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An Examination of Post-Secondary Education Access, Retention and Success of Foster Care Youth

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AN EXAMINATION OF POST-SECONDARY EDUCATION ACCESS, RETENTION, AND SUCCESS OF FOSTER CARE YOUTH

by

Angelique Day

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the requirements for the Degree of Doctor of Philosophy
Interdisciplinary Health Sciences
Advisor: Kieran Fogarty, Ph.D.

Western Michigan University
Kalamazoo, Michigan
August 2011
Changes in the U.S. economy have made the attainment of a higher education credential more important than ever to ensure self-sufficiency. Therefore, it is critical that the child welfare, K-12, and higher education systems encourage and support the postsecondary educational aspirations of court wards. When the state makes the decision to remove a child from his/her biological home, it bears the responsibility to provide the educational guidance as well as assistance otherwise provided by families during the transition from high school to college.

This dissertation explores the educational outcomes of older youth in care by first looking at the perceptions of high school aged foster youth in identifying the barriers and pathways they face in graduating from high school and accessing college and then will investigate persistence in post-secondary education for a sample of foster care alumni who are enrolled at a four-year college. The first study investigates the barriers and pathways high school and college-aged foster care youth face in completing high school and in transitioning from high school to college using action research strategies, which are based on an empowerment theoretical framework. The second study follows a cohort of students who were able to successfully enroll in a four-year university and tracks
persistence in their post-secondary education program using two logistic regression models. The final study takes a look at the same cohort of university enrolled students, but tracks time varying indicators including persistence to graduation and academic achievement of the students throughout their post-secondary journey through the use of discrete time hazard models. Paper two aims to address whether having a placement history in the foster care system predicts dropping out, controlling for gender and race. Paper three examines the issue of college persistence by using an event history analysis to model relative risk of graduation from college over time. Study three also includes an additional time varying covariate, academic performance (GPA), and examines whether academic achievement predicts time to graduation. Although each paper is independent, they are connected by the common theme of college access and persistence of young people who have aged out of the foster care system.

The benefit to the author of the three-paper method is that the task of submitting the findings of the study for publication is eased as the dissertation contains three stand-alone articles. A drawback for the reader of the three-paper method is that there is redundancy in reading the same sections in each paper. The reader is encouraged to keep in mind that some information may be redundant when read as a whole document.
Date: January 19, 2010

To: Kieran Fogarty, Principal Investigator
Angelique Day, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number: 10-01-10

This letter will serve as confirmation that your research project titled “Evaluation of the Foster Youth Alumni Services Program” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: January 19, 2011
ACKNOWLEDGMENTS

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Angelique Day
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CHAPTER I

INTRODUCTION

Related Purposes of the Three Papers

The aim of this three-paper format dissertation is to explore the educational outcomes of older youth in care, looking first at the perceptions of currently enrolled high school and college aged foster youth with regard to their status on where they are in their transition from high school to college and then investigating persistence in post-secondary education for a sample of foster care alumni who are enrolled at a four year college. Chapter I of this dissertation provides background information for the three papers. Chapters II-IV are three stand-alone, yet related papers, each containing methods, results and discussion sections. The final chapter of this dissertation will integrate the findings and discussions of the three papers.

Paper one investigates the barriers and the pathways foster care youth take to complete high school and transition to college using an empowerment perspective. This study was carried out using an action research approach. Empowerment theory focuses on the exploration of environmental factors that influence social problems instead of blaming the victim. In this case foster care youth are engaging professionals and policymakers as collaborators instead of authoritative figures. The voice of foster care youth on their perceptions of the barriers that prevent them from successfully completing high school and accessing college is absent from the current literature.
Papers two and three employ different longitudinal cohort frameworks to assess persistence to graduation of students (both those who experienced foster care placements and those who did not) who were enrolled in a four-year university. Although previous studies have begun to examine college access and post-secondary success of foster care alumni, there are serious gaps in the literature. No study has tracked the post-secondary journey exclusively among foster care students attending 4-year colleges, and none of the previous studies have controlled for socioeconomic status. Paper two follows a cohort of foster care students and a sample of non-foster care, first generation, low-income peers who were able to successfully enroll in a four-year university and tracks persistence in their post-secondary education program using two logistic regression models.

Paper number three builds on the findings of paper number two through the employment of more advanced methodologies that allow the researcher to model the educational survival pattern of foster care youth and their non-foster care, first generation, low-income peers over a period of time. We do not understand where in the post-secondary journey students are most at risk of dropping out. There may be different points in time during the college going process where foster care youth are more at risk of dropping out than other at-risk college-going populations. Answers to these questions are critical to the development of evidence-based policies and programs designed to improve the educational outcomes of this population.

The following section provides background information for the three papers including a review of the literature to help frame the issue of educational access for foster care students in both the K-12 and higher education systems and the costs to society.
when foster care youth are not afforded the same educational opportunities as their non-foster care counterparts.

Background and Significance

Barriers to Education for Youth While in Foster Care

Both individual and systemic factors contribute to poor educational outcomes for foster youth. At the individual level, most children enter foster care because of abuse or neglect by their parents. The trauma experienced by children who have been neglected or abused can lead to a variety of developmental problems, such as learning disabilities and behavioral and emotional disorders (Berrick, Needell, Barth, & Johnson-Reid, 1998; Casey Family Programs, 2003a). It is well documented that school-age foster children are more likely to suffer physical and mental health problems compared to children who have never experienced out of home placement (Bilavier, Jaudes, Koepke, & George, 1999; Unrau & Grinnell, 2005). These problems may manifest as challenging behaviors at school, which in turn, lead to poor academic performance (Tischelman, Haney, Greenwald O’Brien, & Blaustein, 2010).

Entry into foster care, as well as any subsequent placement changes, is often accompanied by changes in school. The Midwest Evaluation of the Adult Functioning of Former Foster Youth, a longitudinal study that is tracking foster youth from the states of Illinois, Iowa and Wisconsin, found that one-third of foster youth experience five or more different school placements (Courtney, Terao & Bost, 2004), twice the number experienced by their non-foster peers (Burley & Halpern, 2001). There are often significant time gaps between removal from one school district and enrollment in another due to poor coordination among child welfare and school personnel and difficulties
transferring school records and course credits from prior schools. This may explain why placement instability has been negatively correlated with educational achievement of foster youth (Pecora, et al., 2005). Abrupt changes in school setting not only negatively affects academic progress, but also can sever stability in social connections to school professionals who are a likely source of formal support to youth struggling with emotional and behavioral problems (Cohen, Kasen, Brook, and Struening, 1991; Barker & Adelman, 1994).

Foster care youth are over-represented in special education programs. Macomber (2009) found that nearly half (45%) of foster children between 6th and 8th grade were also classified as eligible for special education compared to 16 percent of students who have never been in foster care. Other studies have reported that over one-third of foster youth are enrolled in special education classes (Smithgall et al., 2004; Courtney et al., 2001; Shin & Poertner, 2002; Courtney, Terao & Bost, 2004; Pecora et al 2005) and one study reported that the rate for foster care youth is twice that of non-foster youth (Burley & Halpern, 2001).

Foster care youth face other educational disparities as well. Compared to youth in the general population, youth living in foster care are less likely to perform at grade level and twice as likely to repeat a grade (Smithgall et al., 2004; Courtney et al., 2001; Courtney, Terao & Bost, 2004; Pecora et al, 2005; Burley & Halpern, 2001). Foster youth are also far more likely to experience out-of-school suspension and expulsion than their counterparts who never entered the child welfare system (Courtney, Terao & Bost, 2004). Smithgall et al. (2005) found that nearly 70 percent of children in foster care Chicago had been suspended; 18 percent had been expelled.
One consequence of the early educational challenges foster youth face is a low high school graduation/GED completion rate. Only 58 percent of foster youth graduate from high school by age 19 compared to 87 percent of youth in the general population (Courtney, 2009). Estimates from other researchers conclude that high school graduation rates among foster youth vary widely from a low of about one-third (e.g., Scannepieco et al, 1995; McMillen & Tucker, 1999) to a high of a roughly two-thirds (Blome, 1997; Courtney et al 2005; Pecora et al. 2005; Courtney et al 2007). Pecora and his colleagues (2006) report that many foster care youth disproportionately complete high school through GED programs.

Even if they graduate from high school or successfully complete a GED program, foster youth may not be prepared for postsecondary education. Only about 15 percent of foster youth take college preparatory courses in high school, a rate that is half that of non-foster youth (Blome, 1997; Sheehy et al 2001). This gap has been observed even among foster youth who had similar test scores and grades as non-foster youth (Sheehy et al., 2001).

**Gaps in Higher Education Achievement for Former Foster Youth**

Foster youth experience very low rates of college attendance (Courtney, 2009). Fewer than 10 percent of foster youth attend college (Courtney, et al., 2001). One study that tracked enrollment of foster care youth in post-secondary education found that only 26 percent completed a degree or certificate, 1/6 completed a vocational/technical degree, and only 2.7 percent completed a 4-year degree (Pecora, Kessler, O’Brien, Roller-White, Williams, Hiripi, English, White, and Herrick, 2006).
The Midwest Study reported that by age 23 or 24 nearly one quarter of the study participants had not completed a high school diploma or GED, and only 6 percent had a 2 or 4 year degree. Compared to their non-foster care peers, foster care youth were over three time as likely to be without a high school diploma, half as likely to have completed any amount of college, and one fifth as likely to have a college degree (Courtney, Dworsky, Lee & Raap, 2010). Midwest participants who were enrolled in college were more likely to be enrolled in a two-year college (56% vs. 25%) and less likely to be enrolled in a 4-year college (28% vs. 71%) as compared to young adults enrolled in college who had not experienced foster care placements.

For those that do enroll, many do not persist to degree completion. Using data from the National Center for Education Statistics (NCES), Davis (2006) found that only 26 percent of “college-qualified” foster youth earn a degree or certificate within six years of enrollment compared with 56 percent of their peers who had not been in foster care.

**Barriers to Persistence in Higher Education for Youth Who Age Out of Foster Care**

Researchers have only recently begun to investigate college enrollment and retention among those youth who have aged out of the foster care system with a high school diploma. As part of one of the very first studies, Merdinger et al. (2005) surveyed 216 former foster youth attending a four-year university in the state of California. Two-thirds of the sample reported that they felt unprepared for college by the foster care system. Among the factors they cited as being important to their decision to attend

---

1 “College qualified” is defined by the minimum standard of college qualification—students who have earned at least a 2.5 grade point average (GPA), taken a college preparatory curriculum, and completed Algebra I or II, Pre-calculus, Calculus and/or Trigonometry (Hahn & Price, 2008).
college, the most common included getting information about financial aid (45%), getting advising about college (43%) and taking college prep classes (32%).

Merdinger et al. (2005) depicted that the pathway through a college education was marked by several interruptions and challenges for students who aged out of foster care. One in five students reported having previously withdrawn and 16 percent were considering withdrawing. The majority of these students described their current financial situation as fair (45%) or poor (36%). Another study reported that housing was also a major concern among former foster youth enrolled in college; of particular concern was the lack of access to stable housing during holidays and scheduled breaks (Dworsky & Perez, 2009).

Summary

In sum, there is a significant gap at all levels of educational achievement between former foster youth and their non-foster peers. Young people with a history of foster care placement are not only less likely to graduate high school, but they are also less likely to be prepared for, attend and complete college.

The findings from these three papers are expected to contribute to improvements in both policy and practice across the child welfare, K-12 and higher education systems as they strive to improve the educational outcomes of young people who experience placement in the foster care system.

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are headed to independence. Children and Family Research Center, University of
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*Educational Experiences of Children in Out-of-Home Care*. Chicago, IL: Chapin
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framework for school-based psychological evaluations: Utilizing a ‘trauma lens’.

moderator of help-seeking behavior among adolescents who are high risk.
CHAPTER II

MAXIMIZING EDUCATIONAL OPPORTUNITIES FOR YOUTH AGING OUT OF FOSTER CARE: ENGAGING YOUTH VOICE IN PARTNERSHIP FOR SOCIAL CHANGE

Abstract

Promoting voices of youth aging out of foster care in the policy debate is a promising strategy for addressing educational disparities. Most studies on this population use secondary data methods including analysis of administrative data, and primary data techniques that do not involve direct interaction with youth. These methods including surveys, case record reviews or data drawn from interactions with child welfare professionals such as caseworkers and court professionals that serve the population. This study examines the educational issues faced by foster care youth who are transitioning from high school to college from the perspective of the youth themselves. This study also offers youth-guided solutions to address these educational disparities. Two Kidspeak® events provided opportunities for 43 foster care youth from around the state of Michigan to testify in front of two separate and distinguished listening panels of policymakers. Qualitative data analysis involved an empowerment theory-driven, action research approach.

The themes that emerged from the students' testimony fell within eight major categories and included several sub themes. These themes included the desire to have and maintain both school and non-school related permanent and stable caring adults and programs in their lives; having access to flexible teachers with the ability to teach the
mandated high school curriculum in a variety of ways; being afforded the opportunity to recover missing/lost credits; having access to basic needs that are necessary for learning in the public school system; access to extra-curricular and after-school programs; concerns with personal safety on and off school grounds; having access to mental health services; and a lack of access to independent living in the transition from high school to college.

These findings suggest that foster care youth face incredible barriers that impede academic success; however, access to appropriate educational supports and leadership opportunities to participate in the development of these policy and programs will increase the chances for foster care youth to obtain the best possible outcomes. “Nothing about us without us” best encapsulates the belief that foster youth should be actively engaged in any change process that affects them.

Background and Significance

According to Head (2011) and Zeldin, Camino & Calvert (2003), there are three main theoretical rationales for giving young people greater voice and participation across a variety of institutional settings and policy arenas. The first is to ensure social justice. Youth have the right to be nurtured, protected and treated with respect, and where appropriate, be involved and consulted. The second is to support youth engagement. Improving services for young people requires their views and interests to be well articulated and represented. The third is to promote positive youth development (PYD). The theoretical framework around PYD views socio-emotional development as equal in importance to cognitive development (Sherrod, 2007). Participation in public policy
formation has developmental benefits for both the youths themselves and for society as a whole.

The social justice rationale is evidenced by the increase in youth representation in public policy deliberations across the United States over the last few decades (Pittman, 2002). Youth public policy forums are structured opportunities where youth are offered consultative roles, whereby adults seek to learn about young people’s experiences and concerns to inform legislation and programming (Michigan’s Children, 2010).

Youth engagement focuses on civil society. The term civil society, as adopted by the World Bank (2011), refers to the wide array of non-governmental and not-for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations. The purpose of civil society is to balance individual rights with the responsibilities that contribute to the common good. Creating spaces for social experimentation and solidarity in communities gives all members, including youth, legitimate opportunities to influence decisions made on behalf of collective groups (Flanagan & Faison, 2001). Scholars analyzing the role of youth engagement in governance often attest that communities work better when the voices and competencies of diverse stakeholders are involved in the identification, leveraging, and mobilization of community resources (Zeldin, Camino & Calvert, 2003).

Efforts to build civil society emphasize partnership models typically organized around adult-created institutional structures through which youth can influence outcomes in situations of equitable power with adults (Zeldin, Camino & Calvert, 2003). This partnership model is based on the principle that youth and adults can bring their often
different and complementary views, experiences, and talents to address collective issues. Opportunities for civic engagement are especially important for groups of young people, like foster care youth, who have been oppressed by the very systems created to support them. This oppression can include being harmed psychologically by further exposure to trauma or being denied an appropriate education.

As the recipients of many state and federally funded services—including child welfare, health, education, housing and employment services, foster youth are often the subjects of research and public policy, but have rarely been engaged as active participants (Hill, Davis, & Tisdall, 2004). Despite being eager to articulate their views about policies that affect their lives, foster care youth have only just begun to provide input into national, state and local policy agendas (Hill et al., 2004; Checkoway & Richards-Schuster, 2003).

This study addresses the absence of youth voice in policy formation and research, by applying an action research approach to the central issue of access to education. Current and former foster care youth are employed as equal stakeholders in both the research and the development of public policies that directly impact them.

**Importance of Education to Foster Care Youth**

Education is a powerful determinant of quality of life in terms of economic, social, civic, and personal benefits (Joftus, 2002; Carnevale & Desrochers, 2003). For young people in foster care, education is the primary route to better health, longer life, safer and more satisfying employment, and higher social status. Children in foster care depend heavily on schools, not only for education, but also for role models and social capital (Joftus, 2007).
Educational attainment can counteract abuse, neglect, separation, and lack of permanence experienced by children in out-of-home care (Julianelle, 2008). Positive school experiences enhance well-being, facilitate successful transitions to adulthood, and increase chances for personal fulfillment, including the attainment of stable and meaningful employment which is critical to economic self-sufficiency. Unfortunately, youth who have experienced out of home care are particularly prone to academic failure (Joftus, 2007). Low educational attainment among foster youth is not easily explained by a single cause. Instead, a variety of interrelated factors affect a foster child’s school performance, including pre-care experiences (i.e. neglect and abuse, poverty, emotional challenges, behavioral issues) and experiences during foster care placement (i.e. placement disruption and school mobility) (Smithgall, Gladden, Yang, & Goerge, 2005).

