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Mental Health and the Relationship Between Parental Divorce and Children's Higher Degree Acquisition

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MENTAL HEALTH AND THE RELATIONSHIP BETWEEN PARENTAL DIVORCE AND
CHILDREN'S HIGHER DEGREE ACQUISITION

by

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ABSTRACT

Studies between parental divorce and children's educational attainment have been extensively observed in family research. However, few studies have attempted to examine the negative relationship of those associations with graduate level attainment. This study suggests that parental divorce is associated with diminished overall mental health (i.e., depressive symptoms) in children, and that this decrease may help explain the connection between parental divorce and lower graduate level academic attainment. Using data from the National Longitudinal Survey of Youth 1997 (NLSY97), a nationally representative sample of nearly 9,000 individuals interviewed, this study outlines hypotheses that link parental divorce, mental health, and graduate level academic success among children. The results suggest children of divorce are less likely to attain a graduate degree and are slightly more likely to have depressive symptoms than children from continuously married parents. There were no significant mediating effects regarding parental divorce and children's higher degree acquisition. The findings imply that the negative effects of divorce may persist past the college years, but that mental health/emotional resources do not seem to help us understand the relationship between divorce and the highest levels of educational attainment.

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CHAPTER 1

INTRODUCTION

In the United States, 40-50% of married couples will divorce, leaving 50% of American children to experience a divorce before the age of 18 (Copen et al., 2012; Marriage & Divorce, 2019). It is suggested through life course theory that experiences, which occur early in life, can have long-lasting impressions on a range of situations throughout a life span (Hayward & Gorman, 2004; Pearlin et al., 2005; Goosby, 2013; Wickrama et al., 2014). This implies that early life disadvantage, such as family instability, may create problems that lead to difficulties over the life course (Pearlin et al., 2005; Schilling et al., 2008; Wickrama et al., 2014). Current research on parental divorce and its effects on children's educational experiences have examined childhood and young adulthood (Cherlin, 2010), with consequences for emotional, behavioral, social, and academic domains (Amato, 2010). An example of this is children of divorced families exhibit lower grades and are less likely to attend college (Heard, 2007) as well as higher antisocial behaviors (Vandewater and Lansford, 1998) than children with continuously married parents. Compared to children of divorced parents, children in intact families demonstrate better physical and psychological health outcomes and stronger cognitive and social competencies (Amato, 2000), which foster better academic performances (Wallerstein & Lewis, 2004).

Although the studies surrounding parental divorce and children's educational attainment have made significant contributions to our understanding, there are still gaps

in this research area. Broadly, there is a lack of adequate knowledge of the patterns of continuing effects of parental divorce during the adult life course (for exceptions see Björklund & Sundström, 2006; Björklund, Ginther, & Sundström, 2007; Devor et al., 2018). Specifically, due to the increasing importance of graduate degrees, examining the effects of parental divorce beyond a bachelor's degree may be a particularly important area of study. Colleges today use a less selective process, admitting more diverse and disadvantaged students than they did in the past. Unlike in the past, a college degree today does not hold as much weight; there is a need to look beyond a four-year degree for further stratification. Additionally, little is known about what the mechanisms are that might result in a lower rate of advanced degree acquisition among children of divorced parents. A growing body of work examines divorce as a risk factor for children's well-being during the formative period of growth, along with other unfavorable life experiences such as mental health problems (Umberson et al., 2014). Some of the developmental effects of divorce might be immediately observed, whereas others can be long-term effects. Divorce is shown to have these long-term effects on a variety of mental health issues (Ben-Shlomo & Kuh, 2002; Miller, Chen, & Parker, 2011; Umberson et al., 2014) such as anxiety, depression, attention problems, and aggressive behavior (Cherlin et al., 1998; Liu et al., 2000; Ross & Mirowsky, 1999). Therefore, examining the potential mediating role of children's depressive symptoms may be especially advantageous.

The purpose of this paper is to assess whether divorce continues to shape educational achievement beyond college graduation, and if it does, what is the possible role of depressive symptoms as a mediating factor using a representative sample. A

conceptual model is presented that theoretically links parental divorce, mental health, and children's graduate level academic success. Several hypotheses drawn from the conceptual model are tested using data from the National Longitudinal Survey of Youth 1997 (NLSY97). The results suggest children of divorce are less likely to attain a graduate degree and are slightly more likely to have depressive symptoms than children from continuously married parents. However, there were no significant mediating effects regarding parental divorce and children's higher degree acquisition. The findings imply that the negative effects of divorce may persist past the college years, but that mental health/emotional resources do not seem to help us understand the relationship between divorce and the highest levels of educational attainment.

