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# Educational outcomes of children with absent-fathers: an examination of children with deceased fathers and children with fathers absent for other reasons compared with children with fathers present in a two-parent home

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Educational outcomes of children with absent-fathers: An examination of children with deceased fathers and children with fathers absent for other reasons compared with children with fathers present in a two-parent home

by

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A thesis submitted to the graduate faculty  
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2008

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DEDICATION

to my mother, Paula, who has been the strongest  
and most supportive person in my life,

to Dr. Sedahlia Crase for being my never ending  
source of encouragement,

to the friends I've made at Iowa State University  
who helped me create so many memories,

to my graduate classmates in which we've shared in each  
other's moments of joy and sadness,

Thank you for all your support!

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## ABSTRACT

The purpose of this study was to examine the differences in educational outcomes for children with fathers absent due to death and those absent for other reasons. The nationally representative Adolescent Health data set was used to select 70 children with deceased fathers, 70 children with fathers who are alive but not living in the home, and 70 children with fathers residing in the home. Demographic variables and educational outcome variables were utilized from waves I and III; correlation and *t* test analyses were performed.

In general, it was found that children without fathers for any reason completed a year less of school than children living with two parents. However, children with deceased fathers and children with fathers absent for other reasons did not differ significantly in the amount of education each completed. There was no association between the child's age when the father died and the amount of education completed, but there was a small association between the length of time a child has been without a father because they died and their highest level of education. Children with fathers absent for other reasons were found to have lower rates of graduating high school and college when compared to children with two parents, while children with deceased fathers did not. Other findings indicated that both male children and African American children with fathers absent for other reasons had lower GPA scores than females or white children. Children from both groups (male and African American) completed more education as their mothers earned more income.

Limitations of the study are considered with recommendations for future research. The study has implications for how mothers and others who work with children can prevent lowered educational outcomes for those with fathers absent due to death and those absent for other reasons.

## INTRODUCTION

Twenty years ago it was estimated that 50% of recently born and future cohorts of children would spend some time of their childhood in a single-parent household before they reached the age of 16 years (Bumpass, 1984). Although current trends have not quite matched this projection, rates of single-parent homes are still high at 33% of children under 18 currently residing in a one-parent home. According to 2006 estimates, over 12.9 million children were reported in single-parent homes with 10.4 million children living with single-mothers (U.S. Census Bureau, 2007). With such a large proportion of our society's children experiencing a single-parent household, mostly in single-mother households, it is imperative to understand the effects growing up in a single-mother household with absent-fathers for any reason may have on the development and success of children.

The current study considers the educational outcomes of children using a more intrapersonal rather than societal approach, thus the reason for focusing on biological fathers rather than including adopted or step-fathers. Income, socio-economic status, number of family members in the household, or current parental marital status, along with other dimensions which are all still very significant to study, were omitted from this study. Rather personal expectations and other descriptors were taken into account when examining the educational outcomes. This is due in part to the research studies finding lower psychological well-being in children in single-parent homes in addition to the limitations of the data. Also, the author was interested in understanding how her experience of losing a father to death was different or similar to others with deceased fathers and how the event of forever losing contact with a parent compares to those who have the chance for contact, whether or not it was utilized.

Researchers have found higher rates of depression (Hetherington, Cox, & Cox, 1985; Servaty, 2001), negative feelings (Carlson, 2006), behavioral difficulties (Astone & McLanahan, 1991) including youth incarceration (Harper & McLanahan, 2004) and delinquency (Carlson, 2006), and lower educational scores, attainment and success (Amato & Keith, 1991; Pong, Dronkers, & Thompson, 2003) in children from single-parent homes. The educational attainment and success outcomes of children from these homes are of particular interest for this study. Education is an important dimension because it affects many other areas of the child's life such as future job prospects, income, dependence on governmental aid, poverty levels, and self-esteem.

Although most research supports the finding that single-parent households are associated with lower educational outcomes in children overall, the majority of research studies have not divided single parenthood into different subgroups to examine how single parenthood differs when it resulted from the death of the father, divorce, or never marrying. A few studies suggest that children whose fathers have died have worse educational outcomes than children whose fathers are absent but still living (Jeynes, 2002). Other studies support the notion that children in divorced single-mother households perform lower on educational measures and have lower levels of educational success (Biblarz & Gottainer, 2000) than other forms of singleness. Although the results tend to lean towards lower educational outcomes for children with divorced mothers, it still remains open for further examination due to findings that suggest children with widowed mothers fare worse in terms of educational achievement.

The purpose of this current study is to examine educational outcomes of children from different groups of mothers, particularly mothers whose children lost their biological



father due to death compared with mothers who are single for other reasons such as divorce, separation, and never marrying the child's biological father. If there are differences between the groups (father absent due to death and father absent due to other reasons) it would be useful to understand how different contexts and demographic variables for father absence affect educational outcomes of children in each of the groups. In addition, this study will add to the literature pertaining to the educational outcomes for children in father absent households due to death versus father absence due to divorce since currently there is a near absence of studies directly comparing these two groups (Mack, 2001). Children with deceased fathers are not usually singled out as a stand-alone category due to the low prevalence of widowhood and parental death in our society during the time children are being reared, making this a unique aspect of the current study. Furthermore, results from the analyses conducted on children with absent-fathers due to death, children from other forms of single parenthood due to divorce, separation, or never marrying, and children from two-parent homes may lend support to one of the conflicting arguments on the effects of educational success in father absent households.

Two practical implications arise from this study. First, educators can use the information gained from this study to better serve students and to identify children at-risk for lower educational outcomes based on their type of single-mother household. In addition, policy makers can utilize this information to form policies or programs to assist the families in overcoming their deficits and lower the risk for poor educational outcomes due to their status as a single-mother household.

## LITERATURE REVIEW

In the past fifty years, the structure of American families has been changing. Beginning around the 1960s, families moved from the two-parent nuclear family structure to more families with divorced or never-married parents. Progressing through the decades, society has altered its view on alternative family structures. In the 1960s, society was concerned that divorce and single parenthood would produce detrimental outcomes for children and increase social problems (McLanahan & Schwartz, 2002). This view shifted in the 1970s to a more passive attitude in that divorce and other forms of single motherhood were simply reflecting the growing independence women were gaining. However, since the 1980s it is believed that although children in single-parent homes fare well, they do not have the same rates of desired outcomes as their counterparts in homes with two parents present (McLanahan & Schwartz).

Twenty years ago, Bumpass and Sweet (1989) set out to document the family experiences of children born between 1970 and 1984. They estimated that approximately half of all those children were likely to experience some time in single-parent families, particularly mother-only family households, by the time they were 16 years old. Their analyses revealed that 44 % of the children were expected to experience some sort of marital disruption and 53 % of those experiencing a disruption (over 23% of *all* children) would remain in single-parent homes throughout their childhood.

However, a recent examination of family trends in the U.S. utilizing data from the 2003 Annual Social and Economic Supplement of the Current Population Survey (CPS) that compared trends between 1970 and 2003 reported that 26% of the population in family groups consists of single-mother and absent-father families (Fields, 2004). Out of the 12

million single-parent families, 10 million are headed by single-mothers. Although this is not parallel with the estimated projection by Bumpass and Sweet (1989), the numbers are still large. When the 10 million single-mothers were categorized into subgroups indicating their marital status, 4.4 million mothers had never been married, just slightly over 3.5 million mothers were divorced, 1.8 million were separated from their husbands, and 416,000 mothers were widowed.

Bumpass and Sweet (1989) noted that historically, parental death was the main cause of single parenthood. During the first half of the twentieth century, rates of single parenthood remained the same, but the causes of single parenthood changed during the 1950s when rates of parental death decreased by two-thirds while marital disruption, such as divorce, increased threefold. However, the 1970s experienced a steep increase in rates of divorce which leveled off in the 1990s (Fields, 2004), increasing the total rate of single-parent households.

Although current rates of singleness caused by divorce, never being married, and being separated far exceed the rate of widowhood, it is still important to study widowhood or the event of father death and its impact on the surviving children. Rates of widowhood and parental death have decreased throughout the past century both in percentages of homes impacted as well as in comparison to the rates of all other singlehood, especially so in relation to the latter. Thus less research has been conducted on the experience and educational outcomes of children in families where mothers became single as a result of becoming a widow and children whose fathers died regardless of marital status. It is imperative that current research focus on these children with deceased fathers to study their educational experiences in the present day rather than referring to research that was conducted in past decades when death of a young parent was more common. How do these

children compare with children whose mother is not living with their father and with children whose parents live in a two-parent household together? This study compared adolescents who became young adults who (a) had single-mothers as a result of being a widow or who lost a father due to death irregardless of parental marital status, (b) were single for any other reason, and (c) were in two-parent families

### *Theoretical Framework*

Otherwise known as the father absence hypothesis, the parental loss perspective is based on the notion that children who lose a parent, regardless of the reason, have lower levels of well-being and academic achievement as a result of experiencing a socialization deficit (Amato, 1993; McLanahan, 1985; Rushton & McLanahan, 2002). When a child is reared in a father absent home, the main agent of socialization becomes primarily the single-mother. Though mothers without the biological fathers may be able to maintain the home and childrearing by themselves once a father is absent, children still experience a deprivation of resources that the father could contribute to the home if he were present. These include interpersonal relationships, economic resources, and a male role model, all of which cannot be fulfilled by the mother simply putting more time into childrearing, thus illustrating the different roles fathers and mothers play and the importance of each in a child's development.

In addition, the parental loss perspective asserts that children with deceased fathers would have more negative outcomes than children with divorced fathers or fathers absent for other reasons. This premise arises from the suggestion that these absent-fathers can still influence the socialization of children through the contact they have with their children, whether the contact is little or abundant. Children whose fathers have died have no opportunity for this contact while children with living fathers, even though the fathers are

absent, have the opportunity for contact. Flouri, Buchanan, and Bream (2002) studied the involvement of absent-fathers in their children's attitude towards education. They found that involvement of fathers not residing with the child with the child's school increased the child's positive attitudes towards school. The researchers concluded that father involvement can be a protective agent for children to shield them from failing in school. Children of fathers absent for other reasons have the opportunity for father involvement in school, whether or not it is taken advantage of, while those with deceased fathers do not have this opportunity at all.

In support for the assertion that fathers serve as socializing agents for their children, Servaty (2001) concluded that father absence due to both death and for other reasons impair the interpersonal and adjustment of children, but that those due to death had more impaired perceptions of their relationships, thus decreasing the chance that these children will get the support needed from those around them. In addition, children with deceased fathers were found to have lower social competence.

Finally, the parental loss perspective suggests that children are worse off when the loss of the father occurred at a young age than during adolescence. The younger the child, the less history he or she may have interacting with the absent-father and thus experience a longer period of time without socialization from a parent.

#### *Defining Father Absence*

The majority of research supports the assertion that children reared in single-parent or father absent households tend to have lowered educational achievement and attainment outcomes overall. However, a few studies refute this conclusion. A much older review of research (Herzog & Sudia, 1973) when this area was first beginning to be studied indicated

that children from homes with absent-fathers did not differ significantly in their academic achievement compared to the achievement of their counterparts with present fathers. Lamb, Sternberg, and Thompson (1997) provided a similar conclusion from their evaluation of previous empirical results indicating that most of the children experiencing parental divorce, whether a painful experience or not, appeared to develop within the normal ranges without adverse consequences.

On the contrary, more research has indicated that single parenthood and father absence have a negative impact on the intellectual/academic well being of children. A very old but major review (Shinn, 1978) indicated that the majority of studies to that time confirmed that children's educational outcomes were negatively influenced by single parenthood and father absence. These studies are discussed in the subsequent paragraphs.