Educational Challenges Facing Foster Care Youth in High School

Foster care youth face major educational challenges. On average, youth move to new foster care placements up to three times per year, with each move resulting in a change of school (Julianelle, 2008). Since it takes time to recover academically after each school change, many children in foster care not only fail to recover, they actually lose ground (Yu et al., 2002). Changes in school not only negatively affect academic progress, but can also disrupt connections to peers and to school professionals who might otherwise be a source of social support (Ersing, Sutphen, & Loeffler, 2009).

Foster youth fall behind each time they change schools due to poor coordination between child welfare and school personnel. In addition to difficulties transferring school records and course credits, it often results in enrollment delays as well as the
repetition of courses and grade levels (Kerbow, 1996; McNaught, 2009). This probably explains the negative relationship found between placement instability and high school completion of foster youth (Pecora, et al., 2005). Youth who had had one fewer placement change per year were almost twice as likely to graduate from high school before leaving care (Pecora et al., 2003).

School changes are only one of the educational challenges that foster youth face. They also experience higher rates of grade repetition, enrollment in special education programs, absenteeism, tardiness and suspensions and expulsions. Compared to youth in the general population, youth in foster care are less likely to perform at grade level, and twice as likely to repeat a grade (Courtney et al., 2001; Courtney, Terao & Bost, 2004; Pecora et al, 2005; Burley & Halpern, 2001).

Macomber (2009) found that nearly half (45%) of foster children between 6th and 8th grade were also classified as eligible for special education compared to 16 percent of students who have never been in foster care. Other studies have reported that over one-third of foster youth are enrolled in special education classes (Smithgall et al., 2004; Courtney et al., 2001; Shin & Poertner, 2002; Courtney, Terao & Bost, 2004; Pecora et al 2005) and one study reported that the rate is twice that of non-foster youth (Burley & Halpern, 2001).

Foster youth experience high rate of absenteeism and tardiness. In fact, they are absent at twice the rate of their peers (Conger & Rebeck, 2001; Finkelstein, Wemsley, & Miranda, 2002). Foster youth are also far more likely to experience out-of-school

---

2 This phenomenon is beginning to be addressed through provisions outlined by the federal Fostering Connections to Success and Increasing Adoptions Act (H.R. 6893, 2008).
suspension and expulsion than their counterparts in the general population (Courtney, Terao & Bost, 2004).

Whether these school difficulties arise from living in an abusive environment prior to their placement or develop while they are in foster care, perhaps due to frequent school changes, is not clear (Finkelstein, Wamsley, & Miranda, 2002). The higher rate of disruptive behavior and academic problems experienced by foster youth may also reflect the fact that school-age foster children are more likely to suffer physical and mental health problems than children who have never experienced out of home placement (Bilavier, Jaudes, Koepke, & George, 1999; Unrau & Grinnell, 2005; Aviles, Anderson, & Davila, 2006).\(^3\)

Addressing health and mental health needs means that these students are attending numerous appointments with child-welfare agencies, therapists, and other medical professionals. Attendance at these appointments also contributes to the higher levels of absenteeism in school (Conger, 2001; Finkelstein et al., 2002).

One consequence of the educational challenges foster care youth face is that many drop out of school. One study conducted in the state of Washington found that only 59% of foster youth in the 11\(^{th}\) grade graduated from high school on time compared to 86% of non-foster youth (Burley & Halpern, 2001). Estimates from other researchers conclude that high school graduation rates among foster youth vary widely from a low of about one-third (e.g., Scannepieco et al., 1995; McMillen & Tucker, 1999) to a high of roughly

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\(^3\) Between 87 and 95 percent of youth in substitute care have at least one physical health condition, and more than half experience multiple co-morbidities (Forkey, 2007; Sanchez, 2010)

\(^4\) Half of foster youth have diagnosed mental or emotional problems, a rate twice that of the general population (White et al., 2007; McMillen et al., 2005) Foster care youth are less likely to receive treatment, and thus have lower recovery rates (Burns et al., 2004)
two-thirds (Blome, 1997; Courtney et al 2005; Pecora et al. 2005; Courtney et al 2007).

Barriers Faced by Foster Care Youth in Accessing College

Access to post-secondary education is often a key to future success by increasing opportunities for meaningful, stable employment and increased income (U.S. Department of Education & National Center for Education Statistics, 2008). Employment opportunities for unskilled persons have declined sharply as the industry structure of employment has shifted from manufacturing to service industries and as the production of the nation’s output has become more technologically sophisticated, raising the literacy and educational requirements of the workforce. College graduates earn significantly more than those with a high school degree (Terney, Bailey, Constantine, Finkelstein, & Hurd; 2009). In 2008, young adults with a bachelor's degree earned 53 percent more than high school completers and 96 percent more than those without a high school diploma (Aud, Hussar, Plany, Snyder, Bianco, Fox, Frohlich, Kemp, & Drake, 2010).

College graduates are also more civically engaged and more active in their communities (Terney, Bailey, Constantine, Finkelstein, & Hurd; 2009). In the 2004 presidential election, those with a college degree were 50 percent more likely to vote than high school graduates, and two and a half times more likely to vote than high school dropouts (Metro United Way, 2011).

Like other young people, the majority of foster youth aspire toward a college education, yet they have many more challenges to overcome (Courtney, Terao, & Bost, 2004; McMillen, Auslander, Elze, White, & Thompson, 2003). Over 70% of youth in foster care age 15 to 19 reported a desire to go to college, and an additional 19% reported a desire to attend graduate school (Tzawa-Hayden, 2004).
Over the past few decades, federal policies have attempted to increase access to college among youth in foster care. Most notably, in 2001, Congress created the Education and Training Voucher program as an amendment to the John H. Chafee Foster Care Independence Program (CFCIP) of 1999. Through this program, states can provide current and former foster youth with up to $5,000 per year for postsecondary training and education (P.L. 107-133, 107th Congress, 2001). Youth participating in the program on their 21st birthday remain eligible until age 23, as long as they are making satisfactory progress toward completion of their post-secondary education credential (Center for the Study of Social Policy, 2009).

Yet despite high aspirations and changes in federal policy, foster care youth are under-represented among college going populations (Courtney, 2009). At age 19, only 18% of foster youth are pursuing a post-secondary degree (Courtney, Dworsky, Ruth, Keller, Havlicek, & Bost, 2005) compared to nearly 60% of their peers (Institute for Higher Education Policy, 2010). Research demonstrates that foster youth are less likely to attend college and then go on to graduate even if they successfully complete high school than youth in the general population (Barth, 1990; Blome, 1997; Courtney et al., 2007, 2009, 2005; Festinger, 1983; Kessler, 2004; McMillen & Tucker, 1999; Pecora et al., 2005; Scannapieco, Schagrin, & Scannapieco, 1995).

One reason for this may be that young people who age out of foster care tend to be concentrated in high-poverty, under-funded, and low-achieving high schools (Smithgall et al., 2004.). Another is that many foster youth are on their own when it comes to patching together the financial resources to pay for college. Because the foster care system does not prepare transitioning youth adequately for higher education
(Hernandez & Naccarato, 2010), even the most talented youth may not know about financial aid resources, procedures, and eligibility criteria, and will not apply to college because it is assumed to be out of reach financially. Others flounder because they lack emotional support in addition to a place to spend school breaks and holidays (Kirk & Day, 2011).

Present Study

This study addresses critical gaps in our current knowledge about high school completion and college access among foster care youth. Studies addressing college access among foster youth have only recently begun to emerge (Kirk & Day, 2011; Hernandez & Naccarato, 2010; Kirk, Lewis-Moss, Nilsen, & Colvin, 2009). Although previous studies have examined the issue of high school completion rates among foster care youth, no studies have been identified by the authors that have examined why some foster youth fail to complete high school and why other foster youth who do complete college fail to enroll in college utilizing the voice of young people who are experiencing this life transition directly. This exploratory study will build on the emerging literature by examining what foster youth perceive as barriers and pathways to high school completion and enrollment in college. It will provide information that is vital for policymakers, child welfare and education professionals who are working to improve the lives of foster care youth.

Methods

Kidspeak® was carried out using an action research approach. Action research has five characteristics: (1) it seeks to explain social situations while implementing change; (2) it is problem focused, context specific, and future oriented; (3) 
group is engaged in the change process; (4) it aims to be educating and empowering; and (5) it involves problem identification, planning action, and evaluation (all of which are interlinked) (Barbour, 2008). Action research is carried out in an organizational setting (in this case a higher education setting) and is often done by practitioners with the expressed aim of affecting change (Barbour, 2008).

Action research is a methodology that builds on empowerment theory. “Empowerment is a construct that links individual strengths and competencies, natural helping systems, & proactive behaviors to social policy and social change” (Perkins & Zimmerman, 1995, p. 569). Empowerment theory focuses on the exploration of environmental factors that influence social problems instead of blaming the victim. In this case, foster care youth are engaging professionals and policymakers as collaborators instead of authoritative figures. By its nature, action research involves strategic action. In this case the strategy is to increase the awareness of the educational challenges foster care youth face; the action is to ensure that solutions considered by policymakers to address these educational challenges are informed by the foster care youth themselves.

Sample

KidSpeak® is a public forum developed by Michigan’s Children, a private nonprofit legislative advocacy organization located in the state capitol. KidSpeak® empowers young people to advocate on their own behalf. Operating on a statewide and local basis, KidSpeak® brings youth before listening panels comprised of legislators, state department heads, and other community leaders to talk about issues of concern to

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5 Michigan’s Children is an independent, multi-issue, nonpartisan organization in Lansing working to make Michigan the best state in America to be a child. To do that, Michigan’s Children informs policymakers and the public about children’s issues and provides communities and young people with the tools to influence policy decisions.
them including education. As the foster care population is greatly impacted by many state, federal and local policies, foster care youth can offer valuable suggestions for improving their K-16 educational success.

In the summer of 2010, Michigan’s Children, convened two separate KidSpeak® programs in partnership with Western Michigan University and Michigan State University, on each respective campus⁶. The purpose of the Kidspeak® events was to give high school aged foster care youth who were transitioning to college and former foster care youth who were enrolled college students and no longer in the foster care system an opportunity to share their ideas about how to improve educational outcomes for youth aging out of foster care. The policy forums were planned in conjunction with two week-long pre-college camps designed to target high school aged foster care youth interested in pursuing a post-secondary degree.

High school students were recruited by their child welfare caseworkers who were asked to select students based on their motivation to attend college. The high school students who participated represented 13 different counties from across the state. Students were registered on a first come, first serve basis until each program reached capacity. Capacity was defined as 20 high school students by the WMU program coordinator and 30 high school students by the MSU program coordinator. The college students were foster care alumni recruited through each university’s foster care retention program. They were paid to serve as peer mentors and camp counselors to the high school students.

⁶ Both Kidspeak® events were supported, in part, by the Charles Stewart Mott Foundation. The WMU event was also supported by the James A & Faith Knight Foundation. The MSU event also included support from the Comcast Foundation, the Volunteer Center of Michigan, and the Park West Foundation.
The first Kidspeak® event was two hours in length and was hosted by Western Michigan University’s (WMU) Seita Scholars program on July 29, 2010. Participation included 18 high school students, six currently enrolled WMU college students and 18 policymakers from the southwest area of the state (See Table 1). The policymakers included representatives from the state legislature, local elected officials from the Kalamazoo community, university administrators, K-12 administrators, workforce development administrators, and foundation representatives.

Table 1

*Characteristics of Attendees at each Kidspeak® Event (N=68)*

<table>
<thead>
<tr>
<th></th>
<th>WMU High School</th>
<th>WMU College</th>
<th>MSU High School</th>
<th>MSU College</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students (N)</td>
<td>18</td>
<td>6</td>
<td>32</td>
<td>12</td>
<td>68</td>
</tr>
<tr>
<td>White</td>
<td>8</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>African American</td>
<td>10</td>
<td>3</td>
<td>15</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>5**</td>
<td>1*</td>
<td>6</td>
</tr>
<tr>
<td>Females</td>
<td>11</td>
<td>4</td>
<td>17</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Males</td>
<td>7</td>
<td>2</td>
<td>15</td>
<td>4</td>
<td>28</td>
</tr>
</tbody>
</table>

*Note:* *Asian American, ** Biracial, *** Age range of participants was 15-23 years of age

The second event was three hours in length and hosted a week later by Michigan State University’s (MSU) Foster Youth Alumni Services Program and the MSU College of Law. Thirty-two high school students, 12 currently enrolled MSU students, and 35 policymakers participated in the event (See Table 1). Because this event was held in the state capitol, it drew policymakers from across the state. These policymakers represented
several stakeholder interests including workforce development, higher education, the legislature, corrections, public health, mental health, business, the courts, human services, K-12 education, the state department of treasury, and other special interest groups.

The majority of young people who participated in both events were African American. This reflects the population distribution of young people in Michigan’s foster care system. Additionally, female students made up the majority of both groups. This gender distribution may also be reflective of the population of foster care youth enrolling in college, or it could be a reflection of what has been observed among the general college-going population for each respective university.

Of the 68 total students who were present at these events, testimony was given by a convenient sample of 43 current and former court wards (12 at the first event and 31 at the second). All 68 youth registered and intended to testify; however, time did not allow for this. Students were randomly selected to speak by the master of ceremonies. It is recognized that the researcher should be presenting the characteristics of only those who spoke, but that is not possible given how the event unfolded. Demographic data reported in Table 1 was captured from camp registration materials that were completed prior to the time of the Kidspeak® events.

Procedures

The institutional review boards at both respective universities approved the study. Informed consent to participate in Kidspeak® was gathered during initial camp registration. Students over the age of 18 signed on their own behalf. Minors co-signed consent forms with their caseworkers.
Instead of using an interview protocol, students were provided with two questions: (1) What do you believe are barriers foster youth face in high school completion and college access? and (2) What suggestions do you have for policymakers to eliminate these barriers? These questions were selected as policymakers identified that the responses to these questions would be the most helpful to them in the work that would follow beyond the events. Students were given "rules" to structure their testimony. They could testify for up to a total of 5 minutes. To begin their testimony, students were asked to give their first name only, followed by age, high school/college affiliation, and county of residence. They were also directed to thank the policymakers for attending the event at the end of their testimony. Most students didn't take the full 5 minutes, although a few went over the allotted time. Typical of action research, the consistent application of the rules and the agenda of each student were outside the researcher's control.

Responses from young people were audio-recorded and transcribed verbatim into Microsoft Word by professional court reporters who were retained for each event. The transcripts of the 43 participants who actually testified at these policy forums provided the data for this study.

Data Analysis

The primary data analysis method was content analysis. Transcripts from the two Kidspeak® events were uploaded into NVIVO 7 research software (QSR International, 2008) and analyzed for themes using an In Vivo coding process (Saldana, 2009). In Vivo coding uses the direct language of the participants as codes rather than researcher-generated words and phrases. This coding method was selected as most appropriate
because it ensures that the analysis is grounded from the perspective of the young people who provided testimony.

To ensure reliability, two researchers, both trained in qualitative analysis methods, reviewed the transcripts independently. Then their codings were compared before jointly developing thematic categories through consensus. Interpretive disagreements were resolved by presenting supportive evidence. A search for contradictory evidence was also performed as a measure of analytical trustworthiness.

The focus of the analysis was on the two primary research questions: (1) What are the barriers foster youth perceive in being able to graduate from high school and enrolling in college? (2) What do foster youth believe will eradicate these barriers? Data that fell outside the purview of these questions will not be discussed here.

Findings

It was clear from the testimony provided by the 43 Kidspeak® participants that these students perceived education as critical to their success. They identified several barriers that have impeded their educational success and offered solutions to eradicate these barriers.