CHAPTER 2

EMPIRICAL AND THEORETICAL BACKGROUND

In the current literature, there is adequate support to show that divorce has negative consequences for children in the short term, but there is less research studying the effects of divorce on child long-term socioeconomic outcomes such as educational attainment at the graduate level (Liu, 2007; Bernardi & Radl, 2014). Additionally, little is known about the mechanisms by which divorce shapes educational outcomes when dealing with a long time-frame. The long-term consequences of divorce for higher degree acquisition may be of special importance as education is closely tied to an individual's opportunities and life chances (Bernardi & Radl, 2014; Ross & Wu, 1995; Shavit & Müller, 1998). Obtaining degrees from college and universities helps ensure economic security, social status, and social mobility (Carnevale & Rose, 2003; Louie, 2007). For example, one study found that college graduates with a bachelor's degree earn an average salary of \$61,000 over the course of their career, while those with a graduate degree earn \$78,000 annually (Carnevale, Cheah, & Hanson, 2015). Higher education provides an opportunity for individuals to enhance themselves throughout the life course.

Relationship Between Parental Divorce and Educational Attainment

Research has found that children who experienced parental divorce are at risk for a variety of negative outcomes, including lower levels of education (Amato, 2010; Lansford, 2009). There are shorter-term effects of divorce on early education (Amato,

2000, 2010; Strohschein, 2005; Sun & Li, 2001, 2011; Vandewater & Lansford, 1998) and college completion (Black & Sufi, 2002; Bulduc, Caron, & Logue, 2007; Conley, 2001; Perna & Titus, 2005), but less research is done on divorce and graduate attainment (for exceptions see Björklund & Sundström, 2006; Björklund, Ginther, & Sundström, 2007, Devor et al., 2018). The findings displayed a consistently negative relationship between parental divorce and children's educational success (Carlson & Corcoran, 2001; Cavanagh, Schiller, & Riegle-Crumb, 2006; Frisco et al., 2007; Ginther & Pollack, 2004; Sun & Li, 2011). This holds true for young children (Amato, 2000; 2005; Amato & Cheadle, 2005), adolescents (Björklund, Ginther, & Sundström, 2006), and young adults (Bulduc, Caron, & Logue, 2007; Heard, 2007; Melby et al., 2008; Cavanagh et al., 2006). For example, Cavanagh et al. (2006) conducted research explaining that the marital histories of parents can shape a child's educational achievements throughout the life course. Their findings highlighted how family instability contributed to stratification in the United States. In this credential-based economy, graduating from a four-year college (not to mention graduate school) is found to contribute to better jobs, financial security, better health and relationships (Cavanagh et al., 2006).

How Does Depression Shape Educational Indicators/Attainment?

Previous research suggests that depression negatively affects academic attainment (Kessler, 2012; McArdle et al., 2014). It has been found that the prevalence of depressive symptoms in college students affects almost one-third of the population (Ibrahim et al., 2013) and might be particularly destructive to higher education in men (Bohman et al., 2017). Depressive symptoms showed an association with difficulties to concentrate and complete school tasks (Humensky et al., 2010). Specifically, depressive

symptoms of students affect learning ability, academic performance, adaptation to college life, as well as performance of future professionals (Fröjd et al., 2008).

Relationship Between Divorce and Depression

The main mechanism that I expect will help explain the negative relationship between divorce and children's higher-level educational success is depressive symptoms. This hypothesis is rooted in the family conflict perspective (Amato & Keith, 1991). The family conflict perspective assumes that inter-parental conflict is a severe stressor for children, prompting children to experience stress, unhappiness, insecurity, and producing a negative impact on their psychological adjustment (Amato & Keith, 1991; Bohman et al., 2017). These psychological effects might continue into adulthood.

There is evidence that shows an ongoing negative effect of childhood parental divorce on young adult's mental health (Cherlin, Chase-Lansdale, & McRae, 1998). Much of the work examining mental health of children with divorced parents shows more unhappiness, more symptoms of depression and anxiety, less satisfaction throughout the life course, and greater chance of seeking counseling (Amato & Booth, 1991; Morrison & Coiro, 1993). Divorce is shown to have long-term effects on a variety of mental health issues (Ben-Shlomo & Kuh, 2002; Miller, Chen, & Parker, 2011; Umberson et al., 2014) such as anxiety, depression, attention problems, and aggressive behavior (Cherlin et al., 1998; Liu et al., 2000; Ross & Mirowsky, 1999).

What Other Factors Shape Acquisition of Higher Degrees?