Research studies indicating that single-parent families are associated with lower educational outcomes vary on the methods employed to define single-parent and single-mother households. One common method of assessment is simply through distinguishing children from one-parent families from those children from two-parent families. This generic classification system allows researchers to investigate the influence of family type on educational attainment by comparing the outcomes of children from single-parent homes (encompassing both single-mother and single-father households) and children from two-parent homes. Pong, Dronkers, and Thompson (1986) utilized a this type of classification scheme in their now 20-year-old cross-national comparative study assessing the achievement gap between one- and two-parent households in the United States and in other developed and industrialized countries. Family structure was identified through their self-reported household roster. Children were then assigned to one of four groups based on the household

membership of both primary and extended relatives: single-parent family (either mother or father), stepfamily, guardian family, and two-parent family. They found that in nine out of eleven countries, young students reared in single-parent families scored lower in math and science subjects than their counterparts reared in two-parent families; the United States and New Zealand had two of the largest achievement gaps between single-parent family children and two-parent family children.

In addition to the basic classification system differentiating single-parents from two parents, researchers often address the causes of single parenthood or father absence and how educational outcomes of children may differ by those causes. As in the previous study, Amato and Keith (1991) did not distinguish single-mothers from single-fathers in their definition of a single-parent family. However, the authors did include the cause for single parenthood in their investigation addressing the impact of separation from one parent on the socioeconomic attainment of adults. Adult respondents were asked who they lived with up until they were 19 years old, indicating the year they ceased living with a biological parent if it occurred. The respondents were also asked to specify the reason for the separation between parent and child and were then categorized into four groups. Causes for separation included parental divorce (or separation), parental death, never lived with father, and other separations (including abuse, illness, and abandonment). Results from this study will be discussed in a subsequent section on race and gender.

Defining father absence or single parenthood and assessing its influence on educational outcomes can be characterized further in terms of family stability or change. In other words, do children experience different outcomes when the family structure remains stable versus when a change occurs? Sandefur, McLanahan, and Wojtkiewicz (1992)

explored this aspect of family structure by examining the influence of parental marital status during adolescence on rates of high school graduation. The authors interviewed respondents at age 14 and again at age 17, assessing if the adolescent resided in a home with one parent (mother or father), both biological parents (intact), or one parent and one stepparent. After the second interviews, the respondents' families were categorized again using the same four categories as were used three years earlier. Adolescents were then coded into one of the following groups reflecting the stability or change in living arrangements: stable intact, stable stepparent and parent, stable one parent, or intact at 14 and single or stepparent at age 17 (Sandefur et al.).

Results from Sandefur et al. (1992) tended to confirm findings supporting the conclusion that adolescent students from single-parent or stepparent homes at age 14 obtained high school diplomas at a lower rate than students from two parent biological families. In addition, students experiencing a disruption between 14 and 17 years of age had rates of achieving high school graduation that were lower than those in stable intact, single-parent, or stepparent families. However, Sandefur et al. found students from intact families and those from single-parent homes or disrupted living arrangements were equally likely to attend college, given that they graduated from high school.

The previous studies employed a basic classification system distinguishing one-parent homes from households containing two biological parents. This type of definition allows researchers to begin to understand the impact one-parent families have on adolescent academic progress. However, the definition does not differentiate single-mothers from single-fathers in single-parent homes, thus limiting the quality of inferences one could make regarding the effects of single-mother families in particular. In response, many who study the



effects of father absence employ a different strategy to identify the mothers with absent-fathers specifically.

A general method in determining father absence is to assess family structure and the mother's marital status. Ermisch and Francesconi (2001) constructed a family structure measure to identify adolescents from single-mother homes. The adolescent was defined as being in a two-parent family if he or she lived continuously with both parents up to his or her 16<sup>th</sup> birthday. Likewise, an adolescent was considered from a single-mother family if the adolescent lived with a mother who was not married to the adolescent's father or not cohabitating with another partner at any time before the adolescent's 16th birthday. Results from this more enhanced definition of single-parent homes, or more precisely single-mother families with absent-fathers, indicated that adolescents experiencing any time with a single-mother and absent-father had increased risks for distress, smoking, and lower educational outcomes. In particular, adolescents who were between birth and 5 years old when their mothers were reported as single were found to be more at risk for these negative outcomes than if mothers were reported as single during the adolescent's later years (Ermisch & Francesconi). Though the dataset for the current study did not allow me to examine if a child has lived continuously with two biological parents or a single-mother with an absent-father, Ermisch and Francesconi were influential in the way I conceptualized this study because of the findings in regards to the age groups in which mothers were reported as being with or without the biological father.

Boggess (1998) also examined the impact of a family structure change and created four classifications for family structures in his study: two-parent families, mother and stepfather families, never married mothers, and then combined divorced, separated, and

widowed mothers into one comprehensive category. Findings suggested that children reared in one-parent homes had more negative outcomes in educational attainment compared to their two-parent counterparts. However, Boggess found that students in never-married single-mother homes were less negatively affected than students who experienced a family structure change through the dissolution of marriage whether it was a divorce, separation, or widowhood. Results also indicated that racial groups were differentially affected by the various family structures.

The various classification schemes that studies implement each have their benefits and disadvantages. Studies examining single parenting as an overall category capture the experiences children may have living with any single-parent, regardless if it is the mother or father. However, the results from such studies cannot be generalized solely to single-mothers with absent-fathers. Since the majority of single-parents are mothers, studies which examine only single-mothers provide information that is more generalizable to the majority of one-parent homes, specifically for single-mothers homes. The current study takes this approach by limiting the data to only children who live with biological mothers with biological fathers absent.

#### *Defining Educational Outcomes*

Studies evaluating the impact of growing up in a single-mother household during adolescence on academic achievement measure educational outcomes in several ways. Each method of measurement focuses on a different and specific aspect of typical academic progress. These methods range from obtaining current academic advancement measures of adolescents to inquiring from young adults about their highest level of education attained.

A common method of ascertaining information on educational attainment is to use one variable or questionnaire item to measure an adult's highest level of education. Amato and Keith (1991) employed a single measure of education in their study of adults' socioeconomic attainment and the adults' previous separation from a biological parent during their childhood. They assessed academic attainment by calculating the number of years of school completed as the highest educational level obtained.

Menning (2002) utilized a similar method in his study of the influence of absent parents' interactions and/or financial transfers, such as child support, on the academic achievement of their children. Menning used a single categorical variable coded with three responses indicating if the young adult did not finish high school, did obtain a high school degree, or if the young adult was ever enrolled in any educational program beyond high school.

Sandefur et al. (1992) went one step further with their measurement of educational outcomes in their research examining the impact of family type during adolescence on high school graduation. Rather than using an individual item to assess the total amount or type of education a young adult obtained, the researchers separated high school education from college attendance. The coding of the receipt of a high school diploma, or an equivalent, from attending college provides more descriptive information. Though some young adults may not have obtained a higher education degree, attending college for some time may still set them apart from others who never attended any higher education.

Similarly, in a study questioning the impact of family structure on poverty levels in this country, McLanahan (1985) used two indicators to evaluate the educational attainment of respondents 17-27 years old. The first education variable specified if the respondent was in

school at age 17 while the second indicator of education asked if the respondent had graduated from high school. The slight difference between these two measures helped the researcher to illustrate if a change occurred between the number of adolescents who are on the path towards graduation and those who actually did graduate, which lent more descriptive data.

Some studies utilize further measures of educational attainment of adolescents and young adults. For example, Downy and Powell (1993), while examining the effect of living with a same-sexed single-parent during adolescence, used a mixture of educational expectations, grades, and standardized tests scores to represent educational outcomes of eighth graders. Students rated their (a) expectations on a scale from 0 (they do not expect to finish high school) to 4 (they will attend graduate school, (b) grades (obtained by adolescents' self-report of the grades they received in all of their subjects since sixth grade which were then computed into one number illustrating their average grade received in most courses), and (c) standardized test scores over the subjects of science, math, reading, and history.

In addition, to illustrate the diversity of ways educational outcomes can be measured, Astone and McLanahan (1991) included many additional measures in their study of the impact of adolescents' family structure on high school achievement. The researchers not only included educational expectations such as if they aspired to be a college graduate, and grades taken from high school transcripts, but also incorporated the regularity of school attendance, attitude toward school, and if the respondent had a continuous progression through academics before reaching graduation.

*Gender*

A significant portion of research has been devoted towards understanding the way in which parental separation, specifically father loss, impacts the educational attainment of boys and girls, whether in similar or different ways. Abdelnoor and Hollins (2004) examined the effects of bereavement during childhood on children's secondary school education. The researchers found that children who have lost a parent due to death, overall had lower academic scores (grade point average) than those children who did not lose a parent by an average of half a letter grade. In addition, girls appeared to be more negatively affected than boys who had lost a parent due to death.

One of the first studies to examine educational outcomes and father loss was Santrock's (1972) study in which effects of father absence were examined, both by death and divorce, on the cognitive abilities of boys and girls using IQ scores from both their third grade and sixth grade years of school. Overall boys with absent-fathers scored significantly lower than girls with absent-fathers. Boys experiencing parental loss due to death had lower scores than girls on their sixth grade IQ as did boys who experienced parental loss due to divorce or separation. No gender differences were found at third grade, leading the authors to infer that amount of time since the death was a contributing factor.

Krein and Beller (1988), comparing the number of years of education attained by young adults reared in single-parent households and two-parent households, found significant differences between young men and women. Their study suggested that both men and women reared in absent-father homes had less schooling than their two-parent counterparts but that males experienced more negative outcomes. Though each additional year spent in a single-mother home lowered the amount of education attained by both males and females,

males were impacted significantly more than females, resulting in a 1/10<sup>th</sup> of a year decrease with every year spent with an absent-father for boys.

The previous articles all lend support to the argument in support of the roles for a same-sexed parent by demonstrating that females living with mothers had more positive results compared to their male counterparts living without a male parent. Psychosexual theory stresses the importance of the presence of a same-sexed parent for a child so that he/she will identify himself/herself with that parent. In addition, the father absent perspective guiding the current study utilizes views derived from socialization theory. This view strongly promotes the roles of each parent as significantly influential for the cognitive and emotional development of children -- when fathers are absent, sons are deprived of a stable male role model on which to base their values, beliefs, and roles and disadvantaged compared to daughters who still have access to their mothers from whom they can learn their female roles. Santrock's (1976) research provides support for the suggestion from the father absent perspective that father absent boys perform lower than father absent girls because of the lack of a same-sex parent. Santrock found that overall in both single-mother households due to divorce and those due to death, boys performed lower on achievement tests and had lower IQ scores compared to girls in the same family types.

On the contrary, several other research studies dispute the findings that males reared in mother-only families are disadvantaged and have lower levels of educational achievement. Svanum, Bringle, and McLaughlin (1982) found significant differences between father-present and father absent children, with father absent children achieving lower scores on cognitive measures. When comparing genders within the father absent sample, no significant differences were found; however Svanum et al. observed that males had increased

vocabulary performance measures. These findings suggest that the mother's role feminizes children in their verbal development.

Downey and Powell's (1993) research finding supports this opposite-sex parent advantage pointed out above. While the researchers acknowledge that children reared with opposite-sexed parents do not gain more, they do however assert that children do benefit in some ways with an opposite-sex single-parent home. Girls from single-father families were found to have higher educational expectations than both girls and boys from single-mother families. In addition, girls from father-only households also scored higher in subjects such as science, math, and reading than girls from mother-only homes. Furthermore, boys seemed to benefit more from living with a single-mother than their female counterparts (Downey & Powell, 1993). These researchers noted that the outcomes were found to be invariable among father absent children resulting from death and divorce when examining the differences between the groups.

### *Race*

Race is often times a control variable in studies examining family structure. In a previous study by McLanahan and Booth (1989), different racial groups were found to experience similar negative effects of growing up in a father absent household leading the author to assume that race was not an important variable relative to the effects of singleness on children's education attainment. This assumption can be considered as a limitation and indicates the need for further research attention to this topic.