The eight major themes that emerged from their testimony are listed in Table 2, but are not in order of significance. Although most of the themes involved barriers to education, some of the young people also talked about potential solutions. Seven of the eight themes appeared in testimony from both events. Although some themes are predictable, others have received little, if any attention.
Table 2

*Education-Related Themes and Examples Presented by the Youth*

<table>
<thead>
<tr>
<th>Theme No.</th>
<th>Theme</th>
<th>No. Youth Who Mentioned Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Lack of permanent and caring relationships</strong>&lt;br&gt;“There is no one there I can depend on”&lt;br&gt;“...so many caseworkers, I can’t even tell you their names”</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td><strong>Need for connections with teachers at school</strong>&lt;br&gt;“Teachers need to take note of what’s going on with their kids.”</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td><strong>Mandatory high school curriculum</strong>&lt;br&gt;“Kids learn slower than others which causes them to fall behind”&lt;br&gt;“teachers don’t teach to the students”</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td><strong>Lack of access to resources to meet basic needs</strong>&lt;br&gt;“I want to get ready for school [clothes, school supplies], but I can’t... we don’t have any money to pay for anything”&lt;br&gt;“... I want to learn, but I don’t have a way to get to school”</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td><strong>Lack of access to extracurricular activities</strong>&lt;br&gt;“I have never been allowed to participate in [after] school activities”</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td><strong>School Safety</strong>&lt;br&gt;“If a school is not safe, why go to school”</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td><strong>Mental health issues</strong>&lt;br&gt;“We are dealing with depression, loneliness”</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td><strong>Lack of Independent living programs</strong>&lt;br&gt;“Where am I going to go [after high school] until college starts?”</td>
<td>6</td>
</tr>
</tbody>
</table>

**Theme 1**

Foster care youth have the desire to maintain non-school related, permanent, stable caring adults in their lives during out of school times who know how to
**support their educational success.** These adults include, but are not limited to, caseworkers, judges, foster parents, relative caregivers, and mentors. Students that had access to stable and caring adults described how these relationships contributed to their educational success in high school and inspired them to pursue a post-secondary education credential. This theme is encapsulated in the following quotes:

The one person who actually helped me was the judge I had when I was 13. If you say you want to quit, he won’t let you quit. I am going to graduate from Cass Tech [high school] this year, and I am going to go to Wayne State [University] for my bachelor’s degree.

I am in a foster home right now; they are strict, but they care about me. All I really wanted throughout my whole life is love and I finally have it. Before coming here [current foster home] I told myself I wasn’t going to add up to much...now I’m going to have the chance to go to college and become what I have always wanted to become.

I have been in foster care for a year and a half. My grandmother has custody of me and my brother. Through her help and support, I was able to maintain my school grades. I did my homework every night, and I attend classes every day. I have a 3.8 GPA now.

When these relationships are not consistently maintained, students don’t feel cared about; they don’t feel their opinions matter, and there is no motivation for them to succeed academically. This point was highlighted by several youth:

There was no one there to make sure I went to school or did my homework. Nobody cared, so I eventually started skipping, I didn’t do my homework.

I have experienced over ten caseworkers. I can’t even tell you their names. I actually looked over my case files, and said, oh, this person was my caseworker? How do they even know about when I am at school because I don’t remember seeing them.
Solutions offered by foster care youth to enhance opportunities for access to permanent and caring adults included the need for state human services department (DHS) to provide them “role models.” Foster care youth recommended that agencies that provide formal mentors and match support to foster care minors should encourage the sustainability of these matches beyond the age of 18 and the closure of their foster care case file. Youth also discussed and the need to be placed with relatives and siblings as a strategy to secure long-lasting and permanent connections.

**Theme 2**

**Foster care youth expressed a desire to have a connection to caring and competent teachers who are aware of their personal challenges and available during the school day.** These young people believed that getting attention from teachers at school would ensure that their educational challenges and deficits would be addressed in a timely manner. The students believed that this would not only ensure their success in high school, but also in the transition from high school to college. This theme was encapsulated in the following quote:

> I have had two teachers, and they really helped me to realize that I could go to college. I never really planned on going to college until this last year. My GPA went from like a 1.0 to a 3.1. My teachers really helped me out and changed my attitude. I want to go to college so that I will be able to support a family, because I will have money. I will be able to give my kids everything I didn’t have.

Students who were not connected to their teachers felt that their academic success was severely compromised.

> The teachers [need] to be able to take note of what’s going on with their kids. I didn’t find out that I was dyslexic and had testing anxiety until my junior year in college. I’m having severe problems in college because you
have to know how to write. I barely know how to comprehend. That’s a problem. Nobody tested me for dyslexia, ADHD, for nothing. I don’t mind being diagnosed, but I want the treatment that goes with it…I was told by my teachers all the time I have to rewrite this…it tears down your confidence. It tears you down because you actually tried, and it took a lot just to get what you got on that paper written…

Theme 3

**Foster care youth expressed the need for teachers to be flexible and creative in teaching the mandated high school curriculum so they can avoid falling behind.**

Foster care youth asked that teachers be more sensitive to students with learning disabilities (“slow learners”) and make accommodations to the curriculum to support their various learning needs. Students also discussed that they needed exposure to hands-on learning opportunities to enhance their understanding of required curriculum content. One student mentioned the need for teachers to adopt “multi-sensory” techniques in the classroom. Foster care youth mentioned that sitting for long periods in the classroom is actually disruptive to the learning process, and that students could benefit from scheduled breaks as a way to maximize curriculum retention. For those that fell behind academically, they wanted to be afforded the opportunity to recover missing/lost credits.

This theme was encapsulated in the following quotes:

Some kids learn slower than others which causes them to fall behind. I believe you can resolve this, to have more programs for students, you know, so people can learn, and they won’t be left behind. So enforce the ‘No Child Left Behind’ concept.

I feel a lot of teachers don’t teach to the students. Students of today need more movement in their classes. They need hands-on experiences. I must move and see things. I can not just hear something to learn it. Educators need to use multi-sensory techniques.
A lot of classrooms are so structured and you are sitting there listening for hours and students need breaks so they can move, stretch, to get their brains back in focus.

Theme 4

Foster care youth are concerned about a lack of adequate resources, including access to school clothes, books and transportation that are necessary for learning in the public school system. Foster care youth reported that they were unable to succeed academically without the basic necessities to support student learning and school engagement. Students mentioned systemic factors, like school and human services budgetary issues and the closure of neighborhood-based schools, contribute to the problem as a reason for the lack of academic achievement among youth in foster care.

This theme was encapsulated in the following quotes:

I am living with my foster parents now, who are really nice people, but I am wearing clothes that are three years old, and I have holes in my shoes, and kids make fun of me because we don’t have any money to pay for anything. School begins in a month and I want to get ready for school, but I can’t.

Schools should try to link up with libraries. At my school, they closed the library, so we are no longer able to read books, or check out books or to even research things.

Yeah I want to learn, but I don’t have a way to get to school. Detroit has closed over fifteen schools. There should be transportation to get the kids to school. Without transportation, students miss a lot of days of school. The school district will only allow 20 days to miss school or you will automatically fail. How do we promote them [foster youth] to graduate if we don’t give them the resources they need to get here [to school] and get the education [they need] to succeed?
Theme 5

Foster care youth are concerned about the limited opportunities they are afforded to participate in extra-curricular and after-school programs. Several students testified that they didn’t have access to extra-curricular activities. One reason offered by a student on why he didn’t have access to after school programs included school mobility issues. Another student saw a placement change in the middle of sports season as vindictive on the part of the child-welfare placing agency. Those without access to after school programs saw this as detrimental to their academic success. Those who had access to these out of school time programs saw them as a buffer to counteract the negative experiences occurring in the home environment. Those who participated in out-of-school programming described having a greater attachment to school. This theme was encapsulated in the following quotes:

I’m currently attending my 17th high school. I have never been allowed to participate in school activities, go to dances...I have never played a high school sport. I have moved around a lot-like over 20 times.”

“When I was in [residential home] I played sports to keep me busy. I played football, linebacker, in 10th grade. My caseworker took me away from sports. It’s like she didn’t want me to do good.

...so school is a refuge to a lot of kids. It was my refuge. I stayed in after school activities: basketball, boxing, volleyball, track and field. I did it all- anything to keep away from home as late as I could. School was home for me. In school and in education we need to create a home-like environment, meaning the support.

Theme 6

Foster care youth are concerned about their personal safety, both at school and in out-of-school settings, and this impacts their school performance. Personal safety issues described by the young people included exposure to physical abuse in the
home setting, school violence, and victimization as a result of bullying on school grounds. Students mentioned that having access to “safety officers” and “hall monitors” in their school buildings would appropriately address school safety issues. Foster care youth who experienced personal safety issues in the home environment, felt that no one listened to their cries for help, and that forced them to take matters into their own hands, which in desperation, caused them to make decisions that were detrimental to their educational success (i.e. school truancy). This theme was encapsulated in the following quotes:

If we don’t have good grades, we have a reason. If my mom is beating me everyday, I would not want to go to school and do any work...because I can’t keep up straight because my back hurts [as a result of physical abuse experienced in the home].

I got put in foster care because my parents physically beat me. When I started to tell people, CPS, no one listened, so I ran away four different times. I was gone for a good month, and I missed a lot of school…”

“If a school is not safe, why go to school? School is supposed to be a safe environment. Instead teachers are afraid of students. Having a public safety officer in the school is important.

I want to talk about bullying. I used to get picked on almost everyday. Students who experience bullying have bad reactions to this abuse. We need more hall monitors. I want the bullying to stop.

Theme 7

**Foster care youth need adults to recognize unmet mental health needs and provide access to mental health services.** Students who are living with mental health problems that have gone untreated disengage from and eventually may drop out of school. Students described being diagnosed with various serious emotional disturbances and prescribed anti-psychotic medications as the primary method to address mental
health needs. Students believed that rather than being diagnosed and prescribed psychotropic medications, they needed access to professionals that were better understanding of the trauma they have experienced both before and during placement; medication is not the only or even the best answer for treatment of mental health issues. This theme was encapsulated in the following quotes:

Students drop out of school because of depression, low self-esteem, students suffering from bullying or other people talking about them. Students stop caring because of family problems, which also tags along with low self-esteem. Distractions are a problem at school, trying to fit in. Some kids have learning problems; I have ADHD and teachers don’t point that out.

When I was placed in foster care, people put me down. They told me ‘no’ a lot. They put me on medication because I was sad; I was depressed. I never ate or slept. I was voiceless and I didn’t like it. I am glad I have a voice today. We [foster care youth] are all dealing with something. We are dealing with depression, loneliness. What we are seeing running across our mind is all the problems that are going on in our lives. That’s all we see. We need someone to tell us, ‘we’ll try’. That’s all I wanted to hear, at least...have someone say, ‘I’ll try’.

Being in the system has given me all this stress and it’s hard to focus on what’s important. Stress messes up how to learn and how others learn. I face frustrations with not being able to pay attention in class because of all the obstacles I have had to overcome in my life. My grades have suffered and I am still working to overcome. Teachers could pay more attention to students when you are seeing their grades dropping and you can ask, ‘what is really going on?"

Theme 8

Foster care youth are concerned about the lack of access to independent living programs and other assistance they should be receiving to help them transition from high school to college. Students who participated in Kidspeak® had
varying opportunities for engagement in independent living programs during high school. Students also had different ideas on what types of services should be offered in an independent living program, and how long these programs should be accessible for students who are currently enrolled in college. This theme is encapsulated in the following quotes:

Where am I going to go until college starts? What am I going to do when I turn 18 in January and graduate in May? College doesn’t start until September. What am I going to do all summer long? I don’t like sleeping in cardboard boxes. It doesn’t sound fun to me. Who is going to show me how to own a house or pay my taxes, how to fill out my bills and my paperwork? I don’t know any of that stuff. Where am I going to go for that help? Who am I going to turn to when I graduate to help me out? When I turn 18 the court says, ‘goodbye, see you later, have fun, you’re an adult, figure it out yourself.’ What it should say is, ‘you need help? Come talk to us’.

Coming to college has made life a lot better. I’m thankful for this [Foster Youth Alumni services Program] program and this camp. This is something I wish I had when I was graduating, when I was leaving high school and going to college...when I turned 18 the lady [my foster parent] was like, your money is stopping, I don’t have anywhere for you to go. I didn’t have anyone to say, yeah, let’s go shopping for your dorm or bring you up to college. We need to establish programs, hands on programs, to help these young people learn these different things. Not only learn how to go to college, but also how to take care of themselves.

Other students spoke about the struggles they faced after they were successfully admitted and enrolled in college. This theme was encapsulated in the following quote:

I came to college alone. I came here, close to dropping out my freshman year because I didn’t have any support. Now there are wonderful people here [at MSU] who have come into my life. I can’t really say there was a

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7 Information about the services provided by the Michigan State University School of Social Work Foster Youth Alumni Services Program can be obtained from http://socialwork.msu.edu/outreach/foster_youth_alumni_svc.php

8 See Kirk & Day (2011) for information on the summer camp program being identified by this student.
lot of structure within the foster care system that helped me to get to that point where I am today. I don’t see enough programs that are specifically directed at foster youth so that they can go to college or so they can find a good job.

Discussion

Testimony from the foster care youth in this study clearly indicated that these young people are facing great educational challenges. The most frequently cited concern foster youth shared at Kidspeak® was the lack of access to permanent, caring adults before, during and after the school day. Children in foster care may miss out on their ability to access permanent, stable and supportive relationships with adults and mentors when they experience school and community mobility. This lack of “connectedness” with caring adults inhibits the healthy development of adult competency. This identification of emotional support as a missing and much needed support must not be taken lightly. It was viewed as an essential support among this population both for those in high school and those enrolled in college. Sources of emotional support included teachers, formal mental health interventions, extended family members, a redefined role of caseworkers, judges and foster parents, and the development of existing informal network members, or natural mentors, as emotional supports.

Because of the lack of stability in their school and family lives, children in foster care need caring adults who can advocate for their educational supports and rights. Youth identified a lack of adults in their lives willing to advocate for their educational needs as a major failure of the child-welfare system. Frequent school changes also diminish a student’s access to needed academic supports, school enrichment opportunities and participation in extracurricular activities.
Because foster care youth have been in multiple placements and many times lack traditional supports, managing homework assignments, meeting teacher expectations, trying to understand class work and achieve good grades are particularly stressful for them. Adding to these problems are the fact that many also have unmet mental health needs, and they are often concentrated in schools districts that are unable to provide even the most basic educational resources (i.e. transportation, books, school supplies).

Too many foster care youth described difficulties in transitioning from high school to college, and not having access to independent living programs to adequately prepare them.

Undertaking the transition to college seems to be more difficult for foster youth than completing high school. By the end of high school, many foster youth have not achieved the level of adult skills and maturity needed in order to gain access to college. This was clearly depicted in the voice of the young man who testified at Kidspeak® that described his fears of aging out into homelessness and the lack of access he has had to independent living programs designed to assist foster youth in their transition to adulthood.

**Implications for Policy and Practice**

This study highlights the various life experiences and social interactions that either promote or supplant the education success of high school and college-aged foster care youth. The results point to several policy and practice recommendations that could increase college access opportunities for foster care youth. First, K-12 educators should prepare foster children for postsecondary education by establishing a preference for mainstream placement parallel to that for students with disabilities. Child welfare
agencies and the school systems should minimize placement and school changes, avoid
pulling a student out of class for appointments, and arrange for residential changes that
require school transfers, when necessary, to take place during summers or between
semesters. These strategies would reduce interruptions in the education of foster youth
and serve as a concrete way for child welfare professionals to recognize and prioritize the
education of foster youth on their caseloads.

These young people have clearly demonstrated a gap in communication between
the education and child welfare systems in making decisions that impact their educational
well-being. Effective collaboration means working together to maintain school
placement stability, sharing a youth’s pertinent information and records, and ensuring a
youth’s timely enrollment in school. Strong school community partnerships could also
provide a venue for youth to access school clothes, school supplies, and mental health
services in schools. In most states, the educational needs of foster children are not
consistently tracked by caseworkers, increasing the likelihood that a child’s educational
problems will not be addressed by either the school or the child welfare agency.

Michigan has begun taking steps to address this issue. In February 2009, the
Michigan Department of Education adopted a policy that dovetails with the federal
McKinney Vento Act (Day, 2010). Under the state policy, foster care youth would be
eligible for homeless youth services through the serving school district for the child’s
first six months of placement in a consistent setting. Students who are not experiencing a
consistent placement for a period of six consecutive months remain eligible for services.
Students served under the McKinney Vento Act are provided transportation by the school
district of origin.
To ensure that foster care youth can reach their academic goals such as graduating from high school and successfully enrolling in college, K-12 institutions must include a focus on addressing barriers to student learning to ensure these young people have an equal opportunity to succeed at school. This should include the provision of intense remedial education opportunities to catch students up who have lost critical seat time in core subject areas due to school mobility issues (Vacca, 2008). Students who are not reading or doing math at grade level will not be prepared for college-level work. It is critical that these young people have been exposed to and successfully complete coursework that is required to meet college entrance standards.

The federal Elementary and Secondary Education Act is up for reauthorization this year, and several of the concerns highlighted by the high school students during the Kidspeak® forums could be addressed through this act (i.e. high school curriculum reforms, credit recovery initiatives, transportation to school, school safety policies & access to after-school programs).

During Kidspeak® several youth testified on the need for better access to mental health services. Because mental health challenges affect school performance, the ability to access mental health services are vital. Increasing student access to high-quality mental health care by developing innovative programs, like school-based health centers, in both K-12 and college settings should be considered. This practice, although growing in Michigan, is not available in every county. According to Conway & Brinson (2003) research has demonstrated that school-based health centers help increase standardized educational assessment test scores, reduce attendance problems, address behavioral problems, strengthen support services for at risk students, decrease school violence and
help schools meet increased immunization requirements while allowing teachers to focus on what they do best – teach.