Research on characteristics of individuals such as race, ethnicity, socioeconomic status, and gender have been carried out to understand attainment of higher education

(Brown, Wohn, & Ellison, 2016; Black & Sufi, 2002; Mullen et al., 2003; Perna, 2000, 2004). For example, low socioeconomic status in childhood is related to poor cognitive development, language, memory, socio-emotional processing, and consequently poor income and health in adulthood (Brown et al., 2016). Additionally, there have been a few studies that tested the relationship between parent's educational background and graduate educational attainment of children (Ermisch & Francesconi, 2001; Mullen, Goyette, & Soares, 2003; Perna, 2004; St. John & Wooden, 2005). The results showed that for each one-year increase in parents' background in education, the likelihood for enrollment in a master's program increased by 6%, professional programs increased by 16%, and doctoral programs increased by 20% (Mullen, Goyette, & Soares, 2003). Early life experiences may also be important for shaping children's higher education (Center on the Developing Child, 2011).

Research Questions

Although there is substantial literature on the effects of divorce on children and adolescents, information about the long-term effects of divorce after the transition to adulthood is less comprehensive. Similarly, little is known about the factors shaping advanced degree acquisition, including how family dynamics and mental health shape whether or not people obtain advanced degrees. Therefore, the main research questions for this project are:

- 1) Is parental divorce related to higher degree acquisition?
- 2) Does depression in young adulthood mediate the relationship between parental divorce and higher degree acquisition?

Conceptual Model

Centered around the theoretical framework and research examined above, I present one conceptual model, which includes two pathways on the way(s) in which parental divorce and depressive symptoms may be linked to children's graduate level educational success. The model shows a direct effect of parental divorce negatively impacting children's graduate level academic achievement (path A). The model also suggests that depressive symptoms may serve as a mediator between parental divorce and educational attainment of their children, such that the effect of parental divorce will be explained in part or fully (path B). This conceptual model can be seen in Figure 2.1.

