.5% of the former

**Table 1** Descriptive data for study variables (n = 3855)

Characteristic	%	n
Sex		
Male	46.4	1787
Female	53.6	2067
Race/ethnicity		
White	36.7	1416
African-American	27.6	1062
Hispanic	33.9	1307
Other	1.8	70
Type of placement		
Aged out of foster care (emancipated)	37.6	1448
Adoption	11.1	427
Kinship	15.9	612
Returned home	26.8	1033
CVS not established	7.4	287
Unknown	1.2	48
Secondary education		
Not graduated high school	49.0	1887
High school graduation	40.0	1545
GED awarded	11.0	423
Post-secondary enrollment (all youth)		
Yes	32.8	1264
No	67.2	2591
Post-secondary enrollment (youth HS/GED, n = 1968)		
Yes	64.2	1264
No	35.8	704
Waiver use (all youth)		
Yes	10.3	398
No	89.7	3457
Waiver use (enrolled youth, n = 1264)		
Yes	31.5	398
No	68.5	866
Waiver use (emancipated enrolled youth, n = 610)		
Yes	53.8	328
No	46.2	282
Retention rates (enrolled youth 2009 cohort, n = 408)		
Spring 2010	72.3	295
Spring 2011	54.9	224
Graduation rates (enrolled youth 2009 cohort, n = 408)		
Graduated in 6 years	16.2	66
Did not graduate in 6 years	83.8	342
Post-secondary degree awarded (all youth)		
Bachelor's degree	1.5	59
Certificate or associates degree	2.0	78
None	96.5	3718

foster youth in our study had no post-secondary educational credentials by age 24.

The low rates of post-secondary education observed are due, in part, to the low rates of high school completion.

Just over half (51%) of former foster youth completed high school or a GED. It is clear that high school graduation rates for foster youth must increase before the state goal of increasing post-secondary accomplishments can be realized.

Given the low rate of high school graduation, post-secondary enrollment rates for the youth in our cohort are surprisingly high. Approximately one-third of the foster youth in the study enrolled in higher education (32.8%). In addition, when examining the subsample of foster youth who received a high school degree or GED, approximately 64% enrolled in post-secondary education during the 6-year follow-up period. It may be that a state tuition and fee waiver increases foster youth post-secondary enrollment in some form (e.g. dual credit courses in high school, enrollment immediately after high school, and/or non-traditional student enrollment).

While foster youth in Texas who complete a high school degree/GED are likely to enroll in higher education, their progress appears to be thwarted as they pursue their higher education goals. Freshman retention rates for foster youth are somewhat below the average for Texas (72% versus 77%) (NCES, 2015a). In addition, foster youth Freshman GPAs are low, with means ranging from 1.84 to 1.97 (depending on whether they accessed the waiver or not). Finally, only 16.2% of the foster youth, who enrolled in 4-year universities in 2009, graduated within the 6-year follow-up period.

Table 1 also provides information on the use of various forms of financial support. Results reveal that only about a third of enrolled youth used the tuition and fee waiver (31.5%). This low rate is attributable to one of two factors; either the youth did not qualify for the waiver or they were eligible but failed to access these resources. It can be assumed that a substantial percentage of the former foster youth in our cohort are not eligible for the waiver. However, to estimate failure to access we looked specifically at emancipated youth. By definition all emancipated youth would be eligible for the waiver. Among emancipated enrolled youth, 54% utilized the waiver and 46% did not.

Table 2 provides additional detail about the use of the waiver and educational outcomes. This table presents information on the cohort of youth that enrolled in higher education in 2009 and could be followed for at least 6 years in order to assess 6-year graduation rates.

Table 2 reveals that there is a statistically significant association between waiver use and post-secondary outcomes. Because we had aggregate rather than individual level data, we are not able to control for other factors associated with waiver use. Consequently, we cannot make statements about the causal effect of the waiver on academic outcomes. However, these findings offer preliminary evidence that those who use the waiver have higher rates of retention, better academic performance, and higher graduation rates than those who do not use the waiver. Specifically, 22.2% of

**Table 2** Cohort of youth enrolled in higher education in 2009 (n=408)

	Waiver (n = 135)	No Waiver (n = 273)	$\chi^2$
First year retention			
Yes	83.0 (112)	67.0 (183)	11.45***
No	17.0 (23)	33.0 (90)	
Second year retention			
Yes	74.1 (100)	45.4 (124)	29.95***
No	25.9 (35)	54.6 (149)	
Graduation			
Yes	22.2 (30)	13.2 (36)	5.44*
No	77.8 (105)	86.8 (237)	
Freshman GPA (mean)	1.97	1.84	

T-tests and standard deviations were not possible with aggregate data for the Freshman GPA variable

\* $p = .05$ , \*\* $p = .01$ , \*\*\* $p = .001$

foster youth who use the waiver graduate from college in 6 years compared to 13.2% of their peers who did not have the waiver.