Other options to address the gap in access to mental health services include increased and more deliberate collaboration among child welfare, mental health and education systems. One promising approach to addressing interagency collaboration is the Systems of Care model developed by the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. A system of care is a coordinated network of community-based services and supports characterized by a wide array of services, individualized care, and services provided within the least restrictive environment, full participation and partnerships with families and youth, coordination among child-serving agencies and programs, and cultural and linguistic competence (Stroul & Blau, 2010).

Additionally, the Patient Protection and Affordability Act of 2010, will require states to extend Medicaid coverage to children who have “aged out” of the foster care system but are under the age of 26 beginning in 2014 (Ferber et al., 2010). This will increase access to health insurance to pay for mental health services of older youth.

Finally, Michigan is exploring how to close the health care gap faced by foster care youth through the implementation of a Foster Care Nurse Home Visitation Pilot in January 2011. The goals of the demonstration project are to provide enhanced health services to children entering DHS foster care, provide oversight to children on psychotropic medication, and provide medical consultation to older youth exiting the foster care system (Alavi, Day, Fogarty, McCafferty & Embaye, 2011).
For students transitioning from high school to college there is a need to reorganize and better coordinate existing and fragmented independent living programs and re-evaluate the age restrictions placed on program participation. Eligibility for services intended to prepare foster youth for the transition into independence only extends to the age of 21 under existing law. This should be extended to at least the age of 24, the age at which federal financial student-aid programs assume that a child should no longer be dependent on parents.

For students on track to graduate from high school, strategies need to be implemented to ensure enrollment in college-access programs. Important reasons why foster youth do not apply to college are that they are not aware of the college opportunities available to them, and they do not have the practical knowledge and skills to successfully navigate the complex college application process including choosing an institution and field of study. Foster care youth are frequently unable to complete financial aid forms, and hence, unable to obtain financial aid (including Pell grants and the Education Training Voucher). Also, the negative connotative of being in foster care may deter foster youth from checking the “ward of the court” box on the financial aid form, unknowingly reducing the opportunity to maximize their financial aid awards.

Many of the university-based programs that currently exist to assist low-income and first-generation college students, including the federal TRIO and GEAR UP programs, often do not effectively reach out to foster youth or take into account their unique circumstances. These programs should be targeting and actively recruiting foster care youth as program participants. College-access programs can provide foster care youth with the knowledge of how to navigate within the higher education system. With
these resources in place, a much higher percentage of foster youth will have the opportunity to persist through high school and enroll in a post-secondary program that best meets their interests and talents.

**Strengths**

The action research strategy employed in the study proved to be an impactful way to impact policies and practices for participating youth and young people across the state. A few known outcomes included the actions of policymakers who made purchases and delivered school supplies to several campers immediately following the event, placement changes pre-empted by the State Court Administrator’s Office that were made as a result of testimony from youth who commented on the safety of their current placement environment; the planning of a conference by the courts to cross-train judges, attorneys, and child welfare caseworkers on the educational disparities of foster care youth; a promise by the Michigan Supreme Court to update the Education Benchbook for judges practicing in the child welfare field; and a commitment by a few members of the legislature to explore options for targeted funding to promote college access and retention rates of foster care youth in the state budget.

**Limitations**

This study has a number of limitations. The participant sample was small. The student sample only included young people who were known by their caseworkers as having an interest in pursuing a post-secondary degree. The opinions of students who provided testimony may not reflect the perceptions of the foster care population as a whole. Students who identified as being from a minority group other than white and
African American were under-sampled; thus the perspectives of students from these other
groups (American Indian, Asian American, and Latino) is not adequately represented.

In sum, this study confirms prior findings regarding factors that can promote and
hinder the educational aspirations of foster care youth. A comprehensive understanding
of the many factors that support and supplant post-secondary access and retention rates of
foster care youth is essential to the building of policies and programs that target the
population. This comprehensive understanding requires that we capture the perspectives
of all necessary stakeholders, including youth themselves, in the development of policy
and practice reform strategies.

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CHAPTER III

AN EXAMINATION OF POST-SECONDARY RETENTION AND SUCCESS OF FOSTER CARE YOUTH ENROLLED IN A FOUR-YEAR UNIVERSITY

Abstract

This study uses administrative data from Michigan State University to examine whether former foster care youth are more likely to drop out of college than low-income, first generation students who had not been in foster care. Former foster youth were significantly more likely to drop out after their first year of college (21% vs. 13%) and prior to degree completion (34% vs. 18%) than their non-foster care peers. This difference remained significant even after controlling for gender and race.

Background and Significance

As of September 2009, approximately 14% of the total US foster care caseload had a case goal of emancipation or long-term foster care (U.S. DHHS, 2010). This included 26,547 foster youth whose case goal was emancipation and another 32,361 whose case goal was long term foster care (U.S. DHHS, 2010). These youth are likely to exit foster care without achieving a permanent living arrangement and hence, will be at risk of experiencing a variety of negative outcomes across several life domains including education, physical and mental health, substance use, criminal justice system involvement, employment and economic self sufficiency, housing and family formation (Courtney, Dworsky, Lee & Raap, 2010; Courtney, 2009; Center for the Study of Social Policy, 2009; McMillen & Tucker, 1999).
This study focuses on just one of these domains, education, and specifically on post-secondary educational attainment. The reason for this focus is that if foster youth can achieve higher levels of education, they are much more likely to be employed in stable and meaningful jobs and much less likely to experience incarceration and homelessness (Leone & Weinberg, 2010).

Barriers to Education for Youth While in Foster Care

Both individual and systemic factors contribute to poor educational outcomes for foster youth (Bruce, Naccarato, Hopson, & Morrelli, 2010). At the individual level, most children enter foster care because of abuse or neglect by their parents (U.S. DHHS, Child Maltreatment Report, 2008). The trauma experienced by children who have been neglected or abused can lead to a variety of developmental problems, such as learning disabilities or behavioral and emotional disorders (Harden, 2004; Berrick, Needell, Barth, & Johnson-Reid, 1998; Casey Family Programs, 2003a). Additional trauma is experienced when children are taken away from their birth families- despite being removed from an abusive and neglectful environment, when they are separated from siblings or when they change foster care placements (Folman, 1998).

Entry into foster care, as well as any subsequent placements changes, is often accompanied by changes in school. Over one-third of foster youth experience five or more different school placements over the course of their foster care stay (Courtney, Terao & Bost, 2004) a number double that of their non-foster peers (Burley & Halpern, 2001). This lack of consistent school placement has been found to result in students losing four to six months of educational progress each time they change schools (Yu et al., 2002). There are often significant delays when foster youth enroll in a new school due
to poor coordination between child welfare and school personnel as well as difficulties transferring school records (McNaught, 2009). This probably explains the negative relationship found between placement instability and educational achievement of foster youth (Pecora, et al., 2005). Changes in school not only negatively affect academic progress, but also can disrupt connections to peers and to school professionals who might otherwise be a source of social support (Cohen, Kasen, Brook, and Struening, 1991; Barker & Adelman, 1994).

Whether the school difficulties experienced by foster youth arise from living in an abusive environment prior to the placement or develop during the foster care stay is not clear (Finkelstein, Wamsley, & Miranda, 2002). However, compared to youth in the general population, youth living in foster care are less likely to perform at grade level, and twice as likely to repeat a grade (Courtney et al., 2001; Courtney, Terao & Bost, 2004; Pecora et al, 2005; Burley & Halpern, 2001). Foster youth are also far more likely to experience out-of-school suspension and expulsion than their counterparts who never entered the child welfare system (Courtney, Terao & Bost, 2004).

High School Completion among Foster Youth

One consequence of the educational challenges foster youth face is that they are less likely to graduate from high school than their peers. A number of studies have measured the percentage of foster youth who graduate from high school and estimates vary widely from a low of about one-third (e.g., Scannepieco et al, 1995; McMillen & Tucker, 1999) to a high of a roughly two-thirds (Festinger, 1983; Barth, 1990; Blome, 1997; Courtney et al 2005; Pecora et al. 2005; Courtney et al 2007). For example, Reilly (2003) found 50% of youth aging out of the foster care system in Nevada left care
without a high school diploma (vs. 6.4% of Nevada students who were enrolled seniors in public schools in the 2004-2005 academic year (UDSOE, NCES, 2006). This occurred despite the fact that 75% of these Nevada-based foster care youth indicated a desire to complete a post secondary education degree.

Post-Secondary Educational Achievement among Foster Youth

A number of studies have found that foster youth are less likely to attend college than their non-foster care peers (Brandford & English, 2004; Wolanin, 2005). Although some of these studies suggest that fewer than 10 percent of foster youth attend college (Jones & Moses, 1984; Courtney, Piliavin & Grogan-Taylor, 1998), others suggest that the college attendance rates may be as high as one-third (Courtney et al., 2007; Festinger, 1983; Barth, 1990). Research also suggests that even when foster youth do attend college, they are less likely to earn a degree than their non-foster care peers (Courtney, Dworsky, Lee, & Rapp, 2010; Davis, 2006).

For example, the Midwest Evaluation of the Adult Functioning of Former Foster Youth, a longitudinal study that tracked foster youth from the states of Illinois, Iowa and Wisconsin since they were 17 years old, found that by age 23 or 24 slightly less than one third of the study participants had completed at least one year of college compared to 53% of a nationally representative sample of 23 and 24 year olds in the general population (Courtney, Dworsky, Lee, & Rapp, 2010). Moreover, just six percent of the Midwest Study participants but 30% of the nationally representative sample of students had earned a degree. Similarly, using data from the National Center for Education Statistics (NCES), Davis (2006) found only 26 percent of “college-qualified” foster youth
earn a degree or certificate within six years of enrollment compared with 56 percent of their peers who had not been in foster care.

In sum, there is a significant gap at all levels of educational achievement between former foster youth and their non-foster peers. Young people with a history of foster care placement are not only less likely to graduate high school, but they are also less likely to attend or complete college (Courtney et al., 2010).

Barriers to Persistence in Higher Education for Foster Youth

Researchers have only recently begun to explore why so few of the foster youth who attend college persist until degree completion. One of the very first studies to address this issue found that two-thirds of former foster youth attending a four-year university in the state of California did not feel very well prepared for college by the foster care system (Merdinger, et al., 2005).

This research also found that the pathway through college education for students who aged out of foster care was marked by interruptions (Merdinger et al., 2005). Nearly half of the students had transferred from another school, primarily from a community college. One in five students reported having previously withdrawn, and 16 percent were considering withdrawing.

Studies also suggest that economic difficulties may be preventing some foster youth from completing a degree. One of the challenges identified in the Merdinger et al. study was the students’ precarious financial situation. Likewise, Courtney et al., (2010) found the most common reason Midwest study participants gave for dropping out of an educational or vocational training program was the need to work.
Yet another reason foster youth who attend college fail to graduate is that some are not be prepared for postsecondary education even though they have graduated from high school. Foster youth are much less likely to take college preparatory courses in high school than their peers (Blome, 1997; Sheehy et al., 2001) and this gap has been observed even when the two groups had similar test scores and grades (Sheehy et al., 2001).

Finally, student service personnel at most post-secondary institutions are not familiar with or prepared to address the unique needs of this population (Dworsky & Perez, 2009). This may explain, in part, why many of the students in the Merdinger et al. (2005) study reported not being able or not knowing how to obtain needed services.

Policy and Program Responses to the Educational Needs of Foster Youth

Over the past few decades, federal policies have attempted to increase access to college among youth in foster care. To help states prepare youth who will be aging out of foster care for the transition to adulthood, Congress enacted the Independent Living Initiative in 1986. It was replaced by the John H. Chafee Foster Care Independence Program (CFCIP) in 1999. This program doubled the amount of money available to States and greater flexibility with respect to the use of those funds to assist transitioning foster youth in achieving self-sufficiency. Current and former foster care youth are eligible for Chafee-funded services including education and vocational training until they are 21 years old (DHHS, ACF, 2001).

As part of the Promoting Safe and Stable Families Amendment of 2001, Congress added the Education and Training Voucher (ETV) Program to the Foster Care Independence Act. This is the first federal program created specifically to address the post-secondary educational needs of current and former foster youth. Through this
program, states can provide current and former foster youth with up to $5,000 per year for postsecondary training and education (P.L. 107-133, 107th Congress, 2001). Youth participating in the program on their 21st birthday remain eligible until age 23, as long as they are making satisfactory progress toward completion of their program (Center for the Study of Social Policy, 2009).

The most recent major federal child welfare legislation, the Fostering Connections to Success and Increasing Adoptions Act of 2008, also contains a number of provisions related to the education of youth in foster care. These include provisions designed to promote educational stability and to expand eligibility for the ETV program to youth who exit foster care through adoption or relative guardianship when they are at least 16 years old. Another provision allows states to claim federal reimbursements for expenses made on behalf of foster care youth up to the age of 21 (Center for the Study of Social Policy, 2009). This provision is important because current research has demonstrated that extending foster care placement to the age of 21 increases the likelihood that these young people will complete at least one year of college (Dworsky & Courtney, 2009).

Foster care youth may also benefit from the federal College Cost Reduction Act of 2009, which allows foster care youth who were in care at age 13 and older to claim independent status when applying for federal financial aid beginning with the 2009-2010 academic year (Fernandes, 2008).

Present Study

This study examines whether former foster care youth are more likely to drop out of college than low-income, first generation students who had not been in foster care. The primary research question this study will address is whether foster care alumni
enrolled in a 4-year college are more likely to drop out than students who come from similar socio-economic backgrounds but who were not in foster care.

By addressing this question, this study aims to fill in several gaps in our current knowledge about post-secondary educational attainment among foster care alumni. First, whereas prior studies have paid some attention to college retention among this population (Hernandez & Naccarato, 2010; Merdinger, 2005), retention is one of this study’s major outcomes of interest. Second, unlike previous studies which have often not distinguished between 2 and 4-year schools, it focuses exclusively on students attending a 4-year university. And third, whereas previous studies have generally used the young adult population or all undergraduates as their comparison group, this study limits its comparison group to students from similar socioeconomic backgrounds.

Methods

This study used de-identified administrative data from the Michigan State University (MSU) student information systems database. This database includes information from the Registrar’s Office, the Admissions Office, the Financial Aid Office, and the Budgets and Planning Office.

Sample

The sample included two groups of MSU undergraduates who had been enrolled at MSU between January 2000 and May 2009. The foster care group consisted of 444 undergraduates who had identified themselves as “former wards of the court” on the Federal Application for Student Aid (FAFSA) form. The comparison group consisted of 378 low-income, first generation college students who had not been in foster care. This comparison group was a stratified random sample selected from the total population of
6,202 MSU undergraduates who reported that neither of their parents had obtained any college and whose taxable family income for the preceding year did not exceed 150 percent of the federal poverty level. These criteria were used to ensure that the two groups would have similar socioeconomic backgrounds. The comparison group was stratified by year of first enrollment and a random sample was selected from each cohort to approximately equal the number of foster care youth who first enrolled in that year.

**Procedures**

The institutional review board at the university who supplied the data approved this study. As additional researchers cross universities were involved in the data analysis, a second university institutional review board was involved in gaining human subjects approval.

**Measures**

**Independent variables.** The main independent variable was “ward of the Court” status as measured by responses to the FAFSA form question. Other independent variables included gender and race.

**Dependent variables.** Two dependent variables were examined; both were binary (yes/no) in nature. The first dependent variable was whether students had dropped out during or before the end of their first year. Students were coded as dropping out during or before the end of their first year if they did not have a reported GPA for the first or second semester. The second dependent variable was whether students had dropped out

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9 Question #53 on the FAFSA form asks, “At any time since you turned age 13, were both of your parents deceased, were you in foster care or were you a dependent or ward of the court?”

10 The researcher intended to make observations using a third dependent variable, end of the first semester, however the percent of those that experienced the event was too low to conduct a meaningful analysis.
prior to degree completion. Students were coded as dropping out prior to degree completion if they withdrew from the university prior to degree completion.

For both of the dependent variables listed above, students were excluded from the analysis if they were still enrolled at the end of the observation period, but had not yet reached the relevant milestone (i.e., end of first year, graduation). Removing these students from the analysis may bias the results in one of two ways. If students who were still enrolled at the end of the observation period were more likely to complete their first year/graduate than the students who were included in the analysis, then the results will underestimate the first year completion/graduation rate. By contrast, if students who were still enrolled at the end of the observation period were less likely to complete their first year/graduate then students who were included in the analysis, then the results will overestimate the first year completion/graduation rate.

Analysis

The administrative data were analyzed using SPSS, version 16.0 (SPSS Inc., IBM Company). The descriptive analysis focused on frequency distributions. Chi square tests were used to assess (1) whether there were differences in dropout rates between court wards and other first generation, low-income students of the same race or gender; and (2) whether there were racial or gender differences in dropout rates either among the court wards or among the other first generation low income students. The multivariate analysis involved estimating two binary logistic regression models. Logistic regression can be used to estimate the effect of one or more predictor (independent) variables on the odds that an outcome or event (categorical, dependent variable) will occur (Field, 2005). A value greater than one indicates that as the value of the predictor increases, the
estimated odds of the outcome occurring increases; a value less than one indicates that as the value of the predictor increases, the odds of the outcome occurring decreases (Field, 2005). Of particular interest in this study was whether being a former ward of the court increased or decreased the estimated odds that students would dropout by the end of their first year or prior to graduation.