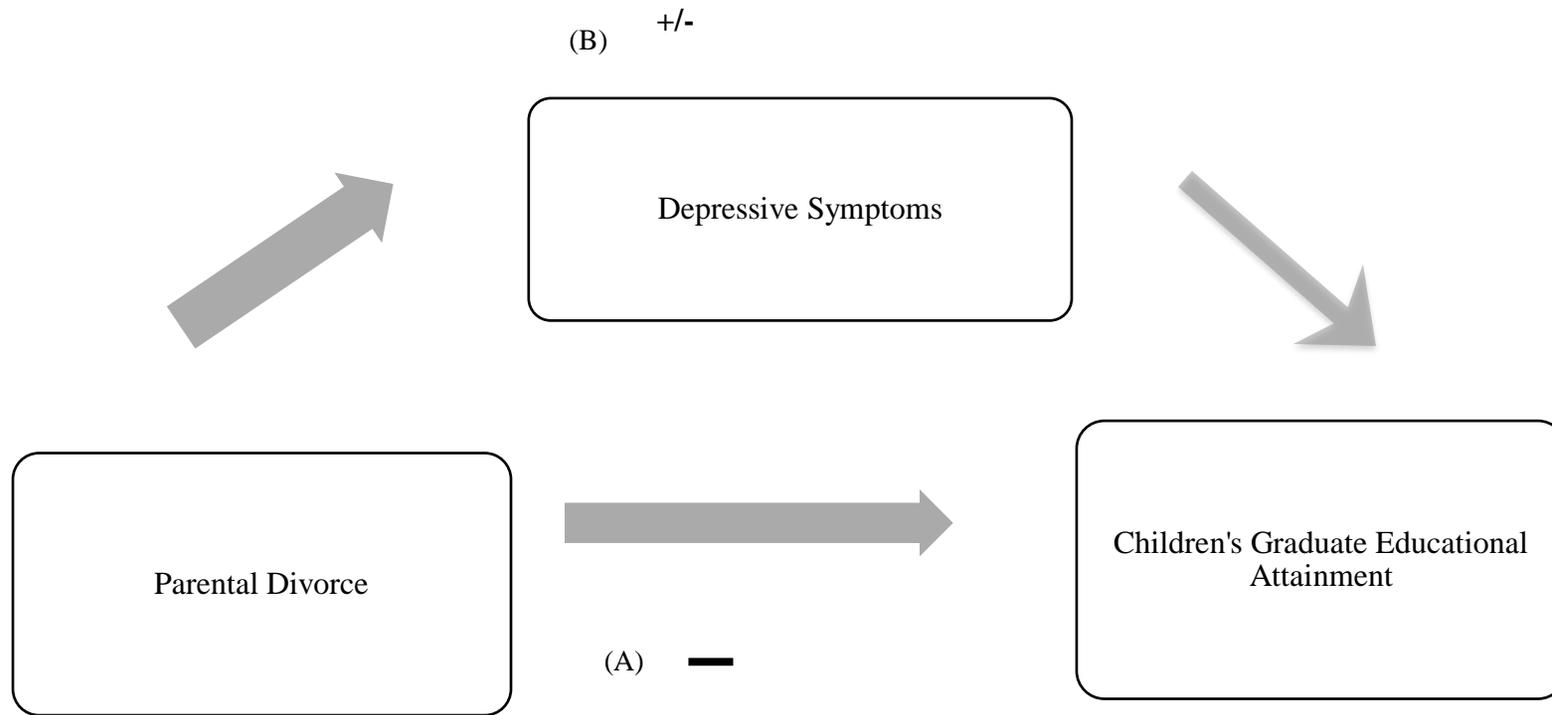


Figure 2.1: Conceptual framework of parental divorce, children's graduate educational attainment, and the possible mediating effects of depressive symptoms.

CHAPTER 3

DATA AND METHODS

Data for the present study came from the National Longitudinal Survey of Youth of 1997 (NLSY97). Produced by the Bureau of Labor Statistics (BLS), the NLSY97 data are collected on respondents born between 1980 and 1984. At the time of the first interview (Round 1, 1997), respondents' ages ranged from 12 to 18. In Round 1 (1997), there was a nationally representative sample of nearly 9,000 individuals interviewed (8,984). In this round, both the respondent and one of that youth's parents (responding parent) received hour-long personal interviews (Bureau of Labor Statistics, 2006). In addition, an extensive two-part questionnaire was administered to both youth and parent. Round 1 was the only round the parents were interviewed. The children, not their parents, were interviewed on an annual basis after Round 1.

The most recent data release is Round 17 fielded in 2015-2016. At the time of the Round 17 interviews, respondents were 30-36 years of age. Round 17 yielded 7,103 respondents, or approximately 80 percent of the original Round 1 respondents (National Longitudinal Surveys, 2018). The NLSY97 is a good fit for the present study for its focus on the transition from school to work in young adulthood (Bureau of Labor Statistics, 2006). It collects extensive data on demographic information, employment information, educational experiences, relationship with parents, marital and fertility histories, dating, criminal behavior, alcohol and drug use, mental health/depression, etc.

Variables

Highest Degree Received: The key outcome variable of educational attainment was assessed at Round 17 (2015) of the survey. The respondents were asked, “What is the highest educational degree [respondent] has ever received?” The following were the responses: (a) none, (b) GED, (c) high school diploma, (d) Associate/Junior college, (e) Bachelor’s degree, (f) Master’s degree, (g) PhD, and (h) Professional degree.

Dichotomous variables were created that measured whether or not the youth obtained a Bachelor’s degree or higher, as well as whether or not the youth received a graduate/professional degree.

Parental Divorce: Parental divorce was measured by combining multiple variables in the NLSY97. From the parent questionnaire, the responding parent’s marital history collected information on the length of each marriage as well as any changes in the marital status (i.e. legal separation, divorce) for each marriage. If the responding parent had been married, he/she answered “In what month and year did you marry [this spouse/partner]?” for up to six spouses. For each of those marriages, the responding parent was asked, “Are you currently separated, divorced, or widowed from that spouse?” If the responding parent answered “yes,” the following question was “How did the marriage to spouse(s) end?” The four categories were (1) legal separation only (2) physical separation but no legal separation (3) divorce and (4) death for up to five spouses. The responses of legal separation only, physical separation but no legal separation, and death were removed from the sample. If the answer was “divorce,” the responding parent was asked in what month and year did the divorce take place for up to 4 divorces. The responding parent was also asked if he/she had been continuously

married or not for up to six spouses. In order to determine if the youth were born within a marriage, the youth's birthdate would need to fall between the spouses' start and end date of their marriage. A dichotomous variable of *divorced* was calculated for whether parents of the child ever divorced (versus marriages that remained intact).

To try and capture youth who had parents that divorced after Round 1, the youth were asked if their biological parents had divorced within the previous 5 years (assessed at Rounds 6, 11, 12, 13, and 16). Round 6, which had children aged 17-23, was used to identify the children who were 17 or 18 at the time of their parents' divorce. Only divorces that happened when the child was 18 or younger were counted.

Depressive Symptoms: Depressive symptoms were measured using five questions derived from a short version of the Mental Health Inventory (MHI-5), developed by Veit and Ware in the early 1980s (Veit & Ware, 1983). These were taken in 2015 from the most current round (17) of the NLSY97 depression scale to measure respondent's current depression. Respondents were asked how often in the past month they: (1) felt depressed, (2) been a very nervous person, (3) felt downhearted and blue, (4) felt calm and peaceful, and (5) been a happy person. Responses ranged from "(0) none of the time, (1) some of the time, (2) most of the time, and (3) all of the time." Positive responses were reverse coded, and the five items were summed with a range of 0 to 15, with higher scores corresponding to higher levels of depressive symptoms (Wickrama et al., 2014; Radloff, 1977; Foster et al., 2008). The Cronbach's alpha = 0.80. Depressive symptoms were also split up into low (0-4), medium (5-9), and high (10-15) categories to test for significance using chi-squared tests.