Table 2 provides information on the cohort of youth that enrolled in higher education in 2009, a traditional path where young adults begin their post-secondary education at age 18. However, our data also tracked youth that enrolled later, during the follow-up period from 2010 to 2015. We did not have a sufficient 6-year period to track the academic outcomes for these students. However, we are able to report that of the 1264 foster youth that enrolled at some point between 2009 and 2015, 32% enrolled shortly after turning 18 (the 2009 cohort) and 68% enrolled later (between 2010 and 2015). Thus, for foster youth in this sample, a non-traditional path of delayed enrollment is the norm rather than the exception. Youth that enrolled at age 18 and those who delayed enrollment had similar waiver utilization rates (33% and 31% respectively). If the graduation rate for the youth who delayed enrollment is comparable to the 2009 cohort, then our initial estimate that 1.5% of former foster youth receive a bachelor's degree would increase to 6%. However, this figure is still consistent with current estimates for foster youth and far below the national average for non-foster youth.

## Discussion

The present study provides a unique look at the educational accomplishments of former foster youth. We examine academic data for a cohort of former foster youth, followed from age 18 to age 24. In addition, the cohort studied is from Texas, one of 22 states with a tuition and fee waiver

for former foster youth (Cohen, 2013). These data allow us to explore whether a state with a waiver is able to avert the poor post-secondary outcomes for foster care alumni that are consistently documented nationally and in states without waivers. Our findings only partially support this notion. Results reveal that post-secondary achievements of former foster youth in Texas are low. Approximately 2% of the cohort obtained an associate's degree or certificate and 1.5% achieved a bachelor's degree during the 6-year follow-up period. This is consistent with existing estimates that 1–11% of former foster youth obtain a bachelor's degree (Courtney et al., 2011; Pecora et al., 2006a, b; White et al., 2015; Wolanin, 2005). However, it is far below the national average for non-foster youth (32.5%) and less than expected for a state with a tuition and fee waiver (U.S. Census Bureau, 2016).

Our data allow us to identify when and where former foster youth struggle in their educational pursuits. First, our findings reveal low rates of high school completion. Approximately half (51%) of the foster youth in the cohort obtained a high school degree or GED. This is below other estimates for foster youth (65%) and the general population (87%) (NCES, 2015a; USDE & USDHHS, 2016). States that aim to improve post-secondary outcomes through tuition waivers must invest comparably in secondary education initiatives for youth in foster care. Many states, including Texas, are working to improve foster youth high school completion rates. The Texas legislature recently passed several bills designed to increase placement stability, reduce school disruptions, place foster care liaisons in school districts, and provide funding to kinship care families. However, it is not clear whether these policy changes have effectively addressed the well-documented barriers to high school completion such as poor academic performance, unmet mental health needs, disproportionate disciplinary actions, and a lack of social support.

One interesting finding from our study is that, among foster youth who completed a high school degree or GED, 64% enrolled in higher education at some point in the 6-year follow up period. This exceeds other estimates of college enrollment for foster youth with a high school degree/GED (42%) and comes close to the national average for the general population (69%) (BLS, 2015; Courtney et al., 2010). Thus, the rate of higher education enrollment of the youth in our study appears comparatively high. This may suggest that the waiver, and intensive DFPS efforts to promote higher education and inform foster youth of the waiver, are successfully encouraging them to enroll in colleges or universities. This aligns with other findings of higher post-secondary enrollment rates for foster youth in states with tuition waivers (Watt et al., 2018) and the McMillen et al. (2003) finding that a large percentage of youth in foster care want to attend college. However, we also found, as have other researchers, that foster youth who enroll tend to struggle in college

once they get there (Geiger et al., 2018; Watt et al., 2013). The foster youth in our study had lower first year retention rates than the Texas average (72% vs. 77%) (NCES, 2015a). They also had low Freshmen GPAs (range 1.84–1.97). GPAs less than 2.0 are below state and university standards for satisfactory academic progress (SAP). Students who do not meet SAP requirements may no longer qualify for financial aid and may face academic probation or expulsion. Finally, among the foster youth in our study who enrolled in college in 2009, 6-year graduation rates (16%) are dramatically lower than Texas and national averages (52% and 54%) (NCES, 2015b). This figure includes youth who used the waiver as well as those who did not (because they were not eligible or did not access it). We also examined the graduation rate specifically for youth who used the waiver, and while higher, it was still low (22%).

Our data reveal that post-secondary outcomes are poor for Texas foster youth, despite the tuition and fee waiver. However, that does not mean that the waiver has no benefit. In the present study we compare the academic outcomes of foster youth who enrolled in higher education and utilized the waiver with those of foster youth who enrolled but did not have the waiver. In all aspects of academic achievement, we found that the youth who used the waiver had better performance. Those who used the waiver had dramatically higher first year retention rates and slightly higher GPAs. In addition, as mentioned, youth who used the waiver had higher graduation rates than youth who did not use the waiver. Our data merely provide bivariate associations between waiver use and outcomes. Thus, we cannot conclude that this is a causal relationship. However, this analysis provides the first indication that waivers may improve higher education outcomes.