Findings

Table 3 shows the demographic characteristics of the foster youth sample and the comparison group of non-foster youth. The two groups did not differ statistically with respect to either race or gender. With respect to gender, the largest percentage of students in both groups is female; with respect to race, the largest percentage of students in both groups is white.

Table 3

Demographic Characteristics of Foster Youth and Non-Foster Youth Samples

<table>
<thead>
<tr>
<th></th>
<th>Foster Care</th>
<th></th>
<th>Non-Foster Care</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Total</td>
<td>444</td>
<td>100</td>
<td>378</td>
<td>100</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>199</td>
<td>45</td>
<td>175</td>
<td>46</td>
</tr>
<tr>
<td>African American</td>
<td>186</td>
<td>42</td>
<td>134</td>
<td>35</td>
</tr>
<tr>
<td>Other</td>
<td>59</td>
<td>13</td>
<td>69</td>
<td>18</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>184</td>
<td>41</td>
<td>143</td>
<td>38</td>
</tr>
<tr>
<td>Female</td>
<td>260</td>
<td>59</td>
<td>235</td>
<td>62</td>
</tr>
</tbody>
</table>

Race $\chi^2 = 5.51$ (2), $P = .06$
Gender $\chi^2 = 1.11$ (1), $P = .29$
Table 4 shows the number and percentage of students who dropped out during or before the end of the first year. Twenty one percent of the foster care students had dropped out during or before the end of their first year compared with 13 percent of their non-foster care peers. White foster care students dropped out of school during or before the first year at a much higher rate than their white, non-foster care peers (23.6% and 7.4% respectively). Between group differences were not observed among African American students and students of other races. Female foster care students were also significantly more likely to drop out during or before the first year than females who were never placed in foster care; this difference was not observed for males.

Table 4

Students Who Dropped Out During or Before the End of the First Year by Race and Gender

<table>
<thead>
<tr>
<th>Race</th>
<th>Foster Care (N = 444)</th>
<th>Non-Foster Care (N = 378)</th>
<th>χ² (df)</th>
<th>P&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>21.4</td>
<td>49</td>
<td>13</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>47</td>
<td>23.6</td>
<td>13</td>
<td>7.4</td>
</tr>
<tr>
<td>African American</td>
<td>40</td>
<td>21.5</td>
<td>27</td>
<td>20.1</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>13.6</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>21.7</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Female</td>
<td>55</td>
<td>21.2</td>
<td>29</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Table 5 depicts the within group differences in dropping out during or before the end of the first year. Within the foster care group, there was no association between race
and dropping out during or before the end of the first year. By contrast, African American non-foster care youth were significantly more likely to drop than their white, non-foster care peers. There was no association between gender and dropping out within either group.

Table 5

*Dropping Out During or Before the End of the First Year: Within Group Comparisons*

<table>
<thead>
<tr>
<th>Foster Care</th>
<th>N</th>
<th>%</th>
<th>$\chi^2$ (df)</th>
<th>P&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>47</td>
<td>24</td>
<td>2.74 (2)</td>
<td>.25</td>
</tr>
<tr>
<td>African American</td>
<td>40</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>22</td>
<td>.02 (1)</td>
<td>.88</td>
</tr>
<tr>
<td>Female</td>
<td>55</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comparison Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>13</td>
<td>7</td>
<td>10.89 (2)</td>
<td>.01*</td>
</tr>
<tr>
<td>African American</td>
<td>27</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td>.21 (1)</td>
<td>.64</td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 is similar to Table 4, but the outcome measure is dropping out prior to degree completion. Just over one third of the foster care students dropped out prior to degree completion compared to only 18 percent of their non-foster care peers, and this difference was statistically significant. White foster care students dropped out of school
prior to degree completion at a much higher rate than their white, non-foster care peers (33% and 10% respectively). African American foster care students dropped out of school prior to degree completion at a rate that was marginally higher than the rate for their African American non-foster care peers (38% and 26% respectively). Between group differences were not observed among students of other races. Male and female foster care students were significantly more likely to drop out before degree completion than their same-gender, non-foster care peers.

Table 6

Students Who Dropped Out Before Degree Completion by Race and Gender

<table>
<thead>
<tr>
<th></th>
<th>Foster Care (N = 444)</th>
<th>Non-Foster Care (N = 378)</th>
<th>( \chi^2 ) (df)</th>
<th>P&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Total</td>
<td>151</td>
<td>34</td>
<td>68</td>
<td>18</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>65</td>
<td>32.6</td>
<td>18</td>
<td>10.2</td>
</tr>
<tr>
<td>African American</td>
<td>71</td>
<td>38.1</td>
<td>35</td>
<td>26.1</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>20</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68</td>
<td>36.9</td>
<td>27</td>
<td>18.8</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>31.9</td>
<td>41</td>
<td>17.4</td>
</tr>
</tbody>
</table>

Table 7 depicts the within group differences in dropping out prior to degree completion. Within the foster care group, there was no association between race and dropping out prior to degree completion. By contrast, race was associated with dropping out within the comparison group. African American non-foster care youth were
significantly more likely to drop out than their white, non-foster care peers. There was no association between gender and dropping out within either group.

Table 7

*Dropping out Prior to Degree Completion: Within Group Comparisons*

<table>
<thead>
<tr>
<th>Foster Care</th>
<th>N</th>
<th>%</th>
<th>$\chi^2$ (df)</th>
<th>P&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>65</td>
<td>33</td>
<td>3.54 (2)</td>
<td>.17</td>
</tr>
<tr>
<td>African American</td>
<td>71</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>25</td>
<td>1.22 (1)</td>
<td>.27</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>N</th>
<th>%</th>
<th>$\chi^2$ (df)</th>
<th>P&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td>13.53 (2)</td>
<td>.001***</td>
</tr>
<tr>
<td>White</td>
<td>18</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>35</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>.15 (1)</td>
<td>.70</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two logistic regression models were estimated to determine whether race and gender might account for the differences between foster youth and non-foster youth observed in Tables 4 and 6. Table 8 depicts the results of the model predicting whether students had dropped out during or before the end of their first year. The estimated odds of dropping out during or before the end of the first year were almost two times higher for former foster youth than for their non-foster peers. This effect was statistically
significant. Neither race nor gender was a significant predictor of dropping out during or before the end of the first year.

Table 8

*Predictors of Dropping Out During or Before the End of the First Year*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former Ward of the Court</td>
<td>1.772**</td>
<td>1.214 - 2.587</td>
</tr>
<tr>
<td>Gender (Male = reference group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>.899</td>
<td>.613 - 1.289</td>
</tr>
<tr>
<td>race (White = reference group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>.821</td>
<td>.457 - 1.475</td>
</tr>
<tr>
<td>Other</td>
<td>.602</td>
<td>.335 - 1.082</td>
</tr>
</tbody>
</table>

**p < .01

Table 9 depicts the results of the logistic regression model predicting whether students dropped out before degree completion. Here again foster care status is a statistically significant predictor of dropping out. The estimated odds of dropping out prior to degree completion were more than two times higher for foster youth than for their non-foster peers even after controlling for race and gender. Neither race nor gender was a significant predictor of dropping out prior to degree completion.

Table 9

*Predictors of Dropping Out Prior to Degree Completion*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former Ward of the Court</td>
<td>2.278***</td>
<td>3.175 - 1.637</td>
</tr>
</tbody>
</table>
Table 9—Continued

<table>
<thead>
<tr>
<th></th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
</tr>
<tr>
<td><strong>Gender (Male = reference group)</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.797</td>
</tr>
<tr>
<td><strong>Race (White = reference group)</strong></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>1.107</td>
</tr>
<tr>
<td>Other</td>
<td>0.644</td>
</tr>
</tbody>
</table>

***p < .001

Discussion

Foster youth were significantly more likely to drop out during or by the end of after their first year (21%) than their non-foster care peers who were low-income, first generation students (13%). Foster care youth were also significantly more likely to drop out prior to degree completion (34%) than low-income, first generation students who had not been in foster care (18%). These findings are consistent with the results of earlier studies that indicate that foster care alumni fare worse than their non-foster care peers in the area of postsecondary educational attainment (Courtney, et al., 2010; Dworsky & Perez, 2009; Pecora et al., 2006). Moreover, the fact that foster care alumni were more likely to drop out than another group of students who were facing similar socioeconomic challenges suggest that the differences found between the two groups could not be totally explained by socio-economic status. Another interesting finding is that one’s race, once thought to be a significant predictor of educational attainment (Mallinckrodt & Sedlacek, 2009) was not related to dropping out among the foster care youth, although it was
related to dropping out for among the comparison group. Being white was not a protective factor for students who enrolled in college from the foster care system.

In this study, gender was not related to dropping out among either the foster care students or their counterparts. Diprete and Buchmann (2006) found women graduate at a higher rate than men. However, findings from the current study align with the findings of Hertzog (2005) who also found no gender differences in college retention rates.

Implications for Policy and Practice

One explanation for the disparity in dropping out between foster care and other low-income students is that students who come to campus from foster care may have needs that differ from their non-foster peers of similar socio-economic backgrounds. If college graduation rates are to increase among young people aging out of foster care, substantive changes in both policy and practice may need to be made.

For example, many foster care alumni who come to campus may not have strong connections to caring adults (National Center for Mental Health Promotion and Youth Violence Prevention, 2010); This is a problem because the stress of coursework and the pressures of college life can become unbearable for students who have no one to turn to in times of stress (Mitchell & Trickett, 1980). Additional supports may be needed for foster youth on campus to make up for or counteract the lack of access to informal networks (Mendes, 2006). Foster care students who have access to positive social support on campus, including access to faculty and community mentors, are more likely to persist to graduation (Haussmann, L. R. M., Schofield, J. W. and Woods, R. L. 2007.)

Similarly, previous studies that have queried students on why they dropped out of college reference several barriers including the need to work, child care responsibilities,
and falling behind in school (Courtney, et al., 2010; Merdinger, 2005). An additional service that could be offered to foster care students include the creation of on-campus family resource centers for pregnant and parenting students. Academic support, including access to tutoring, is also critical for this population to ensure they don’t fall behind (Merdinger et al., 2005).

This has certainly been the rationale behind the growing number of programs that provide former foster youth with a wide array of services and supports they need to succeed in school and graduate. No two programs are alike, but commonalities include opportunities for academic, social and emotional support, year round housing, and access to financial aid targeted to the population (Dworsky & Perez, 2009). The findings of the present study and previous studies support the implementation of these campus-based, student support services that target foster care alumni. Specific appropriations could be allocated through the federal and state higher education and human service budgets to support the development and evaluation of campus support initiatives for foster care alumni enrolled in college.

Financial aid in and of itself is not enough to cover all necessary education expenses. For some, the only way to make ends meet is to work while attending school. Unfortunately, some studies have found full-time college students are less likely to succeed in school if they work more than 15-20 hours a week (Pike, Kuh, & Massa-McKinley, 2009). Priority placement in federal work study positions would ensure foster care students have access to necessary employment resources, but at a level that would not compromise their educational success (i.e., greater flexibility in work hours during times of increased pressures in the classroom when students need extra time to study and
prepare for examinations, and strict policies that limit the amount of hours students can work over the course of the semester (OSU Federal Work-study Information, 2010). However, the need to work is not likely to account for the differences found between former foster care students and their non-foster care peers in the present study because the non-foster care control students also came from families of low socio-economic status.

In addition to access to traditional forms of financial aid and work-study programs, foster care youth could benefit from revisions to the federal Education Training Voucher (ETV) program. The ETV program, the largest financial aid program that specifically targets foster care youth, is designed for students who are following a traditional college career path. The ETV program is structured in a way that it requires foster care youth to apply for funding before their 21st birthdays, and they are only eligible until they turn 23 years of age (Center for the Study of Social Policy, 2009).

These restrictions are not conducive to the educational success of foster care youth for several reasons: first, because many foster care youth repeat a grade before they graduate from high school (Courtney et al., 2001; Courtney, Terao & Bost, 2004; Pecora et al., 2005; Burley & Halpern, 2001), they are often older than 18 when they enter college. Second, many foster care youth are required to enroll in remedial college courses before they are ready to begin college level work (Conley, 2005); and remedial course work does not count towards degree completion. This adds to the amount of time it takes to graduate (Davis, 2006).

Finally, there is a great need to increase coordination between public and private child welfare agencies, K-12 education authorities and colleges and universities to ensure a seamless transition from high school to college for foster youth (McNaught, 2009). In
many schools and communities, a bewildering array of transition services already exist—the primary problem is the lack of communication and coordination between agencies, services, and programs. And for young people in foster care, simultaneously navigating the labyrinth of support-related agencies, completing forms, setting up appointments, and meeting mandatory program requirements of multiple service systems can be overwhelming. Many communities are finding that the inclusion of a “convener”, or intermediary organization that exists to support coordination across service systems has proved to be the most helpful in addressing this gap (Hoye & Sturgis, 2005). Another related solution could be the provision of child welfare agencies in the placement of child welfare staff in K-12 schools and post-secondary institutions.

Strengths and Limitations

The strength of this research is that it includes a fairly large sample of foster care students at a four-year university. It is also the first quantitative study to compare college drop out rates among foster care alumni who attended college and drop out rates among other low-income students.

However, there are several limitations in this study. Earlier studies that have looked at foster care youth and higher educational obtainment have followed a mix of foster care alumni, including those who have accessed community colleges and vocational institutions in addition to 4-year colleges and universities. This study may be capturing a higher number of the most successful/more resilient foster care students from across the state of Michigan who may have faced fewer barriers than students who have been represented in other studies. Certainly the requirements for acceptance into a four-year college are more rigorous than the standards for community colleges and vocational
education programs. Additionally, this study was conducted at a Big Ten university where the admissions criteria are even more rigorous than many other four-year colleges. In fact, there are studies that have found that minority students are more likely to graduate when they attend more selective colleges rather than non-selective schools (Griffith, 2008). One of the ironies in higher education is that the most selective schools, that enroll the best prepared and most traditional students, tend to offer the most guidance in regards to which courses to take and in what sequence, how to add or drop courses and apply for financial aid, and what resources are available to help them adjust to campus life, and resolve personal or academic problems that may interfere with their progress; while institutions that serve the least prepared and most at-risk students tend to offer much less (Brock, 2006). Extensive guidance like this is critical to the academic success of foster care youth.

Another limitation relates to the fact that the multivariate analysis could not control for several other potential confounding variables identified in the literature (i.e. age at which alumni exited foster care, years between foster care exit and first enrollment in college, and foster care placement history) because these variables are not contained in the MSU student data system. Additionally, it was not possible to control for students’ prior academic history (e.g., high school GPA, ACT score, etc.). The differences observed between foster care students and their non-foster care peers could be attributed to the preparation these students received prior to entering college. For example, foster care students tend to be over-represented in the lowest performing high schools (Smithgall et al., 2004). Controlling for these variables would require a data sharing agreement between the university and the state department of human services and
between the university and with the state department of education or individual school
districts. As the state of Michigan, not unlike other state departments of education, lacks
a centralized data system, it increases the challenges researchers would face in trying to
acquire data on prior academic performance of foster care students. Additionally,
securing agreements necessary to match individualized foster care placement data with
student data records across the child welfare and education systems could prove
challenging given concerns around confidentiality and compliance with the Child Abuse
Prevention and Treatment Act (CAPTA) for human service agencies and the Family
Education Rights and Privacy Act (FERPA) for universities and state and local education
authorities.

Finally, the university database system did not differentiate between students who
were eligible for federal work-study and those that actually participated in on-campus
employment through the federal program. As on-campus employment shows promise for
increasing student retention rates (OSU Federal Work-study Information, 2010) it would
have strengthened this study to have data on their participation in available work study
positions.

Conclusion

Changes in the U.S. economy have made the attainment of a higher education
credential more important than ever to self-sufficiency. There is a significant disparity
in post-secondary graduation rates between foster care youth and their low-income, first
generation peers. Therefore, it is critical that child welfare, K-12, and higher education
systems work together to support the postsecondary educational aspirations of court
wards. This includes the creation of population specific wraparound services located on
college campuses that not only support foster care youth in the transition from high school to college, but also from the first term of enrollment until students graduate with a post-secondary education credential.