Controls for Youth Characteristics: Youth characteristics were taken from Round 1 of the youth questionnaire in the NLSY97. The gender was coded dichotomously as male and female, with male serving as the reference category. Age was measured in years. Race and ethnicity were measured at Round 1 and were coded as White (non-Hispanic), Black/African American (non-Hispanic), Hispanic, and Other (non-Hispanic). White serves as the reference category.

Controls for Parent Characteristics: The educational background is based on a Round 1 question asking for the highest grade completed by respondent's biological mother and biological father. Based on this, parental educational background was recoded as (1) high school or less, (2) some college, (3) bachelor's/4-year college degree, and (4) graduate/professional degree. A set of dummy variables was created for each category of education for mothers and fathers, with high school or less serving as the reference category.

Controls for Household Characteristics: In Round 1, the child's parents reported household income for the most recent year. The NLSY97 defined income as gross wage/salary for respondent, along with data on other income sources (rental property, small business investments, inheritance, child support, annuities, etc.) (U.S. Bureau of Labor Statistics, 2014). To reduce the proportion of missing data, respondents who do not provide exact dollar answers were asked to select the applicable category from a predefined list of ranges. Based on these predefined ranges, a variable was created based on income terciles: (1) low (less than or equal to \$23,100), (2) medium (more than \$23,100 but less than or equal to \$51,400), and (3) high (more than \$51,400) with high income serving as the reference category.

Analytic Strategy

Data analysis progressed in several steps. First, the analytic sample was comprised of respondents who completed Round 17 of the survey, when respondents were between the ages of 30-36 (N=8,984). The sample was limited to youth whose parent questionnaire was filled out by a biological parent, either the biological mother or the biological father, following other research (Devor et al., 2018; Lansford, 2009; Bulduc, Caron, & Logue, 2007). Due to most of the divorce data coming from biological parents, youth whose parent questionnaire was filled-out by an adoptive, step, foster, guardian or non-relative parent were removed from the sample (N=8,300) (Carlson & Corcoran, 2001; Gennetian, 2005; Ginther & Pollack, 2004; Wallerstein & Lewis, 2004). The sample was also limited to children who were born within a marriage between their biological parents, thus youths born outside of a marriage were removed from the sample (N=5,202). Finally, the sample was limited to having biological parents either end in a legal divorce or have been continuously married, meaning that children whose parents separated, never chose to marry, or died were dropped (N=4,984). These sample limitations follow those made in similar research on divorce and educational attainment (Devor et al., 2018). All variables, with the exception of respondent's highest degree received and depressive symptoms will be measured using Round 1 of the survey; highest degree received and depressive symptoms are measured with Round 17, the most current year of the survey (2015). Descriptive statistics for each variable used in the analysis are reported and assessed for the analytic sample (see Table 4.1).

Bivariate relationships between parental divorce and key variables (particularly depressive symptoms and higher degree acquisition) were assessed using chi-squared

tests. Finally, mediation analyses were conducted using the `binary_mediation` command in Stata 14. I examined the association of the full sample between parental divorce and children's graduate level academic attainment, with depressive symptoms as a mediator. Depressive symptoms were coded as a continuous variable in these analyses.

`Binary_mediation` can be used with multiple mediator variables in any combination of binary or continuous along with either a binary or continuous response variable. This command provided the indirect effect (of parental divorce on higher degree acquisition via depressive symptoms), direct effect (i.e., remaining effect that is not explained by the mediator), and total effect (i.e., parental divorce on higher degree acquisition) of depressive symptoms as a mediator between parental divorce and children attaining a graduate degree. The command `binary_mediation` does not produce standard errors or confidence intervals. Therefore, the bootstrap command was used and obtained standard errors for the direct and indirect effects along with a 95% percentile confidence intervals. The results are interpreted as significant when the confidence interval does not contain zero. I estimated the model twice. In Model 1, the sample included the full sample of youth. Model 2 was limited to if the youth graduated from college with at least a 4-year degree.