The rates of single-mother and/or absent-father homes for White and Black children are clearly quite different. According to statistics from the U.S. Census Bureau (2006), approximately 76% of White children compared to 35% of Black children live in two-parent,

married homes with a remainder 15.8% of White children and 71.6% of Black children living in single-mother homes. Other estimates exemplify this large racial gap in terms of living arrangements. Both White and Black children are in single-mother homes due to the death of their father at relatively low rates with 0.65% of White children and 1.3% of Black children. However, their rates dramatically shift and widen when other reasons for singleness are examined; approximately 10.9% of white children experience divorced and/or separated single-mother homes while a much larger proportion of Black children (38.3%) grow up in divorced and/or separated single-mother homes. Clearly Black and White children experience different rates and types of single-parent homes.

In a study assessing the factors that influence the decision to attend college, Perna (2000) found that about 42% of White high school graduates attend college whereas only 35% of Black high school graduates do so. Krein and Beller (1988) examined how family structure influenced the amount of education completed by gender and by racial groups and observed that the more time spent in a single-mother household, the less education attained by White men, Black men, and Black women. White women were the exception whereas White men experienced the most negative effects, with a decrease in the amount of education completed by  $1/10^{\text{th}}$  of a year for each year spent living with a single mother.

Furthermore, in assessing the impact of father absence on cognitive performances, Svanum et al. (1982) found no significant gender and cognitive performance interactions with White children but they did find a gender interaction for Black children with absent-fathers, with Black males performing significantly higher than Black females. Although White males did not have significantly higher cognitive performances than White females,



their scores were slightly increased possibly demonstrating the role mothers play on the feminization of males with their increased verbal abilities.

Additionally, Amato and Keith (1991) addressed a limitation of research by examining the long-term effects White and Black children of single-mothers may experience as adults. The researchers found an interaction between the person's ethnicity, gender, and father absence. Both White males and females who had experienced father absence completed about half of a year less education than their white counterparts who had not experienced parental absence. Black females reared without their father's presence were the most affected, having an education that was two-thirds of a year less than their peers who had fathers present. Interestingly, Black males without fathers did not differ significantly from father-present Black males in the amount of education completed. This finding is in agreement with Svanum et al. (1982)'s findings and suggests that generally, the presence of a father or father figure in the lives of Black males does not influence educational success, but rather the role of the mother and her presence is more pronounced.

#### *Time of Event*

Analogous with the father absence perspective, one might presume that children who have experienced an event such as divorce, separation, or death of a parent resulting in father absence at an earlier age would be more affected (McLanahan, 1985). This assumption stems from the idea that young children would then not only be without a father for a longer period of time, but that the timing of the loss would impact the socialization of the child. Krein and Beller (1988) found that time spent in a single-parent or absent-father household during preschool years had a negative effect on children's education, while time spent without a father during middle school and high school did not affect education. As an explanation, the

researchers suggested that children are the most influenced in early childhood because children rely mostly on parents during this time while in middle and high school, teachers and peers play a larger role in their lives.

Ermisch and Francesconi (2000) also examined the effects of father loss at different age periods in a child's life on young adult educational attainment. The researchers found that father loss during early childhood is the most detrimental on the amount of education achieved. More specifically, they found that young adults whose fathers became absent while they were between birth and 5 years of age experienced the most negative affects by completing less schooling. This finding supports the theory that the time following the loss is not the most influential, but rather that the negative outcomes follow the child into his or her adult years and are reflected in the young adult's educational level. However, this study provides limited information since it did not examine how the cause of father absence influenced education.

Santrock (1972) examined IQ scores and academic achievement in third- and sixth-grade children but went one step further and distinguished children of divorce from children whose fathers died. Santrock found similar results as Ermisch and Francesconi (2000) in that boys whose fathers became absent due to divorce between birth and 5 years of age performed lower on third- and sixth-grade IQ scores and experienced lower achievement in the third- and sixth-grade years than boys whose parents divorced when the boys were 6-11 years of age. More specifically, boys scored even lower on the IQ and achievement measures when fathers became absent when the boy was 0-2 years of age compared to if the boys was 3-5 years old. Similar results were found for females. Girls whose fathers left due to divorce while the girl was 0-5 years old performed lower on sixth-grade achievement scores than

girls whose fathers left when they were 6-11 years old (Santrock, 1972). This provides further support for the idea that the time immediately following the divorce is not the most destructive time, but rather experiencing more time without a father is more negative.

Loss of a father due to death was also addressed by Santrock (1972); however these results were quite different than what was found when father absence was caused by divorce, as stated in the previous paragraph. While boys from divorced-father homes performed lower on IQ scores when the absence occurred between the ages of 0-5 years, boys whose fathers died tended to show more negative results when the father died when the boy was between 6-11 years old. In addition, boys whose dads died in the first two years of their life actually had higher sixth grade IQ scores than boys whose dads died when they were 6-11 years old. More surprisingly, those boys also had higher sixth grade IQ scores than boys with present fathers. This may have resulted from the feminization that could have occurred with the central role of the mother. Conversely, no significant findings were found for females related to their age at the death their father.

The previous study is important for distinguishing how divorce as one form of father absence and death as another form of absence impact achievement and cognitive measures differently for boys and girls. Abdelnoor and Hollins (2004) concentrated their efforts on understanding how the death of a parent at different ages impacts academic performance. Analogous to Santrock's (1972) findings, Abdelnoor and Hollins found that losing a parent due to death at age 12 is significantly more negative than if the child were 5 years of age or younger, with children who experienced the loss at age 12 performing more than one grade point below their father-present counterparts.

Though it was mentioned earlier that one might presume that educational outcomes are most affected by a longer period of father absence, the review of the previous studies show that this presumption was true for divorce, but not for death. It could be summarized that the negative effects do not decrease over time for younger children of divorce but that older children experiencing the death of his or her father were most impacted because it was a recent event or that death at adolescence had a more profound impact due to the child's developmental level or society's ability to deal with a father's death

### *Parental Education*

Ricciuti (2004) suggests that children reared in single-parent or father absent homes do not necessarily have lowered educational performances compared to their two-parent counterparts. The researcher concluded single-mothers' education level greatly influences the educational performance and attainment of children, with more educated single-mothers producing children with better educational performances.

However, as Norton and Glick (1986) pointed out, single-mothers tended to have completed lower levels of education than married women, who had higher rates of college attendance. According to Bumpass (1984) and Raley and Bumpass (2003), marriage stability and rates of divorce differ with varying education levels of mothers. Both studies reported that two-thirds of women without high school diplomas experience a divorce in their first marriage, compared to about one-third of women who graduated from college. Furthermore, Bumpass noted that children of single-mothers who have only a high school education tended to experience the shortest amount of time in a single-parent household because of their higher rates of remarriage. In contrast, college educated mothers tended to have lower rates of remarriage, thus increasing the length of time the child spent in a single-mother home. Thus,

those in high school educated single-mother homes for a shorter period of time tended to have lower educational outcomes than college educated single-mothers who were in a single-mother home for a longer period of time. This finding suggests that the mother's educational level may override the length of time spent in a single-mother household in terms of the child's educational success.

More recent statistics on the education levels of single-mothers from the 2002 Current Population Survey (Fields, 2003) illustrated the varying levels of education attained by mothers. Approximately 22.1% of single-mothers did not have a high school diploma, 36.2% of single-mothers had successfully complete high school, 29.9% of single-mothers attended some college, and only 11.8% of single-mothers graduated with a bachelor's degree and/or pursued more education. Because of the average level of education single-mothers completed, it is important to understand how mothers' educational experience effects or influences that of her children.

Keith and Finlay (1988) completed a study examining how mothers' education amplifies or reduces the effect of parental divorce on the educational attainment of children. Interestingly, the researchers investigated the children's gain in education compared to that of their mother's education. Overall they found that divorce negatively effects educational attainment and does not result in a relative gain over mothers' education. More specifically, the author found that children with remarried mothers are the most disadvantaged group and the least likely to exceed the amount of education their mothers received. Children whose divorced mothers attended some college completed 1.5 fewer years less than their mothers by one year to one and a half years. However, regardless of mothers' education, if children with divorced mothers have a more privileged background, their chances of completing higher

education are increased. Though Keith and Finlay's study illustrates the influence of a divorced mother's education on her child's education, mothers with their children's father deceased were not explored.

## METHODOLOGY

### *Adolescent Health (Add Health) Data Set*

The Adolescent Health (Add Health) data set was utilized for this study to examine the educational outcomes of children with single-mothers, specifically between children with fathers absent due to death and children with fathers absent for other reasons in comparison with children living with their father in a two-parent home. Add Health is a nationally representative longitudinal study of adolescents and young adults completed by the University of North Carolina at Chapel Hill. Add Health assumes that social factors such as families, friends, and schools influence the choices of adolescents which ultimately promote healthy or self-destructive behaviors. Because many choices that adolescents make do not have immediate or apparent consequences until the adolescents transition into young adulthood and experience the outcomes of their choices, this study examined participants' behaviors and outcomes both during adolescence and young adulthood (University of North Carolina at Chapel Hill, 2003).

Add Health is comprised of a series of in-school questionnaires, in-home interviews, parent questionnaires, and school administrator questionnaires. Data were collected over three waves beginning in 1994 and ending in 2002. However, for the purpose of this study only wave I and wave III from the public use data sets were employed.

Adolescents were selected for participation in the Add Health data set based on their enrollment in a selected and participating school. First, a systematic and stratified sampling method selected 80 high schools reflective of U.S. schools with regard to region of the country and type, size, and ethnicity of the school (University of North Carolina, 2003). High schools were considered eligible if they included the 11<sup>th</sup> grade. Feeder schools, those which

included the 7<sup>th</sup> grade and sent at least five graduates to a selected and participating high school, were identified and included in the sample. If a selected high school already included the 7<sup>th</sup> grade, no feeder school was recruited. A total of 145 schools were in the core study (University of North Carolina).

In-school questionnaires were administered to and completed by 90,118 adolescents in grades 7 through 12 from the selected feeder and high schools between September 1994 and April 1995. The majority of schools used passive consent forms which assumed parental permission if the form was not returned. The four minute In-School Questionnaire surveyed social and demographic characteristics of students and their parents, household structure, health information, expectations for the future, school life, and academic performance. In addition, administrators from each school completed the School Administrator Questionnaire which inquired about their school's characteristics such as social environment, policies, and procedures.

Each participating school provided a student roster including all students who completed the In-School Questionnaire in addition to students who did not complete a questionnaire. Students were stratified by grade and gender and then randomly selected for participation in the in-home sample. The in-home sample consisted of 12,105 adolescents drawn from the core sample of the 80 communities with the addition of specially selected oversamples. In total 27,000 students were selected for in-home interviews. Information regarding the study and informed consent forms was sent to all of the chosen adolescents' households. Those adolescents and parents who agreed to participate in the study completed and returned the informed consent forms to the researchers.



*Wave I*

In-home interviews were conducted with adolescents at their residence between April and December 1995. Only the responding adolescent and one interviewer were present during the interview. Out of the selected sample of 27,000 students from the group who completed in-school questionnaires, 20,745 students agreed to participate for the in-home interviews in wave I of data collection. Parents (or legal guardians) and adolescents both provided written consent before participating in the in-home interview. One- to two-hour interviews with adolescents were conducted using a Computer-Assisted Personal Interview (CAPI) via a laptop computer in which the researcher read aloud the questions and recorded each adolescent's answers. Researchers eliminated the need to read aloud answer choices of each question by showing various response cards to the adolescents. These response cards contained appropriate responses for the adolescent to choose from for each question, thus shortening the length of the interview. For questions addressing more sensitive topics, such as substance abuse and sexual behavior, an Audio Computer-Assisted Self Interview (ACASI) was utilized in which adolescents listened to pre-recorded questions through earphones and entered their answers on the laptop. The interviewer instructed the responding adolescent on how to use the laptop and provided practice questions to ensure the directions were clearly understood. For this current study, data pertaining to demographic variables, such as age, race, grade, current and past education information, status of biological father, timing of father's death, child's report of father absence, and future academic expectations were taken from this wave I adolescent in-home interview.