References


CHAPTER IV

AN ASSESSMENT OF THE EFFECTS OF PLACEMENT IN FOSTER CARE ON GRADUATION FROM A FOUR-YEAR COLLEGE

Abstract

This study uses survival analysis to compare the four-year college graduation rates of students from the foster care system to the graduation rate of first generation, low-income students. Estimates from discrete time hazard models indicate that students who had experienced foster care graduated at a slower rate than their non-foster care peers. Gender did not affect graduation rate; but African American students graduated at a slower rate than their White counterparts. In addition, students in poor academic standing (cumulative GPA of 1.99 or below) were slower to graduate than students in good academic standing (cumulative GPA’s at or above 2.0). The effect of being in poor academic standing was the same regardless of whether students had been in foster care. However, foster care students in good academic standing graduated at a slower rate than students in the comparison group.

Background and Significance

Institutions of higher education are in the business of producing educated graduates prepared to take their places among an informed citizenry and qualified to contribute meaningfully to society (Brock, 2010). The cost of this education is not small. The United States government currently spends over $400 billion annually on post-secondary education, but the returns on this investment are inconsistent; many students
who have received federal grants to support their post-secondary education goals have not graduated (Symonds et al., 2011).

Efforts to hold colleges accountable for their graduation rates have been gaining some traction. Complete College America, established in 2009 with support from the Bill and Melinda Gates Foundation and others, is working to dramatically increase the nation’s college completion rate through state policy changes (Jones, 2011). Additionally, universities are motivated to increase their completion rates, as they face a loss in revenue from students exiting college without a degree and a diminished reputation. Increasing completion rates may be especially important for public universities which are supported by the public’s tax dollars (Chimka, et al., 2007-8).

While access to college remains a major challenge for many students, they have been much more successful in getting into college than in persisting to degree completion (National Center for Public Policy and Education, 2010; Griffith, 2008; Alon & Tienda, 2005). Approximately 50 percent of freshman enrolled in colleges and universities drop out before degree completion (Brawer, 1996), although it is during the first year that the risk of dropping out is typically the highest (Hertzog, 2005). Multiple studies have found that about 30 percent of students entering four-year institutions leave at or before the end of their first year (Tinto, 1993; USDOE, NCES, 1998).

Foster care youth are among the low-income, first generation college students who are the most at-risk of dropping out (Cochrane & Szabo-Kubitz, 2009).

Post-Secondary Educational Achievement among Foster Youth

There is a significant gap in post-secondary educational achievement between former foster youth and their non-foster peers. A number of studies have found that
foster youth are less likely to attend college than their non-foster care peers (Brandford & English, 2004; Wolanin, 2005). Although some of these studies suggest that fewer than 10 percent of foster youth attend college (Jones & Moses, 1984; Courtney, Piliavin & Grogan-Taylor, 1998), others suggest that college attendance rates may be as high as one-third (Courtney et al., 2007; Festinger, 1983; Barth, 1990). Research also suggests that even when foster youth do attend college, they are less likely to earn a degree than their non-foster care peers (Courtney, et al., 2010; Davis, 2006).

For example, the Midwest Evaluation of the Adult Functioning of Former Foster Youth, a longitudinal study that tracked foster youth from the states of Illinois, Iowa and Wisconsin since they were 17 years old, found that by age 23 or 24 slightly less than one third of the study participants had completed at least one year of college compared to 53% of a nationally representative sample of 23 and 24 year olds in the general population (Courtney, et al., 2010). Moreover, just six percent of the Midwest Study participants but 30% of the nationally representative sample of students had earned a degree. Similarly, using data from the National Center for Education Statistics (NCES), Davis (2006) found only 26 percent of “college-qualified” foster youth earn a degree or certificate within six years of enrollment compared with 56 percent of their peers who had not been in foster care.

**Barriers to Persistence in Higher Education for Foster Youth**

Researchers have only recently begun to explore why so few of the foster youth who attend college persist until degree completion. One of the very first studies to address this issue found that two-thirds of former foster youth attending a four-year
university in the state of California felt that the foster care system had not prepared them very well for college (Merdinger, et al., 2005).

This research also found that the pathway through college was marked by interruptions (Merdinger et al., 2005). Nearly half of the students had transferred from another school, primarily from a community college. One in five students reported having previously withdrawn, and 16 percent were considering withdrawing.

Studies also suggest that economic difficulties may be preventing some foster youth from completing a degree. One of the challenges identified in the Merdinger et al. study was the students’ precarious financial situation. Likewise, Courtney et al., (2010) found the most common reason Midwest study participants dropped out of an educational or vocational training program was the need to work. Nora et al. (2005) found that student retention rates are highest for college students exempt from paying tuition. It would make sense, then, that the percent of foster care youth who are successful in persisting to graduation would increase if foster care youth were offered tuition waivers and living stipends to eradicate these economic barriers.

Yet another reason foster youth who attend college fail to graduate is that some are not academically prepared for postsecondary education even though they have graduated from high school. Foster youth are much less likely to take college preparatory courses in high school than their peers (Blome, 1997; Sheehy et al., 2001) and this gap has been observed even when the two groups had similar test scores and grades (Sheehy et al., 2001).

One consequence of their lack of academic preparation is that many foster youth are required to enroll in remedial education courses during their first year in college
This is important because many students who are assigned to remedial education drop out of the classes (and often out of college) and those who remain make slow progress as remedial education delays time— to degree. One study reported that only 52 percent of remedial students in four-year colleges finish bachelor's degrees (compared with 78 percent of students without remedial course work) within eight and one-half years of college entry (Brock, 2010).

Finally, student service personnel at most post-secondary institutions are not familiar with or prepared to address the unique needs of this population (Dworsky & Perez, 2009). This may explain, in part, why many of the students in the Merdinger et al. (2005) study reported not being able or not knowing how to obtain needed services.

Policies and Programs Designed to Promote Post-Secondary Educational Attainment of Foster Youth

Over the past few decades, federal policies have attempted to increase access to college among youth in foster care. To help states prepare youth who will be aging out of foster care for the transition to adulthood, Congress enacted the Independent Living Initiative in 1986. This was replaced by the John H. Chafee Foster Care Independence Program (CFCIP) which the Foster Care Independence Act created in 1999. The Chafee program doubled the amount of money available to States and provided greater flexibility with respect to the use of those funds to assist transitioning foster youth in achieving self-sufficiency. Current and former foster care youth are eligible for Chafee-funded services including education and vocational training until they are 21 years old (DHHS, ACF, 2001).
As part of the Promoting Safe and Stable Families Amendment of 2001, Congress added the Education and Training Voucher (ETV) Program to the Foster Care Independence Act. This is the first federal program created specifically to address the post-secondary educational needs of current and former foster youth. Through this program, states can provide current and former foster youth with up to $5,000 per year for postsecondary training and education (P.L. 107-133, 107th Congress, 2001). Youth participating in the program on their 21st birthday remain eligible until age 23, as long as they are making satisfactory progress toward completion of their programs (Center for the Study of Social Policy, 2009).

The most recent major federal child welfare legislation, the Fostering Connections to Success and Increasing Adoptions Act of 2008, also contains a number of provisions related to the education of youth in foster care. These include provisions designed to promote educational stability and to expand eligibility for the ETV program to youth who exit foster care through adoption or relative guardianship when they are at least 16 years old. Another provision allows states to claim federal reimbursements for expenses made on behalf of foster care youth up to the age of 21 (Center for the Study of Social Policy, 2009). This provision is important because current research has demonstrated that extending foster care placement to the age of 21 increases the likelihood that these young people will complete at least one year of college (Peters, Dworsky, Courtney, & Pollack, 2009).

Foster care youth may also benefit from the federal College Cost Reduction Act of 2009, which allows foster care youth who were in care at age 13 and older to claim
independent status when applying for federal financial aid beginning with the 2009-2010 academic year (Fernandes, 2008).

Benefits of Post-Secondary Education

Increasing the number of former foster youth with four-year degrees is likely to have several benefits. Research has shown that low-income students, including those who have experienced out of home placement, that graduate from a four-year college or university enjoy a wage premium (Behrman, et al., 1996; Dale and Krueger, 2002). In 2008, young adults with a bachelor's degree earned 53 percent more than high school graduates and 96 percent more than those without a high school diploma (Aud, et al., 2010). Increasing the number of these students with four-year degrees will increase their own lifetime earnings, as well as possibly have benefits in terms of intergenerational income mobility (Griffith, 2008; Brock, 2010). Moreover, because of the strong relationship between poverty and child maltreatment (Sedlak & Broadhurst, 1996; Molnar et al., 2003; Berger, 2004; Korbin et al., 1998; Coulton, 1995) increasing the number of former foster youth will four-year degrees could also significantly reduce the future occurrence of child abuse and neglect (Tomison, 1998).

College attendance and completion provide other benefits as well. For example, adults who have attended some college or earned a bachelor's degree are more likely to report “excellent” or “very good” health than those who have only a high school diploma, even when they have comparable incomes (Baum & Ma, 2007), and educational attainment has positive effects on voting and other measures of civic engagement (Dee, 2004).
Present Study

This study examines the issue of college persistence by using an event history analysis to model relative risk of graduation from college for a group of college enrolled foster care youth and a sample of non-foster care, first generation, low-income students over time. The study also examines whether academic standing predicts time to graduation. This study addresses several gaps in our current knowledge about post-secondary educational attainment among foster care youth. First, although previous studies have found that foster care youth who attend college are less likely to graduate than other students (Courtney et al., 2010; Davis, 2006), these studies have not compared degree completion among foster care youth to degree completion among students from a similar socioeconomic background. This study uses other low-income, first generation college students as a comparison group to ensure that differences in socioeconomic background cannot explain any observed differences in graduation rates. Second, unlike previous studies, which have often not distinguished between foster care youth attending 2-year schools and those attending 4-year schools, this study focuses exclusively on foster care youth attending a 4-year university.

Third, there is a body of research examining measures of college success such as GPA (Griffith, 2008; Huber, 2010). For example, Hu and St. John (2001) and Hertzog (2005) have found that grade point average (GPA) is a strong predictor of student persistence, especially for minority students. Students who graduated within six years had an average GPA of 2.82 at the end of their first semester compared to the average GPA of 1.98 for non-graduates (Nora et al, 2005). However, this study examines whether GPA affects graduation among underrepresented groups, like court wards and
whether the impact of GPA on graduation among court wards is the same as the impact of GPA on students from similar socioeconomic backgrounds who were not in foster care.

Methods

Data

This study used de-identified administrative data from a Big Ten university student information systems database. This database includes information from the Registrar’s Office, the Admissions Office, the Financial Aid Office, and the Budgets and Planning Office.

The institutional review board at the university who supplied the data approved this study. As additional researchers cross universities were involved in the data analysis, a second university institutional review board was involved in gaining human subjects approval.

Sample Description

The sample included two groups of four-year college undergraduates who had been enrolled at a Big Ten university between January 2000 and May 2009. The foster care group consisted of 444 undergraduates who had identified themselves as “former wards of the court” on the Federal Application for Student Aid (FAFSA) form. The comparison group consisted of 378 low-income, first generation college students who had not been in foster care. This comparison group was a stratified random sample selected from the total population of 6,202 undergraduates who reported that neither of their parents had obtained any college and whose taxable family income for the preceding year did not exceed 150 percent of the federal poverty level. These criteria were used to increase the likelihood that the two groups would have similar socioeconomic
backgrounds, as the vast majority of foster care youth come from poor families (Goerge, et al., 2002). The comparison group was stratified by year of first enrollment and a random sample was selected from each cohort to approximately equal the number of foster care youth who first enrolled in that year.

Measures

**Dependent variable.** In this study, where the event of interest is graduation from college, the dependent variable is the number of consecutive semesters enrolled at the Big Ten university until graduation. In the literature, this duration is referred to as a *failure* time (Raykov, 2011) even when the event, like graduation, is ‘positive’.

**Independent variables.** The main independent variable, a time invariant covariate, was “ward of the court” status as measured by responses to the query on the Federal Application for Student Aid (FAFSA) form. Additional time invariant covariates included in the models were gender and race. The final independent variable, academic standing, was a dichotomous, time-varying covariate lagged by one semester. Having good academic standing was defined as a cumulative GPA of a 2.0 and above because students with GPA’s of 1.99 and below are placed on probationary status. Students who are unable to bring their cumulative GPA to a 2.0 in the subsequent semester after being placed on probationary status are formally dismissed by the university.

Outcomes

The primary outcome measures were the percentage of students who graduated from college and the discrete time hazard rate. Singer & Willett (2003) define the discrete-time hazard, h(ij), as the conditional probability individual, i, will experience an event (e.g. graduation) in time period j, given that individual i did not experience the
event during an earlier time period \( (h_{i,j} = \Pr(T_i=j | T_i \geq j)) \). The greater the value of \( h \) at time \( t \), the greater the probability that the event will occur. In this case, the discrete-time hazard measures the change in graduation rate over time.

**Data Analysis**

The data were analyzed using R 2.12.2, SPSS version 16, and an event history framework. An event history framework is appropriate when one is analyzing time-to-event data in the presence of censored cases. A case is censored if the observation period ends and the individual has not yet experienced the event (Raykov, 2011). Censored observations contain partial time-to-event information. In this case, students who dropped out and students who were still enrolled at the end of the observation period were treated as “censored”. Once a student dropped out, the case was considered censored through the end of the observation period, even if the student later re-enrolled.\(^{11}\)

Several discrete time hazard models were estimated. Model 1 provides just estimates the hazard of graduation. It does not include any covariates. Model 2 examines the main effect of the grouping variable, “ward of the court status” on the baseline hazard. It includes this grouping variable as well as the time period dummy variables for Semester 1 to Semester 21. This model assumes that the effect of the grouping variable on the hazard rate is consistent over time. Model 3 is the same as Model 2 except that it also examines the main effects of gender and race on the baseline hazard of graduation. Model 4 is the same as Model 3 except that it also examines whether academic standing affected the hazard. Finally, Model 5 examines whether the

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\(^{11}\) Additional analysis may be completed with this data set to assess graduation for students with multiple drop out episodes at a future point in time.
baseline hazard in each time period was the same for the two groups. It does by including interactions between group status and each of the time period dummies. This model allows the effect of the grouping variable on the hazard rate to vary over time.

The discrete-time hazard models yield parameter estimates that can be converted into estimated hazard ratios from the original exponentiated coefficients. If the estimated hazard ratio equals one, the independent variable has no effect on the hazard. If the estimated hazard ratio is greater than one, and the independent variable is categorical, the independent variable is associated with increased hazard. If the estimated hazard ratio is less than one, and the independent variable is categorical, the independent variable is associated with decreased hazard.

This study addresses two research questions about the hazard of graduation: (1) How does the hazard rate for foster care students compare to the hazard rate for non-foster care, first generation, low-income students? (2) What affect do other factors such as gender, race and academic standing have on the hazard rate?

Findings

Table 10 shows the status of the students at the end of the observation period. There was a maximum observation time of 21 semesters. Although students who graduated comprised the largest percentage of both groups, former court wards were much less likely to have graduated than their peers (40% vs. 74%) by the end of the observation period. Conversely, former wards of the court were much more likely to have dropped out (33% vs. 18%).

With respect to the other factors, females were slightly more likely to have graduated than their male counterparts. African American students were less likely to
have graduated than White students or students of other races, and students who
maintained good academic standing were more likely to have graduated than students
with poor academic standing.

Table 10

*Enrollment Status of Students at the End of the Observation Period*

<table>
<thead>
<tr>
<th>Group Status</th>
<th>Graduated</th>
<th>Dropped Out</th>
<th>Currently Enrolled</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-foster Care</td>
<td>274 (74%)</td>
<td>68 (18%)</td>
<td>26 (7%)</td>
<td>368</td>
</tr>
<tr>
<td>Foster Care</td>
<td>176 (40%)</td>
<td>146 (33%)</td>
<td>122 (27%)</td>
<td>444</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Graduated</th>
<th>Dropped Out</th>
<th>Currently Enrolled</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>168 (53%)</td>
<td>88 (28%)</td>
<td>63 (20%)</td>
<td>319</td>
</tr>
<tr>
<td>Female</td>
<td>282 (57%)</td>
<td>126 (26%)</td>
<td>85 (17%)</td>
<td>493</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Graduated</th>
<th>Dropped Out</th>
<th>Currently Enrolled</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>232 (64%)</td>
<td>77 (21%)</td>
<td>56 (15%)</td>
<td>365</td>
</tr>
<tr>
<td>African American</td>
<td>142 (44%)</td>
<td>109 (34%)</td>
<td>69 (22%)</td>
<td>320</td>
</tr>
<tr>
<td>Other&lt;sup&gt;a&lt;/sup&gt;</td>
<td>76 (60%)</td>
<td>28 (22%)</td>
<td>23 (18%)</td>
<td>127</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GPA</th>
<th>Graduated</th>
<th>Dropped Out</th>
<th>Currently Enrolled</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Academic Standing&lt;sup&gt;b&lt;/sup&gt;</td>
<td>442 (64%)</td>
<td>115 (17%)</td>
<td>129 (19%)</td>
<td>686</td>
</tr>
<tr>
<td>Poor Academic Standing&lt;sup&gt;c&lt;/sup&gt;</td>
<td>8 (6%)</td>
<td>99 (79%)</td>
<td>18 (14%)</td>
<td>125</td>
</tr>
</tbody>
</table>

| Total                       | 450 (55%) | 214 (26%)   | 148 (18%)          | 812     |

<sup>a</sup> Other was comprised of students who identified as American Indian, Latino &/or Asian American
<sup>b</sup> Cumulative GPA of 2.0 and above
<sup>c</sup> Cumulative GPA of 1.99 and below
The median lifetime is the period during which the value of the estimated survival function is .50, the time period by which half of the sample has experienced the event. The median lifetime can also be thought of as the “average” time to the target event (Keiley & Martin, 2005). In this study, the median lifetime was 10 semesters for the comparison group, and 11 semesters for the former court wards.