CHAPTER 4

RESULTS

Descriptive statistics for the overall sample are presented in Table 4.1. For the sample, 62% of the youth had received less than a Bachelor's degree, compared to approximately 26% of youth who completed a Bachelor's/4-year college degree. Only 12% of youth obtained a graduate degree. On average, 64% of respondents reported relatively low (scale of 0-4) levels of depressive symptoms versus 33% of medium (scale of 5-9) and 3% of high (scale of 10-15) levels of depressive symptoms. Regarding family structure, 28% of youth had divorced parents (that occurred before age 18) compared to 78% of youth who had both biological parents remain married. In terms of sociodemographic characteristics for the overall sample, 52% were men and 48% were women with the average age being around 33. Approximately two-thirds of the sample was white. In addition, the youth's parents' educational background indicated the majority of parents (mothers (50%) and fathers (53%)), had a high school education or less. Lastly, in terms of household income, only about 19% were in the lowest third (less than or equal to \$23,100), versus 45% of the households were in the highest third (more than \$51,400).

Table 4.1 also presents the bivariate relationship between youth's family structure, depressive symptomology, and their educational attainment. Many significant differences emerge between youth with divorced biological parents and youth with continuously married biological parents. A higher proportion of youth with parents who

remained married attained a graduate degree (13%) compared to youth with divorced parents (8%). A lower percentage of youth with divorced parents had a Bachelor's degree (17%) than youth with parents who remained continuously married (29%). Depressive symptoms were rather alike for children who had divorced parents, but were still significantly different; the low category with a range of 0-4 (58%), medium with a range of 5-9 (38%), and high with a range of 10-15 (4%) compared to children with continuously married parents that had low (66%), medium (32%), and high (2%) categories. With respect to parental educational background, the percentage of parents with high school education or less and some college was relatively similar for parents who had ever divorced versus parents who remained continuously married. Finally, a much higher proportion of youth with continuously married parents had higher childhood household income versus youth with divorced parents.

Table 4.2 presents the mediation analysis results of the association between parental divorce, depressive symptoms, and children's higher degree acquisition. The covariates controlled for in the models were gender, age, race/ethnicity, parents' educational background, and household income. The top section of the table shows results for the full group of respondents. The analysis confirms that parental divorce does predict children to be disadvantaged in attaining graduate degrees (total effect). The mediation results (indirect effect 1) indicate that depressive symptoms do not mediate the association between parental divorce and children attaining a graduate degree.

The bottom section of Table 4.2 is limited to youth with at least a bachelor's/4-year degree. These results indicate parental divorce also predicts children to be disadvantaged past completion of a bachelor's/4-year degree. The analysis did show a

significant mediation effect for children with at least a bachelor's/4-year degree. The effect is small and only 1.3% of the total effect is accounted for by depressive symptoms. This percentage was found using `binary_mediation` and is explained as proportion of total effect mediated. Parental divorce was negatively associated with the odds of obtaining graduate degrees after accounting for gender, age, race/ethnicity, parents' educational background, and household income, but depressive symptoms among children with divorced parents do not fully explain the negative effects of parental divorce.

Table 4.1. Descriptive Statistics on Analytic Sample and Bivariate Relationship Between Parental Divorce and Children's Educational Attainment (4,984)

Variables	All (N=4,984)	Parents ever divorced (N=1,388)	Parents continuously married (N=3,596)	Chi-square
	Percent	Percent	Percent	
Highest Degree Received				104.48***
Less than Bachelor's Degree	62.26	74.95	57.3	
Bachelor's, no Graduate Degree	25.75	16.82	29.24	
Graduate Degree	11.99	8.23	13.46	
Depressive Symptoms				25.58***
Low (0-4)	64.07	58.31	66.3	
Medium (5-9)	33.31	37.75	31.59	
High (10-15)	2.62	3.94	2.11	
Gender of youth				7.8**
Male	51.52	48.34	52.75	
Female	48.48	51.66	47.25	

Age				
30-36	32.91	–	–	
Race/ethnicity of youth				52.32***
White	66.75	67.15	66.6	
Black	12.9	17.36	11.18	
Hispanic	19.64	15.05	21.41	
Other	0.7	0.43	0.81	
Mother's education				35.47***
High school or less	50.45	48.95	51.02	
Some college	26.07	31.54	23.96	
Bachelor's Degree	14.55	11.58	15.69	
Graduate/professional degree	8.94	7.92	9.33	
Father's education				110.01***
High school or less	53.05	65.28	48.91	
Some college	20.83	19.01	21.44	
Bachelor's Degree	14.59	9.03	16.47	

Graduate/professional degree	11.53	6.68	13.18	
Household income				312.78***
Low (\leq \$23,100)	18.83	31.32	13.74	
Medium (\$23,101 \leq \$51,400)	36.44	43.64	33.51	
High (\geq \$51,400)	44.72	25.04	52.75	

Note: Data comes from National Longitudinal Survey of Youth 1997; Reference categories are “male,” “White,” “high school or less” (mother/father), and “high” income (\leq \$246,500); * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 4.2. Mediation Analysis Results of the Association Between Parental Divorce and Children’s Higher Degree Acquisition with Depressive Symptoms as a Mediator