Questionnaires were also administered to a parent or guardian of the participating adolescent. The majority of parent questionnaires were completed the same day as the

adolescent interview. The mother (or other female head of the household) was the preferred respondent to participate in the 40-minute, pencil and paper questionnaire administered by the interviewer. If the mother or other female guardian was not available during this time, the interviewer rescheduled the parent questionnaire for a time when the mother was available. In the event that the mother or female head refused to participate, the adolescent's father or male guardian acted as the respondent.

The Parent Questionnaire supplemented the adolescent's in-home interview by providing further information regarding family composition and the adolescent's health history. The questions inquired about demographic information of the parent or guardian and general questions related to the adolescent. Approximately 6,500 respondents from the core sample were chosen randomly to form the public use data set employed in this study. Data relating to the female respondent's relationship to the adolescent, marital status, education, social status, and age were taken from the Parent Questionnaire in wave I for the current study.

### *Wave II*

Data collection in wave II took place between April and August 1996. Many of the sampled adolescents from wave I were re-interviewed via in-home interviews quite similar to the adolescent interviews used previously. However, the majority of respondents in the 12<sup>th</sup> grade were removed. In addition, 65 adolescent respondents who did not partake in wave I were recruited for wave II. In total, 14,738 new and previously interviewed adolescents (and their guardians) signed informed consent forms and completed in-home interviews. Approximately 6,500 respondents from the core study were included in the public use data set in wave II. No data from wave II were included in this current study.

*Wave III*

In the third wave of data collection in 2001 and 2002 sought to relocate original wave I and wave II respondents approximately 6 years after the initial in-home interview. In total, 15,197 respondents who were now young adults between 18 and 26 years of age were included in the wave III in-home interview sample. Respondents were asked to complete an informed consent form prior to the in-home interview. Parental consent was not necessary since the respondents were 18 years old or older. In-home interviews lasted approximately 90 minutes in the respondent's home and the respondents were provided an incentive payment. Similar to wave I, in-home interviews implemented the use of the CAPI program which enabled the interviewer to read aloud the questions and record the responses electronically in the laptop. Response cards were once again utilized to reduce the length of the interview.

As before in wave I, for questions inquiring about more sensitive information, respondents were instructed to record his or her answers into the laptop in privacy. Before the self-administered section of the interview, the researcher instructed the respondent on how to use the program and provided practice questions to ensure clear understanding of the directions. The questionnaire contained previously-asked questions from past waves and included additional questions to obtain information relating to their transition into adulthood such as relationship histories, educational attainment, and workforce participation.

Furthermore, participants signed and completed High School Transcript Release forms. Researchers collected and coded transcript information that is included in the Education Data component of wave III. From the core sample described above, 4,882 respondents from wave I were re-interviewed in wave III and included in the public use data

set employed by this study. The current study utilized wave III data related to demographic information in addition to education attainment.

Past research measured and evaluated the level of academic achievement adolescents completed in several ways, ranging from a single item to more complex measures including dimensions that contribute to the completion of a high school degree. In the current study, education was not examined as one variable and dimension, but was separated into two categories, attainment and success. Educational attainment was measured by the highest level of education completed found in wave III. Education success was defined as the cumulative overall high school grade point average also found in wave III. As a combination of educational attainment and success, the completion of a high school diploma for all the participants and a college bachelors degree for all those who were 22 years or older in wave III were also examined to separate those who attended a couple years of college from those who completed the degree.

Participants of the current study were grouped into the three categories based on (a) the age they were when their father died (found in wave III) if they were in the deceased father group and b) the number of years living without a father residing in the home, such that their current age (found in wave III) minus the number of years living without a father (found in wave I) would indicate which age group they were in when they first became fatherless. The age groups are birth to 6 years old, 7-12 years old, and 13-18 years old. The basis for the age cutoffs stems from Erikson's Psychosocial Development stages in which those aged 0 to around 5 or 6 may not understand the reasons for father absence or father death, but that by around 6 to 12 years of age, children enter into the industry and inferiority stage in which they start to compare themselves with others. By around 13 years of age

children start to enter adolescence and can begin to think more abstractly and develop a sense of identity (Cook & Cook, 2005).

Differences in education by racial groups were also measured by using wave III demographic information. Participants were categorized as White if they marked that they only considered themselves White. Similarly, Black children were coded as Black if they marked that they only considered themselves Black. Participants in the other race category are those who marked multiple races and/or Asian or Native American.

Data from both waves were utilized to measure the effect of mothers' education level on the education attainment of their children. Mothers' educational data was retrieved from wave I while children's educational data was retrieved from wave III. Mothers who received a high school diploma were separated from those who finished college and those scores were compared with their children's highest level of education attained for both the deceased father group and the father absent for other reasons group.

### *Sample Selection*

The methodology of selecting the samples used in this research took part in several stages. The particular method used is described below; however, it probably would be possible to arrive at the same sample using a different set of steps. First, because wave I consisted of multiple parts including the in-home interview, in-school interview, and the parent interview, only those who marked a gender in the in-home interview and marked the same gender in the in-school interview were kept, thus removing 1,803 subjects for marking different responses for the gender variables in the same wave and to assure that every subject in the finished sample completed both the in-home and in-school versions.

Next, waves I and waves III were combined. Subsequently, only subjects whose gender from wave I matched the reported gender in wave III were kept, eliminating 2,405 subjects because either they were in wave I but not re-interviewed in wave III or because their gender responses were not the same from wave I to wave III. In addition any subject who was not administered the parent questionnaire was removed by keeping subjects if the parent gender variable from the parent questionnaire was either male or female and the child's gender from the in-home interview was either male or female thus eliminating anyone whose parent did not complete the questionnaire because there was no parent gender reported, removing an additional 497 subjects. After that, because it was decided to include only subjects in which mothers completed the parent questionnaire to eliminate parent gender differences among the sample where fathers are present in the home, subjects were removed if the parent indicated gender as male. This then, constituted the sample that was selected for the current study.

Classifying the cause of father absence for single-mother families as never-married, separation, divorce, or widowhood helps to identify and recognize the differences or similarities between each situation as it relates to academic achievement and success. This study aimed to define single-mother households in terms of being caused by widowhood as one category and all other causes of singleness in another category of singleness. However, due to limitations of the data this was not possible. Because the mother's marital status referred to her current marital status and did not take into account her marital status in relation to the child's biological father, marital status could not be used to determine if the mother was widowed, divorced, separated, or never-married. Instead, the categories were

defined as father absent due to death, father absent for other reasons, and father present in a two-parent home.

Selecting participants to be included in the father absent due to death group, father absent for other reasons group, and father present group took several steps. For the father absent due to death group, subjects were kept if they responded “no” to the question asking if their biological father was still alive, keeping only 82 subjects. It was later discovered that 12 subjects responding “no” in wave I responded “yes” to the same question in wave III. These 12 were dropped because it is unclear why their fathers were said to have died before wave I but were coded as living in wave III, leaving 70 subjects remaining in the father absent due to death group. A few ideas could possibly explain why this difference occurred between waves. For instance, a child may not have known the complete history of the biological father and may have been told at an earlier age that his or her father had died and learn at a later age that he was living. Another reason might include a young child being embarrassed to describe during wave I the reason why his or her father is not around, such as because he is in jail or because he left the family, and later coming to terms with the situation and being more truthful during wave III. And of course, it could have been due to error on the child’s part at one of the waves.

Because the comparisons in this paper included equal groups, 70 subjects were selected to comprise the father absent for other reasons group. To do this, those responding “yes” to the question asking if their biological father was still alive in wave I were kept, those responding that their biological father was not living in their household were kept, and those indicating an age in which they last lived with their biological father were kept, leaving 497

subjects who matched the criteria. Subsequently, 70 subjects were randomly selected to match the father absent due to death group on age and gender.

Selecting those with father present from two-parent homes was conducted in a similar fashion as above. First, those responding “yes” to the question if their biological father was still alive in wave I were kept. Next, those indicating that their biological father lives in their household regardless of parents’ marital status were kept, leaving 1,679 eligible subjects from which 70 were randomly selected to form the two-parent sample matching the father absent due to death group on age and gender.

### *Research Questions*

Several research questions are used to guide the direction of this research. These questions include:

1. Is there a significant difference in the level of education attained between children in two-parent households versus children in any type of father absent households?
2. Is there a significant difference in the level of education attained between children in father absent households due to death versus other reasons for absent-fathers?
3. Does educational success differ in children from deceased father households related to the age of the child when the event of paternal death occurred?
4. Does educational success differ between children with deceased fathers versus children with absent-fathers for other reasons related to the number of years the child has been living without the father?
5. Is there a significant difference in the attainment of a high school diploma between children with deceased fathers versus other reasons for absent-fathers?



6. Is there a significant difference in the attainment of a college degree for those 22 and older between children with deceased fathers versus other reasons for absent-fathers?

In order to respond to each research question, decisions were made to determine the appropriate statistical analyses, including correlations and t-tests.

## RESULTS AND DISCUSSION

*Frequencies and Descriptive Analyses*

The frequencies for demographic variables, including gender, age, and race for the participants of this study are located in Table 1. This study separated the participants into three sub-samples based on whether their fathers were deceased, living but absent from the child's home, or living with the child regardless of marital status.

Table 1  
Frequencies of Demographic Variables

	Deceased Fathers		Other Absent-Fathers		Present Fathers	
	<i>n</i>	Percent	<i>n</i>	Percent	<i>n</i>	Percent
<b>Gender Wave I</b>						
Males	26	37.14%	26	37.14%	26	37.14%
Females	44	62.86%	44	62.86%	44	62.86%
<b>Age at Wave I</b>						
11 years old	1	1.14%	0	0.00%	1	1.14%
12 years old	11	15.71%	12	17.14%	11	15.71%
13 years old	15	21.43%	15	21.43%	15	21.43%
14 years old	15	21.43%	15	21.43%	15	21.43%
15 years old	13	18.57%	13	18.57%	13	18.57%
16 years old	8	11.43%	8	11.43%	8	11.43%
17 years old	6	8.57%	6	8.57%	6	8.57%
18 years old	1	1.43%	1	1.43%	1	1.43%
<b>Age at Wave III</b>						
18 years old	0	0.00%	0	0.00%	2	2.86%
19 years old	12	17.14%	12	17.14%	11	15.71%
20 years old	18	25.71%	18	25.71%	13	18.57%
21 years old	15	21.43%	15	21.43%	15	21.43%
22 years old	13	18.57%	13	18.57%	15	21.43%
23 years old	4	5.71%	4	5.71%	9	12.86%
24 years old	7	10.00%	7	10.00%	4	5.71%
25 years old	0	0.00%	1	1.43%	1	1.43%
26 years old	1	1.43%	0	0.00%	0	0.00%
<b>Race</b>						
White	36	51.43%	43	61.43%	55	78.57%
Black	25	35.71%	20	28.57%	12	17.14%
Other	9	12.86%	7	10.00%	3	4.29%

\*Note: The race variable Other denotes those who answered yes to the questions asking if they were Asian or Native American and those who answered yes to more than one response asking if they were of a certain race.

As the table indicates, there were almost two-thirds more females than males in the deceased father group, with the majority of participants being between the ages of 12 and 16 years old in wave I and between ages 19 and 22 years old in wave III. These ages were then replicated in the absent father and two-parent groups by matching the groups on age and gender. Race was not used as a matching variable when randomly selecting the sub-samples. Racial differences in the size of the groups are obvious with more African American children and more children in the other race categories in the deceased father group than in the other absent-father and two-parent groups of children, though the other absent-father participants still had more minorities than the father present families, duplicating what we already know about family structure and race in previous research (U.S. Census Bureau, 2006).