Table 11 shows the parameter estimates from the three discrete-time hazard models. Model 1 provides the baseline hazard rates for each of the 21 semesters in which students could be enrolled during the observation period. The model suggests that the likelihood of graduation peaks during semesters 9, 10, and 11. After semester 12, the hazard of graduation begins to decline.

Model 2 was estimated to investigate the main effect of the grouping variable, “court ward status” on the hazard of graduation. The estimated hazard ratio for court ward status is exp(-.42) or .657. This means that former foster youth graduated at two thirds the rate of other low-income first generation students. The difference in their hazard rates is statistically significant.

The parameter estimates for Model 3 indicate that gender has no effect on graduation, but that being African American as compared to being White reduced the estimated hazard of graduation by 64 percent (1-exp(-1.02)) and being of another race other than White or African American reduced the estimated hazard of graduation by 30 percent (1-exp(-.36)). This effect was statistically significant.

The parameter estimates for Model 4 indicate that being on poor academic standing (having a GPA below a 2.0) reduced the estimated hazard of graduation by 82 percent (1-exp(-1.72)). This effect was statistically significant. The impact of the
grouping variable and race remained significant even after controlling for academic standing.

Finally, the parameter estimates for Model 5 indicate that the hazard rate for the ward of the court group was different from the hazard rate for the comparison group during semesters 5, 10, 11 and 13. Specifically, the ward of the court group had a significantly lower hazard in each of those semesters than the comparison group.

Table 11

Parameter Estimates from Discrete Time Hazard Models Predicting College Graduation for First Generation Low-Income Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>-19.57 (377.86)</td>
<td>-19.35 (376.74)</td>
<td>-19.05 (371.72)</td>
<td>-18.86 (365.00)</td>
<td>-19.57 (560.60)</td>
</tr>
<tr>
<td>Semester 2</td>
<td>-19.57 (382.37)</td>
<td>-19.36 (381.23)</td>
<td>-19.05 (376.13)</td>
<td>-18.90 (370.10)</td>
<td>-19.57 (563.70)</td>
</tr>
<tr>
<td>Semester 3</td>
<td>-5.91*** (0.71)</td>
<td>-5.7*** (0.71)</td>
<td>-5.44*** (0.71)</td>
<td>-5.37*** (0.71)</td>
<td>-19.57 (588.40)</td>
</tr>
<tr>
<td>Semester 4</td>
<td>-4.32*** (0.34)</td>
<td>-4.12*** (0.34)</td>
<td>-3.86*** (0.35)</td>
<td>-3.82*** (0.35)</td>
<td>-4.68*** (0.58)</td>
</tr>
<tr>
<td>Semester 5</td>
<td>-3.21*** (0.20)</td>
<td>-3.01*** (0.21)</td>
<td>-2.75*** (0.23)</td>
<td>-2.72*** (0.23)</td>
<td>-4.64*** (0.58)</td>
</tr>
<tr>
<td>Semester 6</td>
<td>-2.97*** (0.19)</td>
<td>-2.79*** (0.22)</td>
<td>-2.52*** (0.21)</td>
<td>-2.49*** (0.21)</td>
<td>-3.03*** (0.27)</td>
</tr>
<tr>
<td>Semester 7</td>
<td>-3.11*** (0.21)</td>
<td>-2.94*** (0.22)</td>
<td>-2.66*** (0.23)</td>
<td>-2.63*** (0.23)</td>
<td>-3.22*** (0.31)</td>
</tr>
<tr>
<td>Semester 8</td>
<td>-2.47*** (0.17)</td>
<td>-2.3*** (0.17)</td>
<td>-2.01*** (0.19)</td>
<td>-1.99*** (0.19)</td>
<td>-2.37*** (0.22)</td>
</tr>
</tbody>
</table>

It was possible for some students to graduate in less than 8 semesters at the Big Ten University because they had transferred from another college or university.
Table 11 - Continued

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(asymptotic SE)</td>
<td>(asymptotic SE)</td>
<td>(asymptotic SE)</td>
<td>(asymptotic SE)</td>
<td>(asymptotic SE)</td>
</tr>
<tr>
<td>Semester 9</td>
<td>-1.72*** (0.13)</td>
<td>-1.55*** (0.14)</td>
<td>-1.22*** (0.17)</td>
<td>-1.20*** (0.17)</td>
<td>-1.61*** (0.17)</td>
</tr>
<tr>
<td>Semester 10</td>
<td>-1.47*** (0.14)</td>
<td>-1.29*** (0.14)</td>
<td>-0.90*** (0.17)</td>
<td>-0.87*** (0.17)</td>
<td>-1.03*** (0.16)</td>
</tr>
<tr>
<td>Semester 11</td>
<td>-1.07*** (0.14)</td>
<td>-0.89*** (0.15)</td>
<td>-0.44*** (0.18)</td>
<td>-0.37** (0.18)</td>
<td>-0.58** (0.18)</td>
</tr>
<tr>
<td>Semester 12</td>
<td>-1.08*** (0.17)</td>
<td>-0.87*** (0.18)</td>
<td>-0.36** (0.21)</td>
<td>-0.30* (0.21)</td>
<td>-0.88*** (0.24)</td>
</tr>
<tr>
<td>Semester 13</td>
<td>-0.97*** (0.21)</td>
<td>-0.78*** (0.22)</td>
<td>-0.22 (0.25)</td>
<td>-0.35 (0.25)</td>
<td>-0.46 (0.27)</td>
</tr>
<tr>
<td>Semester 14</td>
<td>-0.62* (0.26)</td>
<td>-0.44 (0.27)</td>
<td>0.14 (1.26)</td>
<td>-0.01 (0.30)</td>
<td>-0.36 (0.35)</td>
</tr>
<tr>
<td>Semester 15</td>
<td>-0.29 (0.34)</td>
<td>-0.09 (0.35)</td>
<td>0.53 (0.37)</td>
<td>-0.31 (0.38)</td>
<td>-1.70*** (0.47)</td>
</tr>
<tr>
<td>Semester 16</td>
<td>-0.12 (0.49)</td>
<td>0.34 (0.49)</td>
<td>1.09 (0.51)</td>
<td>-0.70 (0.52)</td>
<td>0.51 (0.73)</td>
</tr>
<tr>
<td>Semester 17</td>
<td>-1.61 (1.10)</td>
<td>-1.41 (1.1)</td>
<td>-0.66 (1.11)</td>
<td>-0.97 (1.13)</td>
<td>-0.69 (1.23)</td>
</tr>
<tr>
<td>Semester 18</td>
<td>-1.39 (1.12)</td>
<td>-1.15 (1.12)</td>
<td>-0.43 (1.14)</td>
<td>-0.44 (1.20)</td>
<td>5.31*** (1.41)</td>
</tr>
<tr>
<td>Semester 19</td>
<td>-0.69 (1.22)</td>
<td>-0.42 (1.23)</td>
<td>0.14 (1.26)</td>
<td>-0.24 (1.26)</td>
<td>19.57 (10754.01)</td>
</tr>
<tr>
<td>Semester 20</td>
<td>-19.57 (10754.01)</td>
<td>-19.15 (10754.01)</td>
<td>-19.28 (10754.01)</td>
<td>-19.34 (10754.01)</td>
<td>-19.57 (10754.01)</td>
</tr>
<tr>
<td>Semester 21</td>
<td>19.57 (10754.01)</td>
<td>19.99 (10754.01)</td>
<td>-19.85 (10754.01)</td>
<td>19.79 (10754.01)</td>
<td>19.57 (10754.01)</td>
</tr>
<tr>
<td>Group (1= Court Ward)</td>
<td>-0.42*** (0.11)</td>
<td>-0.40*** (0.11)</td>
<td>-0.29** (0.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (1= female)</td>
<td>0.12 (0.11)</td>
<td>-0.07 (0.11)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 11 – Continued

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity (1= African American)</td>
<td></td>
<td>-1.02*** (0.12)</td>
<td>-1.01*** (0.13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity (2= Other)</td>
<td></td>
<td></td>
<td>-.036* (0.15)</td>
<td>0.31* (.15)</td>
<td>-0.36*** (0.08)</td>
</tr>
<tr>
<td>GPA</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Semester 1 X Group</td>
<td></td>
<td>-1.93**14 (758.90)</td>
<td></td>
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<tr>
<td>Semester 2 X Group</td>
<td></td>
<td>3.20**14 (767.20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 3 X Group</td>
<td></td>
<td>14.27 (588.40)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Semester 4 X Group</td>
<td></td>
<td>0.59 (0.71)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 5 X Group</td>
<td></td>
<td>2.00** (0.62)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Semester 6 X Group</td>
<td></td>
<td>0.12 (0.38)</td>
<td></td>
<td></td>
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<tr>
<td>Semester 7 X Group</td>
<td></td>
<td>0.20 (0.43)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 8 X Group</td>
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<td>-.24 (0.35)</td>
<td></td>
<td></td>
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<tr>
<td>Semester 9 X Group</td>
<td></td>
<td>-0.26 (0.27)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Semester 10 X Group</td>
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<tr>
<td>Semester 11 X Group</td>
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<td>-1.26*** (0.32)</td>
<td></td>
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<tr>
<td>Semester 12 X Group</td>
<td></td>
<td>-0.41 (0.35)</td>
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<tr>
<td>Semester 13 X Group</td>
<td></td>
<td>-1.24** (0.47)</td>
<td></td>
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</tr>
<tr>
<td>Semester 14 X Group</td>
<td></td>
<td>-0.61 (0.54)</td>
<td></td>
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<tr>
<td>Variables</td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 4</td>
<td>Model 5</td>
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<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Semester 15 X Group</td>
<td></td>
<td>-0.61 (0.69)</td>
<td></td>
<td></td>
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<tr>
<td>Semester 16 X Group</td>
<td></td>
<td>-0.73 (0.99)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 17 X Group</td>
<td></td>
<td></td>
<td>-18.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 18 X Group</td>
<td></td>
<td></td>
<td></td>
<td>-19.57</td>
<td></td>
</tr>
<tr>
<td>Semester 19 X Group</td>
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*** P<.001, ** P<.01, * P<.05

Figure 1 provides a graphical summary of the estimates from Model 2. It displays the baseline hazard rate by foster care status. The baseline hazard function is generally higher for the comparison group than for the ward of the court group, which reflects the fact that the parameter estimate for ward of the court status was negative.

Figure 2 provides a graphical summary of the estimates from Model 5. It shows the effect of group status (foster care vs. comparison group) on the hazard during each semester. In this case, there is no significant group effect observed until the 5th semester when the hazard rate is higher for the foster care group. This significant group effect disappears in subsequent semesters and doesn't reappear again until semester 10, at which point the graph shows the comparison group experiencing a higher hazard rate of
graduation through semester 16; however, the difference is only statistically significant in
semesters 11 and 13. The population in the sample becomes too small to examine any
differences beyond semester 16.

*Figure 1.* Hazard curve for overall effect of foster care status on graduation.

*Figure 2.* Hazard curve for group effect on graduation during each semester.
The combined effects of ward of the court status and academic standing can be seen in Figure 3. Comparing the curve for former foster care students with poor academic standing to the curve for foster care students who were in good academic standing shows that foster care students who were in good academic standing had a higher graduation rate. Likewise, comparing the curve for non-foster care students with poor academic standing to the curve for non-foster care students who were in good academic standing shows that non-foster care students who were in good academic standing had a higher graduation rate. In other words, being in poor academic standing was associated with a lower graduation rate regardless of court ward status.

Figure 3. Hazard curve for graduation and the effect of academic standing by foster care status.

Comparing the curve for former foster care students who were in poor academic standing to the curve for non-foster care students who were in poor academic standing
shows that non-foster care students had only a slightly higher graduation rate. Comparing the curve for former foster care students who were in good academic standing to the curve for non-foster care students who were in good academic standing shows that the non-foster care students had a higher graduation rate. This difference was much larger than the difference among students who were in poor academic standing. In other words, being a former ward of the court was associated with a lower graduation rate, especially among students in good academic standing.

Discussion

The results of the survival analysis, which we estimated the effects of foster care status on the hazard of graduation while controlling for GPA, are interesting in several respects. Students in the comparison group graduated at a higher rate than those who had experienced foster care. Specifically, the effect was statistically significant during semesters 5, 10, 11, and 13 (or the fall semester of a student’s 3rd year, and during a student’s 4th and 5th year of enrollment). These findings are consistent with the results of earlier studies that indicate that foster care alumni fare worse than their non-foster care peers in the area of postsecondary educational attainment (Courtney, et al., 2010; Pecora et al., 2006).

In this study, gender was not related to the hazard of graduation. This runs contrary to the results reported by Courtney, Dworsky, Lee & Raap (2010) who found that 37% of young women who had been in foster care had completed at least one year of college compared with only 26 percent of young men. Additionally, Diprete and Buchmann (2006) found women graduate at a greater rate than men. However, findings
from the current study align with the findings of Hertzog (2005) who also found no

gender differences in college retention rates.

Similar to the findings of other researchers, race had an effect on graduation
(Mallinckrodt & Sedlacek, 2009). African American students graduated at a lower rate
than White students.

In the present study, students in poor academic standing graduated at a lower rate
than students in good academic standing. This finding is not surprising in that several
researchers have found that course failure is a strong predictor of dropping out of school
(Wagner & Blackorby, 1996; Hu and St. John; 2001). Hertzog (2005) also found that
grade point average (GPA) is a strong predictor of student persistence, especially for
minority students. However, the results of the present study also indicate that the
difference in graduation rates between foster care students and their non-foster care peers
is greater among those in good academic standing than among those in poor academic
standing.

Implications for Policy and Practice

If college graduation rates are to increase among young people aging out of foster
care, substantive changes in both policy and practice may need to be made. One
explanation for the disparity in the rate of graduation between foster care alumni and
other low-income, first generation students is that students who come to campus from
foster care may have needs that differ from their non-foster peers of similar socio-
economic backgrounds. Previous studies that have queried foster care youth on why they
dropped out of college reference several barriers including the need to work, child care
responsibilities, and falling behind in school (Courtney, et al., 2010; Merdinger, 2005).
An additional service that could be offered to foster care students is the creation of on-campus family resource centers for pregnant and parenting students. Another is academic support, including access to tutoring, is also critical for this population to ensure they don’t fall behind (Merdinger et al., 2005).

What happens to students after they arrive on campus is at least as important as what happened before (Brock, 2010). The quality and frequency of interactions between students, faculty, and staff will shape students’ experiences and determine how well they “fit” at a particular institution (Tinto, 1993). The evidence on the importance of social integration\(^\text{13}\) is less developed. One can imagine that students who feel more comfortable in their college surroundings may perform better academically. This may be because the effort they put into their coursework is more productive if they are socially comfortable.

Being socially comfortable at college may be more critical for foster care youth than other college-going populations, as college may be the only opportunity for connections to caring adults in their lives. Many foster care alumni who come to campus may not have access to off-campus informal networks where they can turn to in times of stress (Mitchell & Trickett, 1980). Social integration onto college campuses may be needed for foster youth to make up for or counteract the lack of access to informal networks (Mendes, 2006). This is supported by research showing that foster care students who have access to positive social supports on campus, including access to faculty and community mentors, are more likely to persist to graduation (Haussmann, Schofield, & Woods, 2007).

\(^{13}\) Social integration is one of a constellation of “social” terms that is being used widely in contemporary policy development to describe concepts whose aim (as stated by the Copenhagen Declaration and Programme of Action) is to foster societies that are stable, safe, just and tolerant, and respect diversity, equality of opportunity and participation of all people (Laidlaw Foundation, 2002).
Academic advisors in four-year universities may be better positioned than others to influence the availability of supportive relationships on campus and encourage the student’s self-esteem and personal efficacy. Academic advisors play a pivotal role in promoting resilience. The advisor-student relationship serves as the single most important adult interaction for students newly arriving on campuses (McGillin, 2003). According to McGillen (2003) faculty members and advisors not only became the primary academic supports of at-risk students by the third semester, they were also cited by nearly one third of resilient at-risk students as their primary means of social support (McGillin, 2003). As foster care youth are less likely to have access to social support networks outside the university than other students, the percentage of foster care students who name faculty members and academic advisors as their primary means of social support may be much higher.