The tuition waiver and other state efforts may encourage foster youth to enroll in post-secondary courses and increase their odds of success. However, the low graduation rates revealed in this study suggest that much more is needed. One striking finding in the study is that waivers are underutilized. Emancipated youth in Texas are all waiver eligible, yet of those enrolled in higher education, 46% did not access the waiver. The Texas DFPS educates foster youth about the waiver through a number of strategies (e.g. Preparation for Adult Living classes, transition planning meetings). However, additional effort is needed to simplify and assist foster youth with the application process (Hernandez et al., 2017). In addition, our study reveals that even youth who use the waiver have low graduation rates. This is not surprising, as foster youth need much more than the cost of tuition. Their history of complex trauma, disrupted educational experiences, and lack of emotional, instrumental, and financial support create additional barriers to success. Thus, students will need academic skills training, housing, employment, tutoring, social support and extracurricular activities

throughout their college experience (Geiger & Beltran, 2017). Many campuses across the country, including several in Texas, have developed campus support programs for former foster youth (Casey Family Programs, 2016; “Education Reach”, n.d.; “Fostering Achievement”, n.d.). In addition, the Texas legislature, in 2015, established that all 4-year and 2-year public, waiver-granting college campuses must have a designated campus liaison for foster care alumni. However, the vast majority of colleges and universities in Texas do not have support programs for foster youth and there is no state or federal funding to develop them (“Education Reach”, n.d.). In addition, liaisons are not required to have any experience with or training in how to assist foster care alumni. Finally, there is no rigorous evaluation data on the efficacy of these efforts (Geiger et al., 2018; Randolph & Thompson, 2017).

We encourage states to develop their own data exchange systems in order to evaluate tuition waivers, campus support programs, and other state initiatives designed to improve post-secondary outcomes for foster youth. The limited amount of research that we do have suggests that these types of supports are valued by the youth that have access to them and that they can improve outcomes (Hernandez & Naccarato, 2010; Watt et al., 2013, 2018). However, we need much more information about whether these programs are being implemented as intended and what types of practices are most effective. We suggest that the evaluation of state efforts be coordinated and supported nationally to allow for interstate comparisons and an identification of best-practices. To that end, we support the Fostering Success in Higher Education Act of 2017 (S. 1792/HR 3742) (currently under review). This bill proposes to allocate \$125 million to states to develop and evaluate initiatives which would help foster and homeless youth to enroll and graduate from college. If this bill passes (or a comparable investment is made philanthropically), we may be able to make significant gains in our understanding of how to best support foster youth in higher education.

The present study has a number of limitations. Most notably, it only provides data on former foster youth in Texas who turned age 18 in 2008–2009. Therefore, it is not generalizable to other states or time periods. The cohort of youth studied varied in the amount of time spent in foster care but we were unable to capture this variable. The data set also did not distinguish between those who were eligible for the waiver and those who were not. As a result, it was impossible to offer clear statistics on waiver usage rates for all eligible youth and not all youth were waiver eligible. In addition, we have access to aggregate but not individual level data. Thus, we were unable to conduct multivariate analyses to control for issues such as waiver eligibility, demographics, or services received. Finally, we only followed youth for 6 years. Previous research suggests that foster youth progress

more slowly through higher education than non-foster youth. They often are required to take remedial courses or leave school to work (Brock, 2010; Courtney et al., 2010; Day et al., 2013). It is possible that those who did not complete their degree in the 6-year follow-up may eventually do so. In sum, it is clear that additional investigation is needed. Our research team is currently working to obtain the individual level data from the state exchange in order to conduct a more thorough analysis. However, in the interim, our data provide the first opportunity to document post-secondary outcomes of former foster youth in a state with a tuition and fee waiver, and to look specifically at the outcomes for youth who used the waiver. Our data are based on academic records rather than self-report survey data and provide a longitudinal panel design. As such, we offer reliable and valid estimates of post-secondary accomplishments of former foster youth in a field where data on higher education outcomes is extremely limited.

## Conclusion

The present study suggests that a state tuition and fee waiver can benefit foster youth. It may increase post-secondary enrollment and improve the odds of successfully completing a college degree. However, our findings also suggest that a state legislated tuition waiver may not be sufficient for generating large improvements in the post-secondary achievements of foster youth. Texas was one of the first states to implement a waiver in 1993 and yet post-secondary achievements of foster youth remain low. States must create additional strategies to promote high school completion and provide assistance accessing the waiver. Once enrolled, youth then will need additional financial, academic, and social support in order to help them forge a steady path towards degree or certificate completion. Finally, states should collect and regularly report data on the educational attainment of foster youth in order to evaluate the policies and programs implemented.

Foster youth come from some of society’s most marginalized families. In assuming custody, the state aims not only to protect the child, but also to disrupt the intergenerational transmission of disadvantage, dependency, and despair. In order to accomplish this goal, states must invest heavily in the educational attainment of foster youth. This investment will require that states develop comprehensive strategies, attend to their execution, and evaluate their efficacy.

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**Data Availability** The dataset generated during and/or analyzed during the current study are not publicly available as they are currently under the purview of the Department of Family Protective Services and the Texas Higher Education Board. The authors, in consultation with DFPS and the THECB, will consider reasonable requests for the data.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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