Although mothers' marital status was not used as a variable in this study because the author could not ascertain the marital status in relation to the children's fathers, it is essential to note. Overall, mothers of children with deceased fathers include 8 single or never married mothers, 1 married mother, 40 widowed mothers, 8 divorced mothers, 2 separated mothers, and 1 mother who did not report her marital status. All 70 mothers of children with two parents living in the same household reported being married. The breakdown of mothers who have children with fathers absent for other reasons include 1 single or never married mother, 20 married mothers, 37 divorced mothers, and 12 separated mothers.

The children's mean highest level of education attained for each age level in both sub-groups of father absence and those with two parents living in the same household are shown in Table 2. Included in this descriptive table are also the frequencies of the different types of diplomas and degrees attained for each age group. Though not shown in the table, a correlation was run between highest level of education completed and high school GPA

scores. All three sub-samples had significant correlations between these two variables: fathers absent due to death,  $r(59) = .611, p < .01$ , fathers absent for other reasons,  $r(59) = .383, p < .01$ , and fathers present,  $r(55) = .596, p < .01$ .

Table 2

Means and Frequencies for Educational Attainment Variables by Age of Child at Wave III

Age in Wave III	Mean	Frequency				
	Highest Grade Completed	No Degree	GED	High School Diploma	Associates* Degree	Bachelors* Degree
<b>Deceased Father</b>						
19 years old	12.42	1	1	10	0	0
20 years old	12.56	2	0	16	0	0
21 years old	12.93	2	2	9	2	0
22 years old	13.84	1	0	7	2	3
23 years old	15.25	0	0	1	0	3
24 years old	13.29	0	0	5	1	1
25 years old	00.00	0	0	0	0	0
26 years old	11.00	1	0	0	0	0
<b>Father Absent for Other Reasons</b>						
19 years old	12.46	2	0	11	0	0
20 years old	11.63	4	2	9	1	0
21 years old	13.36	0	3	9	1	1
22 years old	13.00	2	0	10	0	3
23 years old	12.60	0	1	4	0	0
24 years old	13.17	0	1	3	2	1
25 years old	16.00	0	0	0	0	1
<b>Present Father</b>						
18 years old	13.00	0	0	2	0	0
19 years old	12.90	0	0	10	0	0
20 years old	12.69	0	1	11	1	0
21 years old	14.33	0	1	13	1	0
22 years old	14.27	1	1	7	0	6
23 years old	14.67	0	2	1	1	5
24 years old	14.25	0	0	2	1	1
25 years old	12.00	0	0	1	0	0

\*Note: Because associate degrees usually require two years of schooling and bachelors require typically four years of college, those under 20 have not had a chance to obtain an associates degree while those under 22 have not had the chance to finish four years of college. Also, no one reported having a Masters degree, PhD, or other professional degrees.

*Question 1: Is there a significant difference in the level of education attained between children in two-parent households versus children in any type of father absent households?*

An independent-samples *t* test showed that the mean score of the highest level of education for the 70 children in two-parent households ( $M=13.74$ ,  $SD=1.76$ ) was significantly greater than the mean score for the 140 children in any type of father absent household ( $M=12.87$ ,  $SD=1.79$ ),  $t(208) = -3.34$  ( $p < .01$ ). The overall father absent household category was then separated into two further categories, deceased fathers ( $n=70$ ) and fathers absent for other reasons ( $n=70$ ). Two additional independent-samples *t* tests were conducted to test the mean level of education attained against each of the two more specific father absent groups and the two-parent household ( $n=70$ ). The tests showed that children in two-parent households had completed significantly greater amounts of schooling ( $M=13.74$ ,  $SD=1.76$ ) than children of deceased fathers ( $M=13.06$ ,  $SD=1.78$ ),  $t(138) = -2.29$  ( $p < .05$ ) (see Table 3). In addition, children in two-parent households also had completed significantly greater amounts of schooling ( $M=13.74$ ,  $SD=1.76$ ) than children with fathers absent for other reasons ( $M=12.69$ ,  $SD=1.80$ ),  $t(138) = 3.52$  ( $p < .01$ ) (see Table 3).

Table 3

Mean Differences in Educational Outcomes Between Children with Fathers Absent Due to Death and for Other Reasons and Those with Fathers Present

Type of Educational Outcome	Deceased Fathers (Group 1)		Fathers Absent for Other Reasons (Group 2)		Father Present (Group 3)		<i>p</i> for (1) vs. (3)	<i>p</i> for (2) vs. (3)
	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>	<i>n</i>	<i>M</i>		
	Highest Level of Education	70	13.06 (1.78)	70	12.69 (1.80)	70		
Completion of High School	70	0.857	70	0.771	70	0.91	0.29	0.02*
High School GPA	59	2.60 (0.93)	59	2.48 (0.78)	56	2.87 (7.94)	0.10	0.01
Completion of Bachelors Degree	25	0.28	27	0.07	29	0.41	0.31	0.03*

\*  $p < .05$  \*\*  $p < .01$

Children in single-mother homes as a collective group and regardless of reasons for father absence had significantly lower level of educational attainment by almost one whole year than children living with both their biological parents. This supports what past research has found in that children living with only one parent have lower educational outcomes (Amato & Keith, 1991; Pong, Dronkers, & Thompson, 2003; Shinn, 1978). Father absence was further broken down, revealing that both children with deceased fathers and children with fathers absent for other reasons when compared to two-parent children separately completed significantly lower levels of education. Children having deceased fathers completed a little over half of a year less than children with two parents while children with fathers absent for other reasons completed over a year less of school than children in two-parent homes. The breakdown of these results lends further support that children without fathers for any reason such as death, divorce, and separation complete between half a year and a whole year less of school.

*Question 2: Is there a significant difference in the level of education attained between children in father absent households due to death versus other forms of father absence?*

Using an independent-samples *t* test, results indicated that there was not a significant difference in the highest level of education attained between children of deceased fathers ( $n=70$ ,  $M=13.06$ ,  $SD=1.78$ ) and fathers absent for other reasons ( $n=70$ ,  $M=12.69$ ,  $SD=1.80$ ),  $t(138) = 1.23$  ( $p > .05$ ). In other words, children with deceased fathers did not have any more or less significant amounts of education compared to children with fathers absent for other reasons. This finding was unexpected since the parental loss theory suggests that children with deceased fathers would have lowered educational outcomes than those with fathers absent for other reasons. In addition, neither of the conflicting studies cited earlier, Jeynes

(2002) who found support that children with deceased fathers fare worse nor Biblarz and Gottainer (2000) who suggested that children with divorced and absent-fathers have lowered outcomes than other forms of father absence, were supported.

A few variables which were not taken into account may have influenced the results related to this question. First as the parental loss theory explains, any contact with a father may help the educational outcomes of children through the socialization process. This study did not take into account the frequency of visits from the fathers nor the amount of time children spent with their fathers who were absent for other reasons. Perhaps if contact with absent-fathers was examined, one might see that contact with an absent-father may increase educational outcomes. Second, fathers absent for other reasons included a wide range of absent-fathers while the deceased fathers group encompasses only one type of absent-fathers. Possibly, there could be something about combining divorced, separated, and never-married absent-fathers into one group that negates finding a difference for one type of fathers absent for other reasons against children of deceased fathers.

*Question 3: Does educational success differ in children from deceased father households related to the age of the child when the event of paternal death occurred?*

A Pearson product-moment correlation was used to examine any association between the highest level of education attained and the age of the children when their fathers died. No significant correlation was found between age at father death and highest level of education,  $r(n = 70) = -.166, p > .05$ . To understand the relation between the children's age when their fathers died and the cumulative overall GPA scores in high school an additional correlation was employed. As with level of education, no significant association was found between age at father's death and GPA,  $r(n = 59) = -.178, p > .05$ .

Although the above findings were not statistically significant, children with deceased fathers were divided into three groups based on their age when their fathers died: 0-6 years old, 7-12 years old, and 13-18 years old to further explore the author's curiosity about this question. Independent-samples *t* tests were used to test GPA scores of each group against the others. No comparison yielded significant results (see Table A1 in Appendix A).

These analyses found no significant associations between the age grouping in which children lost their fathers and (a) the amount of education that was completed or (b) high school GPA scores. This is contrary to the parental loss perspective which theorizes that a loss at younger ages tends to have increased negative outcomes on education. The results regarding this question were not found to support this perspective because children who lost a father between the ages of birth and 6 did not have significantly lowered levels of education attainment than those who were between the ages of 7 and 12 or 13 and 18.

Additionally, the results dispute the findings from Ermisch and Francesconi (2000) suggesting that children in the preschool years complete fewer years of schooling. Ermisch and Francesconi, however, did not separate children with deceased fathers from fathers absent for other reasons. One possibility for not finding lowered educational outcomes for younger aged children might be due to the fact that in the current study, children with deceased fathers were singled out and examined separately whereas children with absent-fathers for any reason were combined in the study conducted by Ermisch and Francesconi. Perhaps in their study, there were one or more groups besides children with deceased fathers that had considerably lowered educational attainment such that when all types of father absence were examined together, it appeared that children who lost their fathers to death had lowered outcomes though it was simply because they were combined with the others. One



study by Santrock did separate children with fathers absent due to death from those absent for other reasons and found results indicating that being at a younger age at father's death tended to lower educational outcomes. Unlike Ermisch and Francesconi who found those preschool aged or younger to be the most negatively influenced group, Santrock found that children between 6 years and 11 years of age were the most negatively influenced in his study.

On the other hand, the current study had a small number of children with deceased fathers to begin with and even smaller numbers when the children were separated into groups respective to their ages at their fathers' death. This small sample size limited the likelihood of finding significant differences in the smaller age groups, thus limiting the generalizability of these results to the general population of children with deceased fathers.

*Question 4: Does educational success differ between children with deceased fathers versus children with fathers absent for other reasons related to the number of years the child has been living without the father?*

An assumption was made when testing the mean differences of the highest level of education completed and cumulative overall GPA scores with the age in which children began living without fathers. Although it is straightforward to find the age in which the children in the deceased fathers group began living without their fathers by using the age in which their fathers died, children with fathers absent for other reasons required a different way to document this age. Therefore, children with fathers absent for other reasons were placed in one of the three age groups based on their age in wave I minus how many years they reported living with their father as reported in wave I with the assumption being that

they lived continuously with their fathers for the number of years they reported and had not since lived in the same household as their father.

A Pearson product-moment correlation was used to examine the associations between age of losing a father for any reason and the highest level of education attained. First, children with deceased fathers and children with fathers absent for other reasons were combined into one group. The number of years living apart from their fathers and their highest level of education were not significantly related  $r(n=140)=-.1045, p > .05$ . The finding that living more years without a father for any reason did not tend to increase or decrease the amount of education attained was not all that surprising since children with deceased fathers in the previous research question were not found to have lowered outcomes when they lost their fathers at a younger age, thus living longer without a father than those who lost their fathers at older ages. This test was quite similar to the correlation focusing on children of deceased fathers in the previous question, however, reconstructing the correlation to include children with fathers absent for other reasons in addition to children with deceased fathers added further support that length of living in a father absent household was not associated with the amount of education completed.

The combined group of children with fathers absent for any reason was then broken down into two groups, deceased fathers and fathers absent for other reasons. A correlation on the number of years living apart from their fathers and their highest level of education was performed for each of the two groups. Children with deceased fathers were found to have a small but significant positive association between the number of years they have lived without their father and their highest level of education finished,  $r(n=70)=.257, p < .05$ . Therefore, the longer they have lived without their fathers the more education they

completed. This differs from the finding above because this examined children with deceased fathers separately. For children with fathers absent for other reasons, however, there was no significant association between the two variables,  $r(n=70)=-.0421, p > .05$ . Thus, children with absent-fathers for other reasons differ from the deceased father group in that the amount of education attained was not related to the amount of time children lived without their fathers.