Another possibility to consider in increasing the experience of graduation for college-going foster care youth is that students who are better able to form social networks are then better able to form study groups and gain knowledge through their peers, therefore increasing their educational output (Griffith, 2008). There is evidence that the formation of peer and social groups can positively impact educational outcomes. Increasing the number of students at the university from their own peer groups has a positive impact on both grades and persistence (Fletcher and Tienda, 2008). Students felt a stronger sense of belonging and performed better academically when students were able to interact with peers who shared common life experiences (Ostrove and Long, 2007).

Thus, universities who target and recruit foster care youth to enroll in their post-secondary institutions may increase these students’ odds at successfully persisting to
graduation if they provide these students with opportunities to regularly interact with one another throughout their post-secondary academic journey. Utilizing upper level foster care youth to serve underclassmen can serve a pivotal role in the construction of a new support network for incoming students who have come to campus from the foster care system.

Finally, the fact that the difference in graduation rates between foster care students and their non-foster care peers is greater among those in good academic standing than among those in poor academic standing means that it should not be assumed that foster care youth who are achieving academically are not in need of support services to ensure they persist to graduation. Some foster care youth may arrive at college knowing exactly what they need to do to accomplish their goals. Most, however, need guidance to figure out which courses to take and in what sequence, how to add or drop courses and apply for financial aid, and what resources are available to help them adjust to campus life. Even after they have been in college for awhile, many students need help knowing how to fulfill their major requirements, file for graduation or transfer, and resolve personal or academic problems that may interfere with their progress.

This has certainly been the rationale behind the growing number of targeted college retention programs that provide former foster youth with a wide array of services and supports they need to succeed in school and graduate. No two programs are alike, but commonalities include opportunities for academic, social and emotional support, year round housing, and access to financial aid targeted to the population (Dworsky & Perez, 2009). The findings of the present study and previous studies support the implementation of these campus-based, student support services that target foster care youth. Specific
appropriations could be allocated through the federal and state higher education and human service budgets to support the development and evaluation of campus support initiatives for foster care alumni enrolled in college.

Strengths and Limitations

The strengths of this research are that it includes a fairly large sample of foster care students at a four-year university as well as a comparison group of low-income first generation students who were not in foster care. It is also the first quantitative study to use discrete time hazard models to analyze college graduation rates of foster care youth.

However, there are several limitations in this study. Other factors that the analysis could not control for could have impacted the college graduation rates of the foster care and comparison groups. For example, it was not possible to identify students who had transferred from another college or university. Transfer students have very different college experiences than students who enroll in 4-year colleges immediately, or shortly after high school. Transfer students in this study are very likely to have graduated in less than 8 semesters. Not being able to control for transfer status is a problem if the likelihood of being a transfer student was different for foster care group than for the non-foster care group.

Secondly, test scores on college entrance exams and high school GPA are significant predictors of college GPA. Students with higher test scores and grades have demonstrated higher ability prior to entering college, and therefore tend to perform better in college as well (Cohn et al., 2004). Students that enter a college or university in the bottom half of the test score distribution suffer in terms of GPA in both their first year
and through to their senior year (Griffith, 2008). However, this study could not control for prior academic performance.

Another factor that could affect the foster care group’s graduation rate is the loss of access to education and training vouchers after the age of 23. The inclusion of age as a covariate would have allowed us to assess how many students became ineligible for ETV at the time they dropped out of college.

Conclusion

Changes in the U.S. economy have made the attainment of a higher education credential more important than ever for self-sufficiency. There is a significant disparity in post-secondary graduation rates between foster care youth and their low-income, first generation peers. This difference is observed even when foster care youth are maintaining passing GPA’s. There is a great need for institutions of higher education to create population-specific wraparound supports that begin from the first term of enrollment and follow students until they graduate with a post-secondary education credential. These wraparound supports should not only include supports for tangible needs (i.e. financial aid, child care, housing, & employment), but also access to supportive faculty and staff and opportunities for newly enrolled foster care youth to interact with other foster care youth enrolled on campus.

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CHAPTER V

CONCLUSION

The aim of this three-paper dissertation was to assess college access to and completion of post-secondary education among foster care youth from three perspectives. Paper one used a qualitative action research approach to examine the challenges faced by foster care youth transitioning from high school to college from the perspectives of the youths themselves. The paper also offered some youth-guided solutions to address those challenges.

Papers two and three were based on a quantitative analysis of administrative data from a Big Ten university student information systems database. For paper two, logistic regression models were estimated to determine whether there was a difference in the likelihood of dropping out prior to degree completion between undergraduates who identified themselves as former court wards and other low-income, first generation college students after controlling for race and gender. For paper three, an event history framework and discrete time hazard models were used to compare the foster care alumni’s college graduation rate to the college graduation rate of their non-foster are, first generation, low-income peers and to examine the academic standing on those graduation rates.

This final chapter summarizes the major findings and their implications for future research. It also discusses the limitations of the research and how those limitations may have affected the results.
Summary of Study Findings

Paper One

Two Kidspeak® events provided opportunities for a sample of foster care youth from around the state of Michigan to testify in front of state and local policymakers and administrators. The students spoke about several barriers that have impeded their educational success and offered solutions to eradicate these barriers.

An analysis of their testimony identified eight major themes: the desire for relationships with caring adults both in and out of school; having access to teachers with the ability to teach the mandated high school curriculum in a variety of ways; being afforded the opportunity to recover missing/lost credits; having the resources necessary for learning in the public school system; access to extra-curricular and after-school programs; concerns with personal safety on and off school grounds; having access to mental health services; and a lack of independent living preparation for the transition from high school to college.

The students provided several recommendations for policy and practice including access to caring adults and mentors after their foster care cases are closed, not making placement changes in the middle of sports seasons, or during other extra-curricular activities where foster care youth are actively engaged, and the promotion of school safety through the adoption of statewide anti-bullying policies, among others.

Paper Two

Undergraduates who have been in foster care were significantly more likely to drop out during or before the end of their first year (21% vs. 13%) and prior to degree completion (34 vs. 18%) than their non-foster care peers who were low-income, first
generation students. These findings are consistent with the results of earlier studies that indicate that foster care alumni fare worse than their non-foster care peers in the area of postsecondary educational attainment (Courtney, et al., 2010; Dworsky & Perez, 2009; Pecora et al., 2006).

There are several recommendations for policy and practice to improve post-secondary retention rates of foster care youth. Foster care youth may arrive on campus without strong connections to caring adults who they could turn to for support in dealing with the stresses of college-level coursework and the pressures of college life. One way to increase college retention and graduation rates among foster care alumni would be to provide them with mentors (including faculty and community mentors) or other formal supports (campus-based programs that target foster care youth) to compensate for their lack of access to informal networks (Mendes, 2006; Haussmann, Schofield, and Woods, 2007).

Another barrier to post-secondary retention is access to sufficient financial aid resources necessary to cover all education and living expenses. Priority placement in federal work study programs and the extension of policies on the use of targeted financial aid programs, such as the education training voucher (Center for the Study of Social Policy, 2009) could go a long way to increase college retention and graduation rates among foster care alumni.

**Paper Three**

Overall, students who experienced foster care placement graduated at a slower rate than the comparison group of students who had not been in foster care. Specifically, the effect was statistically significant during the following semesters of enrollment: 5,
10, 11, and 13 (or the spring semester of a student’s 2nd year, and during a student’s 4th year of enrollment). Overall, academic standing impacted students’ experience on graduation. Students in poor academic standing (cumulative GPA of 1.99 or below) graduated at a slower rate than students in good academic standing (cumulative GPA’s at or above 2.0). However, the difference in graduation rates between foster care students and their non-foster care peers was much larger among students in good academic standing than among students in poor academic standing.

This study points to several recommendations for practice interventions to ensure foster care youth successfully persist to graduation. Evidence supports the importance of socially integrating, including immediate and regular access to academic advisors (McGillen, 2003), other students support service programs that target the population (Dworsky & Perez, 2009) and positive social networks (i.e. peer to peer mentors) (Ostrove & Long, 2007).

Study Limitations

Paper one had several limitations related to the sample. The sample was small and only included young people who were known by their caseworkers to have an interest in pursuing a post-secondary degree. Consequently, the opinions of students who provided testimony may not reflect the perceptions of the foster care population as a whole. The perspectives of young people who were neither white nor African American were also under-represented.

Finally, the full impact of the action research strategy could not be assessed because there wasn’t adequate time during the Kidspeak® event to capture all of the reactions of the policymakers on the listening panel.
Three limitations characterized paper two. First the sample did not include students attending community colleges and vocational institutions; these findings cannot be generalized to students who attend two-year and vocational post-secondary education programs. Because admissions requirements for a Big Ten university are more rigorous than the standards for community colleges and vocational education programs, the students in this sample may have been more successful or resilient than students represented in prior studies. This is important because studies have found that minority students are more likely to graduate when they attend more selective colleges rather than non-selective schools (Griffith, 2008). This also might explain why the differences observed in this study were not as large as what was observed in other studies (Pecora et al., 2006).

Second, the multivariate analysis could not control for several potentially confounding variables. Some of these variables specifically pertain to the experiences of the students who had been in foster care (i.e. age at which alumni exited foster care, years between foster care exit and first enrollment in college, foster care placement history). Others have been identified in the literature as being related to college success (i.e. high school GPA, ACT score). Controlling for the latter variables is important because these pre-college differences could explain some of the differences observed between the foster care students and their non-foster care peers. Finally, because on campus employment may increase student retention rates (Oklahoma State University Federal Work Study Information, 2010), paper two would have been stronger if it had been possible to differentiate between students who were eligible for federal work-study and those who actually participated in an on-campus employment program.
In paper three a major limitation was the inability to control for several covariates that could affect graduation rates. For example, test scores on college entrance exams and high school GPA are significant predictors of college GPA (Cohen et al., 2004; Griffith, 2008). Because foster care students lose eligibility for education and training vouchers (ETV) after the age of 23, Paper three would have been stronger if student age were known.

Questions for Future Research

The themes that emerged from paper one raise several questions for future research. For example, what services could states provide with their federal Chafee funds to better prepare foster care youth for the high school to college transition? What are the barriers that prevent young people in foster care from receiving mental health services?

The literature review indicates that maintaining foster youth in their school of origin is a good policy for increasing educational outcomes (Atkinson, 2008; Weinberg, Zetlin, & Shea, 2003; McNaught, 2009), but it also indicates that many foster care youth are concentrated in low performing schools (Smithgall et al., 20004). Does keeping foster care youth in their school of origin increase college access even if the school of origin is a low performing school?

Students who participated in the Kidspeak® program indicated that teachers should be open to different instructional strategies as a way to improve educational outcomes. What types of instructional strategies should be used by classroom teachers to improve the academic outcomes for youth in foster care? For foster care students who are attending alternative education programs as the strategy to secure their high school
diplomas, are they less prepared to attend college than students who graduate from traditional high schools?

From a systems perspective, who is responsible for the educational outcomes of children in foster care? The young people who participated in Kidspeak® believed that receiving an education was critical to their success. They also mentioned that the most important support to ensure their educational success was access to permanent and caring adults (i.e. foster parents, educators, case workers, judges). How can education advocacy be made more effective among adults involved in the lives of young people who are aging out of the foster care system?

Questions for future research include the following:

1. Does academic performance prior to high school have the same impact on foster care students as on other low-income first generation students? The literature suggests that test scores on college entrance exams and high school GPA are significant predictors of college GPA (Cohen et al., 2004; Griffith, 2008). The inclusion of these predictors in subsequent research is important to gain an understanding of their impact on the college drop out rates of foster care youth.

2. Does being of transfer student status affect the experience of graduation? In paper three, we observed that there were a number of students who experienced graduation during semester five. It is assumed that these students were experiencing the event during semester five because they were transfer students; however, we can not be conclusive about this.

3. How might becoming ineligible for the ETV have affected when and whether foster care students dropped out or graduated? Foster care students over the age of 23 lose eligibility for the education and training voucher. Adding age as covariate in a future study would allow us to assess how many students may have dropped out after losing access to this financial aid resource.
4. Finally, how many more students in this study would have experience the event of graduation if the analysis had allowed for students to re-enter college after taking a period of time off? College students may have life experiences that impact their ability to succeed academically. When given a second chance at obtaining a post-secondary credential, they may be able to find success. Employing a multiple spell survival analysis approach would allow us to track students who took a break in the college going process, but may not have actually dropped out.

Summary

This research has given foster care youth an opportunity to contribute to our understanding of the problems that impede their educational success and to offer possible solutions. It has also begun to fill gaps in the literature related to college retention and graduation among this population.

Policy makers and practitioners in the fields of family law, child welfare, K-12 education, higher education and mental health can use these research findings to increase the post-secondary educational success of foster care youth. This is critical as changes in the U.S. economy have made the attainment of a higher education credential more important than ever to obtain self-sufficiency.

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Appendix A

HSIRB Approval Letters
May 17, 2011

To: Joanne Riebschleger
254 Baker Hall

Re: IRB # 09-493 Category: EXPEDITED 6,7
Renewal Approval Date: May 16, 2011
Project Expiration Date: May 15, 2012

Title: Evaluation of Michigan Educational Opportunities for Youth in Care Camp, 2009

The Institutional Review Board has completed their review of your project. I am pleased to advise you that the renewal has been approved.

The review by the committee has found that your renewal is consistent with the continued protection of the rights and welfare of human subjects, and meets the requirements of MSU’s Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

Renewals: IRB approval is valid until the expiration date listed above. If you are continuing your project, you must submit an Application for Renewal application at least one month before expiration. If the project is completed, please submit an Application for Permanent Closure.

Revisions: The IRB must review any changes in the project, prior to initiation of the change. Please submit an Application for Revision to have your changes reviewed. If changes are made at the time of renewal, please include an Application for Revision with the renewal application.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify the IRB office promptly. Forms are available to report these issues.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with the IRB office.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at IRB@msu.edu. Thank you for your cooperation.

Sincerely,

Harry McGee, MPH
SIRB Chair

Angeline Day, Rosalind Kirk
Appendix B

Glossary of Terms
GLOSSARY

**Academic Standing** – time varying covariate, dichotomous variable. Good academic standing is defined as having a cumulative grade point average (GPA) of 2.0 and above. Poor academic standing is defined as having a cumulative GPA of 1.99 and below.

**Action Research** is a proactive research project geared toward constructive and positive change in a social setting by investigating participants’ conflicts and needs (Barbour, 2008).

**Censoring** is a missing data problem that is commonly addressed in survival analysis. Ideally, both the initial observation date and event experience dates of a subject are known, in which case the lifetime is known. If it is known only that the date of death is after some date, this is called right censoring.

**College qualified** is defined by the minimum standard of college qualification— students who have earned at least a 2.5 grade point average (GPA), taken a college preparatory curriculum, and completed Algebra I or II, Pre-calculus, Calculus and/or Trigonometry

**Content analysis** is the systematic qualitative and quantitative analysis of the contents of a data corpus (documents, texts, etc.) (Barbour, 2008).

The **Discrete-Time Hazard Function**, denoted as $h(t_j)$, is the conditional probability that a person will experience the target event under investigation during time period $j$, given that he or she had not experienced that event in a previous time period.

**First Generation** include students who reported on the FAFSA that their parents had not completed any degree beyond a high school diploma

**Foster Care Alumni/Former “Ward of the Court”** - are used interchangeably, and refer to a student who was in the custody of the State rather than in a biological parents’ home at the time of graduation from high school/application to college.

**In Vivo Coding**, also known as literal coding and verbatim coding, refers to the coding method in which a participant generated word or short phrase from the actual language found in the qualitative data record is used as the primary data analysis method. In Vivo coding is particularly useful in educational ethnographies with youth. The child and adolescent voices are often marginalized, and coding with their actual words enhances and deepens an adult’s understanding of their cultures and worldviews. In Vivo is also applicable to action research (Saldana, 2009).
A **low income**-individual means an individual whose family's taxable income for the preceding year did not exceed 150 percent of the poverty level amount.

The **Median Life-Time** is the period during which the value of the estimated survival function is .50, or, in other words, the time period by which half of the sample has experienced the event and half has not. The median life-time can be thought of as the “average” time to the target event (Keiley & Martin, 2005).

**Persistence Toward Degree** is defined as continued enrollment in college beyond the completion of the first year.

The **Survival Function**, \( S(t) \), as its name implies, indicates the probability that a randomly selected person will “survive” during period \( j \); in other words, it indicates the probability that he or she will not experience the event during that time period.

**Social integration** encompasses four dimensions: spatial elements (i.e. public spaces, private spaces, physical location, geographic proximity/distance, and economic proximity/distance), relational elements (i.e. social proximity/distance, emotional connectedness, recognition, and solidarity) functional/developmental elements (i.e. capabilities, developmental capacities, assets/liabilities, and talents/potential, and human capital), and participation/empowerment (i.e. freedom to participate and the power to do so). Social inclusion is dependent upon the satisfaction of these needs.

**Time to event**, in this study, is measured in semesters.