Effects	Paths	Depressive Symptoms	
		Coef.	95% C.I. ^a
<i>Y1: Graduate Degree</i>			
Indirect Effect	(parental divorce→depressive symptoms→graduate degree)	-0.003	(-0.007; 0.0014)
Direct Effect	(parental divorce (depressive symptoms)→graduate degree)	-0.085	(-0.167; -0.01)

Total Effect	(parental divorce→graduate degree)	-0.087	(-0.165; -0.0095)
<i>Y2: Grad degree, limited to BA completion</i>			
Indirect Effect	(parental divorce→depressive symptoms)→ graduate degree)	-0.005	(-0.008; -0.001)
Direct Effect	(parental divorce (depressive symptoms)→graduate degree)	-0.023	(-0.034; -0.0113)
Total Effect	(parental divorce→graduate degree)	-0.021	(-0.030; -0.0113)

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Note: Bootstrapping results after 500 replications; ^a bias-corrected confidence intervals using the binary_mediation command in Stata; **Bold** if the result is significant at least at the .05 level of significance; gender, age, race/ethnicity, parents' educational background, and household income are controlled for in all models.

CHAPTER 5

DISCUSSION

Life course theory proposes that early life difficulties may have harmful effects while moving through the life course (Hayward et al., 2004; Pearlin et al., 2005; Goosby, 2013; Wickrama et al., 2014). These difficulties, particularly early family instability, can lead to damaging consequences for mental health, such as depressive symptoms, in adulthood (Schafer et al., 2011; Wickrama et al., 2014). Although the negative effects of parental divorce on children's educational attainment and mental health has been constant in former studies, there has been little examination regarding young adults with higher degree acquisition and the factors that may be working to explain the lower rate of advanced degrees among children of divorce. The two key contributions of the present study were (a) including a measure of advanced educational attainment (i.e., achieved a graduate degree); and (b) examining whether depression plays a significant role in mediating the negative relationship between parental divorce and higher degree acquisition in a nationally representative sample.

The results of the present study addressed the potential negative influence of parental divorce and children's graduate level educational success. An examination of the bivariate results provides strong support for the first research question showing that young adults with divorced parents were less likely to achieve a graduate degree compared to children with continuously married parents. These results support previous research on U.S. families indicating that children with divorced parents are educationally

disadvantaged in terms of both completions of a bachelor's degree and graduate/professional degrees. This extends our knowledge of parental divorce and children's educational outcomes beyond childhood and adolescence (Ginther & Pollack, 2004; Wallerstein & Lewis, 2004) showing adults exhibit long-term deficits in functioning from marital dissolution (Amato, 2000). This is consistent with research on adults of divorce experiencing disrupted interpersonal relationships that has shown they tend to marry early, experience unhappy marriages, divorce repeatedly, generally mistrust people, and feel limited on their social support (Ross & Mirowsky, 1999). Even 30 years after the time of the divorce, negative long-term consequences still clearly affect income, education, health, and behavior of many grown children (Uphold-Carrier & Utz, 2012). Furthermore, possessing a graduate degree is becoming increasingly important to one's economic success. Having a Master's, Professional, and/or Doctoral degrees have become a requirement for entry into many professions, can give success in the competitive job market, and is strongly related to income (Thomas & Zhang, 2005). Jobs requiring a master's degree are expected to grow by nearly 17 percent between 2016 and 2026 (Bureau of Labor Statistics, 2016). In light of the increasing importance of graduate education, the long-term effects of divorce may continue to affect future socioeconomic inequalities in the United States. Lower socioeconomic status adults are more likely to divorce or to never marry than are higher socioeconomic status adults (Cherlin et al., 2010) leading divorce to potentially limit future social mobility.

I also examined whether depressive symptoms mediated the relationship between parental divorce and children's higher degree acquisition and found that they did not. This suggests that the negative effects of parental divorce may persist past the college

years even after accounting for the negative impact on children's mental health. These emotional resources do not seem to help us understand that relationship. Depressive symptoms were not an important mediator, (even though it was statistically significant in the second set of models by only 1.3%). There are several alternative possibilities, which could be explored in future research. Firstly, financial instability is one of the more prominent effects experienced by children from non-traditional family structures. Although an increasing number of parents share legal custody after divorce, the majority of children live primarily with their mothers (Fox & Kelly, 1995; Hardesty & Chung, 2006). The increasing costs of higher education can become a deterrent for children of divorce, even with federal financial assistance. Financial resources might help explain the gap in educational attainment, even though income was controlled for in the models. However, the income measure used was very unrefined. Parents' accumulated wealth differs across family structures, affecting the amount of financial support for higher education. Divorced parents (36%) are less likely to pay for all or most of their children's higher education, compared to married parents (59%) (Amato et al., 1995). Additionally, divorced parents are more likely than married parents to provide no assistance for higher education at all (Amato et al., 1995). Secondly, arguments have been made about the consequences of divorce for parenting styles and quality. It is well known that children of divorce experience a decrease in parental attention, help, and supervision (Amato & Keith, 1991), which may increase the likelihood of problems for children, such as academic failure (Bernardi & Radl, 2014). Parents now give more support to grown children, on average, than parents gave in the past (Fingerman et al., 2012). Some scholars have suggested that over a third of the financial costs of parenting