In the deceased fathers group, children were compared to each other based on the age they lost their fathers and the amount of education they finished. Children 0-6 years old when they lost their father were compared against 7-12 year olds and 13-18 year olds, in addition to 7-12 year olds compared with 13-18 year olds using independent-samples  $t$  tests on highest level of education attained. No significant results were found (see Table B1 in Appendix B). Similarly, the same age group comparisons were used for children with fathers absent for other reasons so that independent-samples  $t$  tests could be done on their GPA based on the age they lost their fathers. As with deceased fathers, children with fathers absent for other reasons did not differ significantly from each other based on their age when they started living without their fathers (see Table B1 in Appendix B).

Lastly, to see if the educational outcomes of children from the age groups differed by the two types of father absence (deceased fathers or fathers absent for other reasons), additional independent-samples  $t$  tests were conducted between samples by comparing the same age group found in each. Children who began living without their fathers between the ages of 0-6 years old because their fathers died were compared with children whose fathers became absent for other reasons when the children also were between 0-6 years old. These comparisons extended to the 7-12 year old age group and the 13-18 year old age group. No

significant differences were found in either the highest level of education attained or the cumulative GPA scores (see Table C1 in Appendix C).

Overall, the results suggest that it is not the age in which the child experienced the loss event, but rather how recent this loss event occurred. When exploring children with deceased fathers, children who had lived without their fathers for longer periods of time completed more schooling. Therefore it could be proposed that the negative effects of losing a parent to death diminish over time and a recent loss tends to lower the amount of education attained or the younger the child is at the time of the death, the greater effect there is on the child's developmental processes. However, children with fathers absent for other reasons were not found to have any positive or negative association between the amount of time without a father and the amount of school completed.

The findings from this section conflict with other studies' findings that educational outcomes differed significantly by age groups. For example, Abdelnoor and Hollins (2004) reported that children with deceased fathers differed in their academic performance in regards to their age when their father died, with adolescents who lost their fathers scoring lower than those who were 5 years old or less when their fathers died. Similarly, Ermisch and Francesconi (2000) examined the age groups children were in when father absence occurred and concluded that children who lost fathers for any reason at a younger age have more detrimental effects to their education. Santrock (1972) went further and separated his sample by type of father absence, gender, and age group. He found children between the ages of 0 and 5 in the divorced father group and children between 6 and 11 years old in the deceased father group were the most negatively affected children with lowered educational outcomes. The current results do not provide support for these age group differences. This may occur

possibly because of the small sample size of children in both types of father absence and even smaller numbers of children in each age group.

*Question 5: Is there a significant difference in the attainment of a high school diploma between children with deceased fathers versus absent-fathers for other reasons?*

As a baseline comparison, an independent-samples  $t$  test was first conducted to examine the difference of attaining a high school diploma in children from two-parent families ( $n=70$ ) and overall father absent families, combining the two father absent groups ( $n=140$ ). The results indicated no significant difference  $t(208) = 1.91$ , though it was approaching significance with  $p = .0577$ . To explore this further, the deceased father group and the father absent for other reasons group were each compared separately with the children in two-parent families using an independent samples  $t$  test (see Table 4). Only the children with fathers absent for other reasons ( $n=70$ ,  $M=0.77$ ,  $SD=0.42$ ) had significantly lower high school diploma attainment than children from two-parent families ( $n=70$ ,  $M=0.91$ ,  $SD=0.28$ ),  $t(138) = 2.35$  ( $p < .05$ ). Children with deceased fathers ( $n=70$ ,  $M=0.85$ ,  $SD=0.35$ ) did not differ significantly from children in two-parent families,  $t(138) = 1.059$ ,  $p > .05$ . Finally, when testing the rates of high school diploma attainment between children with deceased fathers ( $n=70$ ,  $M=0.86$ ,  $SD=0.35$ ) and fathers absent for other reasons ( $n=70$ ,  $M=0.77$ ,  $SD=0.42$ ), no significant results were found,  $t(138) = 1.30$ ,  $p > .05$  (see Table 4).

Table 4

Mean Differences in Educational Outcomes Between Children with Deceased Fathers and Fathers Absent for Other Reasons

Type of Educational Outcomes	Deceased Fathers			Father Absent for Other Reasons			<i>t</i> score	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
	Highest Level of Education	70	13.06	1.78	70	12.69		
Completion of High School	70	0.86	---	70	0.77	---	1.30	0.19
High School GPA	59	2.60	0.92	59	2.48	0.78	0.75	0.46
Completion of Bachelors Degree	25	0.28	---	27	0.15	---	1.16	0.25

In general, children who had fathers absent for any reason when combined as one large group did not have significantly lower or higher rates of high school completion than children residing in two-parent homes. This finding was unexpected since most of the literature reviewed in this study suggests that children in single-parent homes or father absent homes tend to have lowered educational outcomes. When children with absent-fathers were separated into fathers absent due to death and fathers due to other reasons, different results emerged when compared to children in the two-parent sub-sample. Children with deceased fathers had completed high school at rates similar to two-parent children. These results were contradictory to the parental loss perspective. Also, in comparison with findings from previous research questions examined, one can infer that even though children with deceased fathers have the same likelihood of graduating high school, these children overall have lowered levels of attaining more education beyond high school than children in two-parent households.

Children whose fathers were absent for other reasons, however, displayed significantly lower rates of attaining a high school diploma than two-parent children, thus supporting the results found by Sandefur et al. (1992). One reason this difference was not found earlier when comparing absent-fathers as one large and non-descriptive group may be due to children with deceased fathers masking the significant difference in the rates of attaining a high school diploma. This possibility led the author to purposely examine the two types of father absence separately. Furthermore, children with deceased fathers compared to children with fathers absent for other reasons had a similar likelihood of graduating high school, adding more support for disputing the parental loss perspective when examining educational outcomes.

*Question 6: Is there a significant difference in the attainment of a college degree for those 22 and older between children with deceased fathers versus fathers absent for other reasons?*

First, both the deceased father group ( $n=25$ ,  $M=0.28$ ,  $SD=0.46$ ) and fathers absent for other reasons group ( $n=27$ ,  $M=.15$ ,  $SD=0.36$ ) were compared separately against the two-parent group ( $n=29$ ,  $M=0.41$ ,  $SD=0.50$ ) using independent-samples  $t$  tests. No significant differences were found between the deceased father group and two-parent group,  $t(52) = -1.02$ ,  $p > .05$ . However, there was a significant difference between the father absent for other reasons group and two-parent families,  $t(54) = 2.26$ ,  $p < .05$  in that children with two parents had higher rates of completing college. Another independent-samples  $t$  test was used to answer this question more directly by comparing college graduation rates between children with deceased fathers ( $n=25$ ,  $M=0.28$ ,  $SD=0.46$ ) and fathers absent for other reasons ( $n=27$ ,  $M=.15$ ,  $SD=0.36$ ) and no significant differences were found,  $t(50) = 1.16$ ,  $p > 0.5$  (see Table 4).

Similar to the findings regarding high school graduation, children with deceased fathers were not found to have significantly lowered rates of graduating college when compared with children who grew up in a two-parent household. It appears that children with deceased fathers have equal rates of attending college when compared with children in two-parent homes even though overall they were found to have significantly lower levels of educational attainment. One possibility for this may be similar to Sandefur et al.'s (1992) assertion that children who experience a disruption or loss of a father are just as likely to go to college as those living in a two-parent home given that they have graduated from high school.

#### *Other Findings*

Even though race and gender were not addressed specifically in the research questions, they were still of interest for the study. For children of deceased fathers, there were no significant differences in the mean scores for level of education attained for White ( $n=36$ ,  $M=12.72$ ,  $SD=1.65$ ), Black ( $n=25$ ,  $M=13.32$ ,  $SD=1.89$ ), and other races ( $n=9$ ,  $M=13.67$ ,  $SD=1.94$ ) when using independent-samples  $t$  tests. Similar insignificant results were found when using independent-samples  $t$  tests for the level of education attained for children of absent-fathers who were White ( $n=43$ ,  $M=12.67$ ,  $SD=1.8$ ), Black ( $n=20$ ,  $M=12.85$ ,  $SD=1.95$ ) and other races ( $n=7$ ,  $M=12.29$ ,  $SD=1.5$ ) (see Table D1 in Appendix D).

Overall, children belonging to different racial groups were not significantly different from each other on the amount of education completed whether they have fathers absent due to death or for other reasons. This supports McLanahan and Booth's (1992) findings that race may not play a large role in the amount of education a child attains when their fathers are absent. However, these results contradict Krein and Beller (1988) who found that Black



males and females completed less schooling than their White counterparts and Perna (2000) who found White children attending college at significantly higher rates than Black children.

Although the current study aimed to examine different racial groups, the small sample size and few children in each racial group other than White or Black made it difficult to complete the task. Children were coded as White if they identified only as being White and vice versa with Blacks, while all children other who did not match with the classifications for white or Black were coded as “other.” Therefore, one cannot conclude with confidence that children in different racial groups do not differ in the level of education completed. Although the current study did not find significant differences, it is unclear how the results would have emerged if more Asian and Native American children had been in the groupings.

Furthermore, the cumulative high school GPA scores were examined for each race in both the deceased father sub-sample and the father absent for other reasons sub-sample using independent-samples *t* tests. No significant differences were found within the White ( $n=30$ ,  $M=2.68$ ,  $SD=0.99$ ), Black ( $n=20$ ,  $M=2.47$ ,  $SD=0.93$ ), and other races ( $n=9$ ,  $M=2.61$ ,  $SD=0.73$ ) in the deceased father group. However, within the father absent for other reasons group, White children ( $n=36$ ,  $M=2.69$ ,  $SD=0.6$ ) had significantly higher mean GPA scores than Black children ( $n=17$ ,  $M=1.99$ ,  $SD=0.82$ ),  $t(51) = 3.51$  ( $p < .001$ ), but the other comparisons were not significant (see Table D1 in Appendix D). In other words, Black children with fathers absent for other reasons did not complete fewer or more years of school than children classified as White or other, but did have lower cumulative GPA scores in high school than did White children.

Gender was addressed in a similar way as race. Independent-sample *t* tests were run between the males and females in the two types of father absent groups for highest level of

education attained and cumulative high school GPA. The mean difference in level of education attained between males ( $n=26$ ,  $M=13$ ,  $SD=1.9$ ) and females ( $n=44$ ,  $M=13.09$ ,  $SD=1.74$ ) was not significant for the deceased father group,  $t(68)=-0.205$ ,  $p > .05$ . Neither was there a difference between males ( $n=26$ ,  $M=12.19$ ,  $SD=1.77$ ) and females ( $n=44$ ,  $M=12.98$ ,  $SD=1.77$ ),  $t(68)=-1.79$ ,  $p > .05$  in the father absent for other reasons sub-sample. Cumulative high school GPA scores were also compared but the differences between males ( $n=22$ ,  $M=2.32$ ,  $SD=.89$ ) and females ( $n=37$ ,  $M=2.77$ ,  $SD=0.92$ ) in the deceased father sub-group,  $t(57)=-1.87$ ,  $p > .05$  were not significant. However, a different picture emerged for the absent-father sub-sample in which females had a significantly higher mean cumulative GPA score ( $n=36$ ,  $M=2.79$ ,  $SD=0.51$ ) than the males ( $n=23$ ,  $M=2.01$ ,  $SD=0.9$ ),  $t(57) = -4.26$   $p < .001$  (see Table E1 in Appendix E).

The results from the current study tend to show no difference between males and females on level of education attained and GPA scores for children living in households where fathers were absent due to death. Abdelnoor and Hollins (2004) found females scoring lower GPA scores than their male counterparts with deceased fathers, yet this study failed to provide support for their finding. Males and females with fathers absent for other reasons did not differ from each other on the amount of education completed, but females had a 0.75 point higher cumulative GPA scores than did males.

According to the psychosexual theory which asserts males would be more likely to have lowered educational scores because they do not have a male role model, this was not the case found for children with fathers absent for other reasons. Although the results do not show that males from this group have increased GPA scores over males with two-parents, one cannot rule out the possibility that mothers may reduce the negative outcomes of fathers

absent for other reasons through other roles they may fulfill as a result of father absence.

After all, males who had fathers absent for other reasons did not score lower than females as would be predicted by the psychosexual theory, thus adding support towards mothers playing a factor in males' educational outcomes.

Mothers income level in relation to the amount of education attained by children was also examined using correlation analyses. A significant positive correlation was found between mothers' income and highest level of children's education in two-parent homes,  $r(63) = .328, p < .05$ . Similarly, positive associations were found between mothers' income and highest level of education for children with deceased fathers,  $r(60) = .351, p < .01$  and children with fathers absent for other reasons,  $r(64) = .384, p < .01$  (see Table F1 in Appendix F). In general, children's highest level of education increased as mothers' income increased whether children were in two parent homes, had deceased fathers, or had fathers absent for other reasons.

Mother's income also was correlated with the student's attainment of a high school diploma and with whether or not the student received a bachelor's degree. For children with deceased fathers, there was a small but significant positive association between income and having a high school diploma,  $r(60) = .298, p < .05$  and a significant positive association between mothers' income and receiving a bachelor's degree,  $r(22) = .494, p < .05$ . However, for children with fathers absent for other reasons, there was not a significant association between mothers' income and (a) having a high school diploma,  $r(64) = .229, p > .05$  and (b) attaining a bachelor's degree,  $r(25) = .175, p > .05$  (see Table F1 in Appendix F). Children with deceased fathers had increased rates of attaining a high school diploma and a bachelor's degree when mothers' income increased but there were no similar associations for children

with fathers absent for other reasons. This may mean that children with deceased fathers benefit more from their mothers' income than those with fathers absent for other reasons.

Mothers of children with deceased fathers had an average education of a high school diploma ( $n=69$ ,  $M=5.46$ ) while mothers of children with fathers absent for other reasons attained a level between high school and some college ( $n=70$ ,  $M=6.39$ ). Mothers' education was also correlated with the education of children using bivariate correlations. The highest level of education attained by mothers correlated with the highest level of education attained by the children resulted in a significant positive association,  $r(69) = .435$ ,  $p < .01$  for children of deceased fathers and for children of fathers absent for other reasons,  $r(69) = .500$ ,  $p < .01$  (see Table F1 in Appendix F).

Lastly, the mothers' and children's personal expectations of the child completing high school and going to college each were correlated with the children's actual attainment of a high school diploma and/or finishing college. There were no significant associations between their mothers' level of disappointment if the child did not graduate high school and the children's rate of actually graduating high school for either the children of deceased fathers  $r(70) = .078$ ,  $p > .05$  or children with fathers absent for other reasons,  $r(70) = -.039$ ,  $p > .05$ . Similar correlation analyses revealed no significant associations between the children's own desire to go to college in wave I and if they completed college in wave III for children with deceased fathers,  $r(70) = .193$ ,  $p > .05$  or children with fathers absent for other reasons,  $r(70) = .055$ ,  $p > .05$  (see Table F1 in Appendix F).

The expectations of mothers and children were not found to have any relationship with the actual act of graduating high school or going to college. Astone and McLanahan (1991) noted that children in single-mother households receive less encouragement with

school in general, but when they do receive encouragement the children had higher rates of achievement. The current study did not find support that children attain more education when expectations are placed on them. However, Astone and McLanahan measured how active parents were in their children's educational experience while the current study did not. It could possibly be that it is not the level of disappointment the mother and child would feel if the child did not reach higher education, but rather it is the level of participation from mothers that have associated increased rates of high school completion and attending college.

## LIMITATIONS AND FUTURE RESEARCH

The Add Health data set was chosen for this study because of its advantageous large, nationally representative sample which increased the chances of finding more children who experienced the atypical event of losing a father to death. However, once the author began categorizing children and conducting analyses, several disadvantages emerged.

Initially, the researcher was interested in studying the children from various forms of father absence in comparison to children with deceased fathers; however, this was not a feasible due to the way the data were constructed. As mentioned previously, mother's marital status referred only to her current marital status and not that in relation to the child's father. For example, a mother might report that she was widowed; however the child reported the father alive and therefore the widowed status referred to a different relationship other than to the child's father. Furthermore, a woman reported as divorced may be divorced from a previous partner but still involved with the child's father. Several scenarios come into play with this problematic variable of marital status. An additional group of variables collected on the mothers' history of romantic relationships and how they were terminated could have made up for this difficulty of obtaining a measure of type of relationship currently with the father, but the relationship history did not indicate which relationship resulted in the child. Consequently, children were separated into three categories with the most clear definitions; those who reported the father living in the same household (two-parent home), those who reported their fathers as not living (deceased fathers), and those who reported their fathers alive but not living in the same household as the child (fathers absent for other reasons).

Additionally, the data set did not question the cause of the fathers' deaths. It would have been interesting to see if the effects of losing a father were dissimilar if it was an

anticipated death such as from a terminal illness or unexpected like a vehicle accident or suicide. But because this information was not collected, children were categorized into a single group if they indicated they lost their fathers to death.

Another limitation of the study was the small number who reported a father absent because he had died. A larger group of 82 children initially reported that their fathers had died at wave I but only 70 of the same children reported their fathers as deceased in wave III, thus limiting the final number of children in the group. This directs attention to another concern with the data, in that children as young as 11 years old were relied upon to give information regarding their family history that was not backed up with parental data. Specifically, children were asked if their biological fathers were alive or dead. Children at young ages may not understand what the term biological means and assume that since there is a father figure in the house, whether a stepfather or another form, that their father is not dead. On the other hand as briefly discussed earlier, children may have reported fathers deceased in wave I because they were told their fathers had died instead of the real reason of their absence. Additionally, they may have been too embarrassed to tell the truth when they were at a younger age because the father was incarcerated or absent for another reason and the child was not comfortable discussing this until they were older.

Although it is easy to assume that children who lost their fathers due to death lived consecutively without their fathers after the loss event, the same cannot be said of children with fathers absent for other reasons. One variable was offered by Add Health to determine the amount of time a child lived without his or her father. This variable asked how many years the child lived with the father up until the first collection of data, which was then used to establish the length of time living without the father by taking the age in wave III minus

the number of years the child reported as living with the father in wave I. The author is aware that this is not the most accurate way of obtaining this information because it assumes the child lived continuously *without* the father for the remainder of the time. Nevertheless, all the information that was made available by Add Health was utilized and it was decided to use this information although part of it was assumed.

Several decisions regarding the direction of the study were made, which may be viewed as further limitations. First, children and their biological fathers were chosen to be the focus of the study, eliminating the participation of children whose adopted or step-fathers became absent for various reasons. The motivation behind this includes trying to keep the data as clean as possible and to emphasize the psychological impact of losing one's biological father upon education outcomes. Additionally, mothers' cohabitation was not of interest to the study although it is a factor to be considered in other research. This decision was made to further accentuate the focus on the psychological effects of living without one's biological father and not the social aspects of having an alternative father figure in the home.

The three groups examined in this study were created so that all were equal in number and matched on gender and age. However in nature, death of a parent occurs at a much smaller proportion than divorce or separation. Thus, the largest group possible for examining children with deceased fathers was formed while making smaller the groups of children with fathers absent for other reasons and children with two-parents.

Future research should consider the limitations of the current study and find possible remedies so these limitations can be turned into areas of strength for other studies. In addition, studying combinations of father absence would aid in the understanding of single parenting and father absence even further. The current study categorized children as being



exclusively in one group and did not take into account the movement children may experience from switching from one group type to another. For example, a child could be categorized as having a father absent for other reasons but then move to the deceased father group if something were to happen to the father. More detailed and specific future studies might aim to look at this in addition to examining the effects of losing a stepfather or adopted father to either death or other forms of separation in comparison to the similar experiences with a biological father.

## CONCLUSIONS AND IMPLICATIONS

This study examined the educational outcomes of children with absent-fathers. Highest level of education attained, high school GPA, high school completion, and graduating college were compared between groups to discover how children with fathers absent due to death differ from children with fathers absent for other reasons. Participants were drawn from the Adolescent Health data set if they participated in both waves I and III of the study. Participants were categorized as having fathers absent due to death if they reported their fathers had died or fathers absent for other reasons if they reported their father was alive but not living in the same household as the child.

Independent-sample *t* tests and correlations were used as the analyses in the current study. The research found that children living with two parents completed almost a whole year more of school than children with deceased fathers and children with fathers absent for other reasons. No differences were found in highest level of education between children with deceased fathers and children with fathers absent for other reasons. There was no association between the children's ages when fathers died and amount of education completed or high school GPA scores. Children with deceased fathers did not differ in GPA scores or amount of schooling completed when compared to each other based on the age group they were in when their fathers died. Children with deceased fathers were found to have completed more education when they lived longer without their fathers while children with fathers absent for other reasons did not. Children with fathers absent for other reasons were found to have lower rates of high school completion and of attaining a bachelor's degree compared with children who lived with two parents, though children with deceased fathers did not differ from children from two-parent homes on this education variable. Those with deceased fathers

did not differ from those with fathers absent for other reasons in completing high school or graduating from college.

Other analyses examining additional areas not included in the research questions showed that within the fathers absent for other reasons group, White children attained significantly higher GPA scores than Blacks but similar results were not found for children with deceased fathers. Females with fathers absent for other reasons had higher GPAs than their male counterparts. Those with deceased fathers and fathers absent for other reasons completed more education as mother's income increased. A mother's level of disappointment if the child did not graduate high school was not related to the child's actual attainment of a high school diploma, nor was the children's personal desire to attend college and their actual attendance of a college.

In summary, children who lived without a father for whatever reason were found to have lowered educational outcomes than children who grew up in a two-parent home. However, the results did not support the parental loss perspective discussed earlier. Children with deceased fathers did not have lowered educational outcomes compared to children with fathers absent for other reasons. Moreover, the opposite was found in some instances with children with fathers absent for other reasons having lower rates of graduating high school and/or college.

The current study provides an updated representation of the educational outcomes of children who grew up without a father in the household. Although the study used an alternative stance arguing that children with deceased fathers would have lowered educational outcomes, it was still valid through the parental loss perspective, though not well supported by past research. It was partially expected not to uncover many significant

differences between children of deceased fathers and children with fathers absent for other reasons. The author, however, chose the argument as a means to compare her own experience to the experiences of others with deceased fathers and discovered that she was not an exception by completing a higher level of education, but that she had increased odds of graduating high school and college than those with fathers absent for other reasons, according to the findings from the current study.

Overall this research is actually good news for children and young adults whose fathers have died. Although this is a smaller group than at earlier times in our history, we are experiencing a war which has taken over 4,000 lives of U.S. soldiers and others associated with it, many of whom are fathers. Every day, we hear about some father who is killed in a construction accident, a car accident, or who has an untimely death due to a disease or suicide. Since children with deceased fathers constitute a much smaller group than children experiencing father absence for other reasons, it may be easy to view this group as less important to study because of the population's small number. However, these mothers and children have questions, wonder how they will be and are being impacted by the death of a father, and need support and understanding related to their potential outcomes. Schools, social and mental health organizations, websites, and publications can utilize information from the current study and future research by lending support and understanding not only to the children but also to the mothers who are rearing their children after the child's father has died.