occur after the age of 18 (Mintz, 2015). In addition to financial support, time is also given to grown children through their parents by helping to make doctor's appointments, offering emotional support, or giving advice (Mintz, 2015). These differences in emotional and non-tangible supports from divorced versus married parents could help to explain the educational gap, even for advanced degrees. Finally, children who experience their parents' divorce are likely to have had extended exposure to conflict between their parents, diminishing children's capacity to handle conflict (Billingham & Notebaert, 1993). This conflict is distressing for children and can have long-term effects on educational attainment (Amato, 2005), contributing additional instability during a time that is already marked with uncertainty and possibly upsets a child's ability to learn (Mehana & Reynolds, 2004). Compared to children from continuously married families, college students from divorced families have lower educational aspirations and are less educated into adulthood (Gruber, 2004). For example, adult children of divorce may externalize their distress in the form of aggression, hostility, non-compliant behavior, delinquency, and vandalism, or internalize it in the form of depression, anxiety, withdrawal, and dysphoria (Sutherland, 2014) affecting educational attainment. As college and graduate attendance is becoming more common, more work is needed to theorize and model explanations beyond life course theory and mental health for understanding graduate academic success. This study is important for adding to the current baseline that future research can draw upon.

There are several important limitations to note of the present study. These limitations highlight important future directions. First, the main focus was solely on parental divorce and did not add in separation or couples who never chose to get married.

This excludes other prevalent non-traditional family structures. However, research on the effect of parental divorce on graduate level attainment is relatively new and not fully understood yet, establishing the present study as an important baseline that can be drawn upon in future research. Second, there are certain event-ordering issues. Ideally, we would want to isolate situations in which: the parental divorce precedes depressive symptoms, and depressive symptoms precede enrolling in graduate school. I was able to line up ordering for parental divorce occurring prior to testing for depressive symptoms. Only divorces that happened by the time children were 18 counted as divorce for the study. I used the most recent measures of depressive symptoms from the NLSY97 to ensure that they took place close to the time at which respondents would have been in graduate school. Lastly, only five variables were available in the NLSY97 to construct the depression scale to create an index of depressive symptomology. This scale is known, as the Mental Health Inventory (MHI-5) and is the subscale of the Mental Health Inventory-38. The validity and reliability may have been increased, had there been access to the full scale on the NLSY97. The full scale of the MHI has a Cronbach's alpha of 0.93, while the subscale has an alpha of 0.82 (Mental Health Inventory, 2019). However, there is enough faith in the 5-measure item to be using it in this study because it has been extensively examined in large populations and has evidence for its validity (Mental Health Inventory, 2019).

Future research should examine differing familial structures on children's graduate school enrollment and degree attainment, which could include cohabiting, same-sex coupling, intergenerational households, stepfamilies, etc. This research has already been carried out examining differing familial structures and children's bachelor degree

attainment. For example, 36% of children from married parents received a bachelor's degree, 20% of cohabiting families, and 16% of stepfamilies (Fagan & Talkington, 2004). Examining the potential differences between bachelor and graduate degrees would also be valuable, considering the mindset, coursework, and environment that accompany both (Franklin University, 2019). Additionally, graduate degrees can open doors to opportunities (i.e., promotions and raises) that might not be available without it (Franklin University, 2019). Most children rely on their families and student loans to pay for college costs (FinAid, 2019). Specifically, due to the increasing importance of graduate degrees, examining the effects of parental divorce beyond a bachelor's degree shows to be a particularly important area of study. Furthermore, future studies should focus on how the costs of higher education can become a burden for children of divorce. This thesis provides an important glimpse of the consequences of parental divorce on children's graduate-level attainment. Specifically, adding to the previous work surrounding life course theory and the effects of parental divorce on mental health and education broadly, while also enhancing to the literature regarding the mediating effects of depressive symptoms. As long as nearly half of marriages in the United States end in divorce and children continue to view higher education as a foundation to their future success, there will be a long-term need to understand and monitor the higher educational consequences of marital dissolution.

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