## APPENDIX A

Table A1

Mean Differences in High School GPA Scores of Children with Deceased Fathers

	0-6 years old			7-12 years old			13-18 years old			<i>t score</i>	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Age Groups											
0-6 vs. 7-12	17	2.81	0.91	26	2.58	0.77	---	---	---	0.90	0.37
7-12 vs. 13-18	---	---	---	26	2.58	0.77	16	2.41	1.16	0.58	0.56
0-6 vs. 13-18	17	2.81	0.91	---	---	---	16	2.41	1.16	1.12	0.27

## APPENDIX B

Table B1

Mean Differences in Educational Outcomes by Age in Which Fathers Became Absent

Age group	0 to 6 Years Old		7 to 12 Years Old		13 to 18 years old		<i>t</i> score	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Highest Level of Education								
Deceased Fathers								
0-6 vs. 7-12	13.37	1.74	13	1.77	---	---	0.73	0.47
7-12 vs. 13-18	---	---	13	1.77	12.83	1.92	0.31	0.76
0-6 vs. 13-18	13.37	1.74	---	---	12.83	1.92	0.89	0.38
Fathers Absent for other reasons								
0-6 vs. 7-12	12.69	1.93	12.67	1.79	---	---	0.04	0.97
7-12 vs. 13-18	---	---	12.67	1.79	12.7	1.80	0.07	0.95
0-6 vs. 13-18	12.69	1.93	---	---	12.7	1.80	0.01	0.99
GPA Scores								
Deceased Fathers								
0-6 vs. 7-12	2.81	0.91	2.58	0.76	---	---	0.91	0.37
7-12 vs. 13-18	---	---	2.58	0.76	2.41	1.16	0.58	0.56
0-6 vs. 13-18	2.81	0.91	---	---	2.41	1.16	1.12	0.27
Absent-Fathers for other reasons								
0-6 vs. 7-12	2.46	0.49	2.53	0.78	---	---	0.30	0.76
7-12 vs. 13-18	---	---	2.53	0.78	2.45	0.89	0.37	0.71
0-6 vs. 13-18	2.46	0.49	---	---	2.45	0.89	0.02	0.98

## APPENDIX C

Table C1

Mean Differences in Educational Outcomes Within Age Groups When Children Began Living Without Father

Age Child Became Father Absent	Deceased Fathers			Fathers Absent for other Reasons			<i>t</i> score	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Highest Level of Education								
0 to 6 year olds	19	13.37	1.74	13	12.69	1.93	1.03	0.31
7 to 12 year olds	33	13.00	1.77	27	12.67	1.80	0.72	0.47
13 to 18 year olds	18	12.83	1.92	30	12.70	1.80	0.24	0.81
GPA Scores								
0 to 6 year olds	17	2.81	0.91	10	2.46	0.50	1.14	0.27
7 to 12 year olds	26	2.58	0.77	23	2.54	0.78	0.199	0.84
13 to 18 year olds	16	2.41	1.16	26	2.45	0.89	0.126	0.90

## APPENDIX D

Table D1

Mean Differences in Educational Outcomes by Race and Type of Father Absence

	White			African American			Other			<i>t</i> score	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Highest Level of Education											
Deceased Fathers											
White vs. African American	36	12.72	1.65	25	13.32	1.89	---	---	---	1.31	0.19
African American vs. Other	---	---	---	25	13.32	1.89	9	13.67	1.93	0.47	0.64
White vs. Other	36	12.72	1.65	---	---	---	9	13.67	1.93	1.49	0.15
Fathers Absent for other reasons											
White vs. African American	43	12.67	1.80	20	12.85	1.95	---	---	---	0.35	0.73
African American vs. Other	---	---	---	20	12.85	1.95	7	12.29	1.50	0.69	0.50
White vs. Other	43	2.67	1.80	---	---	---	7	12.29	1.50	0.54	0.59
GPA Scores											
Deceased Fathers											
White vs. African American	30	2.69	0.99	20	2.47	0.93	---	---	---	0.75	0.45
African American vs. Other	---	---	---	20	2.47	0.93	9	2.61	0.73	0.40	0.70
White vs. Other	30	2.69	0.99	---	---	---	9	2.61	0.73	0.19	0.85
Fathers Absent for other reasons											
White vs. African American	36	2.69	0.60	17	1.98	0.82	---	---	---	3.51	0.001*
African American vs. Other	---	---	---	17	1.98	0.82	6	2.69	1.09	1.65	0.11
White vs. Other	36	2.69	0.60	---	---	---	6	2.69	1.09	0.01	1.00

\* Note: Significant at the .001 level.



## APPENDIX E

Table E1

Mean Differences in Educational Outcomes by Gender and Type of Father Absence

	Males			Females			<i>t</i> score	<i>p</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Highest Level of Education								
Deceased Fathers								
Males vs. Females	26	13.00	1.90	44	13.09	1.74	0.21	0.84
Fathers Absent for Other Reasons								
Males vs. Females	26	12.19	1.77	44	12.98	1.77	1.79	0.08
GPA Scores								
Deceased Fathers								
Males vs. Females	22	2.32	0.888	37	2.77	0.915	1.87	0.07
Fathers Absent for other reasons								
Males vs. Females	23	2.01	0.897	36	2.79	0.507	4.26	0.001*

\* Note: Significant at the .001 level.

## APPENDIX F

Table F1

Correlations Between Children's and Mothers' Variables and Educational Outcomes for Children Whose Fathers Have Died and Those Absent for Other Reasons

	Age at Father's Death	Number. of Years Without Father	Mothers' Income Level	Mothers' Education Level	Mothers' Level of Disappointment	Childs' Desire to go to College
Deceased Fathers						
Highest Level of Education	-0.166 (70)	0.257* (70)	0.351** (63)	0.435** (69)	---	---
GPA Scores	-0.178 (59)	---	---	---	---	---
High School Diploma	---	---	0.289* (60)	---	0.078 (70)	---
Bachelors Degree	---	---	0.494* (22)	---	---	0.193 (70)
Fathers Absent for Other Reasons						
Highest Level of Education	---	0.042 (70)	0.384** (64)	0.500** (69)	---	---
GPA Scores	---	---	---	---	---	---
High School Diploma	---	---	0.229 (64)	---	0.039 (70)	---
Bachelors Degree	---	---	0.175 (25)	---	---	0.055 (70)

\*  $p < .05$  \*\*  $p < .01$

## APPENDIX G

## IRB Approval Form

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office of Research Assurances  
Vice Provost for Research  
1138 Pearson Hall  
Ames, Iowa 50011-2207  
515 294-4566  
FAX 515 294-4267

**DATE:** April 18, 2007

**TO:** Brandie M. Ward  
c/o Sedahlia Jasper Crase, 4380 Palmer

**CC:** Sedahlia Jasper Crase  
4380 Palmer

**FROM:** Jan Canny, IRB Administrator  
Office of Research Assurances

**IRB ID:** 07-133                      **Study Review Date:** 16 April 2007

The Institutional Review Board (IRB) Chair has reviewed the project, "How does type of single mother household influence educational outcomes of young adults: An analysis of widowed and divorced mothers" (IRB ID 07-133) and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b), Exempt Category (4). A description of this exemption category can be found in the list on the next page. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if the project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or if required by the IRB.

Any modification of this research should be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

## REFERENCES

- Abdelnoor, A., & Hollins, S. (2004). The effect of childhood bereavement on secondary school performance. *Educational Psychology, 20*(1), 43-54.
- Amato, P. R. (1993). Children's adjustment to divorce: Theories, hypotheses, and empirical support. *Journal of Marriage and the Family, 55*(1), 23-38.
- Amato, P. R., & Keith, B. (1991). Parental divorce and adult well-being: A meta-analysis. *Journal of Marriage and the Family, 53*(1), 43-58.
- Astone, N. M., & McLanahan, S. (1991). Family structure, parental practices, and high school completion. *American Sociological Review, 56*(3), 309-320.
- Biblarz, T., & Gottainer, G. (2000). Family structure and children's success: A comparison of widowed and divorced single-mother families. *Journal of Marriage and the Family, 62*, 533-548.
- Bogges, S. (1998). Family structure, economic status, and educational attainment. *Journal of Population Economics, 11*, 205-222.
- Bumpass, L. (1984). Children and marital disruption: A replication and update. *Demography, 21*(1), 71-82.
- Bumpass, L., & Sweet, J. (1989). Children's experience in single-parent families: Implications of cohabitation and marital transitions. *Family Planning Perspectives, 21*(6), 256-260.
- Carlson, M. J. (2006). Family structure, father involvement, and adolescent behavioral outcomes. *Journal of Marriage and Family, 68*(1), 137-154.
- Center for Research on Child Wellbeing. (2002). *Father absence and child well-being: A critical review* (Working Paper 02-20). Princeton University: Rushton, W. S., & McLanahan, S.
- Cook, J. L., & Cook, G. (2005). *Child development: Principles and perspectives (S.O.S. ed.)*. Boston: Pearson.
- Downey, D. B., & Powell, B. (1993). Do children in single-parent households fare better living with same-sex parents? *Journal of Marriage and the Family, 55*(1), 55-71.
- Ermisch, J. F., & Francesconi, M. (2001). Family structure and children's achievements. *Populations Economics, 14*, 249-270.

- Fields, J. (2004). *America's families and living arrangements: 2003*. Current Population Reports, P20-553. U.S. Census Bureau, Washington, DC.
- Fields, J. (2003). *Children's living Arrangements and Characteristics: 2002*. Current Population Reports, P20-547. U.S. Census Bureau, Washington, DC.
- Harper, C. C., & McLanahan, S. S. (2004). Father absence and youth incarceration. *Journal of Research on Adolescence, 14*(3), 369-397.
- Hetherington, E. M., Cox, M., & Cox, R. (1985). Long-term effects of divorce and remarriage on the adjustment of children. *Journal of the American Academy of Child Psychiatry, 24*, 518-530.
- Herzog, E., & Sudia, C. (1973). Children in fatherless families. In B.M Caldwell & H. N. Ricciuti (Eds.), *Review of child development research* (pp 141-232). Chicago: University of Chicago.
- Jeynes, W. (2002). Examining the effects of parental absence on the academic achievement of adolescents: The challenge of controlling for family income. *Journal of Family and Economic Issues, 23*(2), 189-210.
- Keith, V., & Finlay, B. (1988). The impact of parental divorce on children's educational attainment, marital timing, and likelihood of divorce. *Journal of Marriage and the Family, 50*, 797-809.
- Krein, S. F., & Beller, A. (1988). Educational attainment of children from single-parent families: Differences by exposure, gender, and race. *Demography, 25*(2), 221-234.
- Lamb, M. E., Sternberg, K. J., & Thompson, R. A. (1997). The effects of divorce and custody arrangements on children's arrangements on children's behavior, development, and adjustment. *Family and Conciliation Courts Review, 35*(4), 393-404.
- Mack, K. (2001). Childhood family disruptions and adult well-being: The differential effects of divorce and parental death. *Death Studies, 25*, 419-443.
- McLanahan, S. (1985). Family structure and the reproduction of poverty. *The American Journal of Sociology, 90*(4), 873-901.
- McLanahan, S., & Booth, K. (1989). Mother-only families: Problems, prospects, and politics. *Journal of Marriage and the Family, 51*, 557-580.
- McLanahan, S., & Schwartz, D. (2002). Life without father: What happens to the children? *Contexts, 1*(1), 35-44.

- Menning, C. (2002). Absent parents are more than money: The joint effect of activities and financial support on youths' educational attainment. *Journal of Family Issues*, 23(5), 648-671.
- Norton, A. J., & Glick, P. C. (1986). One parent families: A social and economic profile. *Family Relations*, 35(1), 9-17.
- Perna, L.W. (2000). Differences in the Decision to Attend College among African Americans, Hispanics, and Whites. *Journal of Higher Education*, 71(2), 117-141.
- Pong, S., Dronkers, J., & Thompson, G. H. (2003). Family policies and children's school achievement in single- versus two-parent families. *Journal of Marriage and Family*, 65, 681-699.
- Raley, R.K., & Bumpass, L. (2003). The topography of the divorce plateau: Levels and trends in union stability in the United States after 1980. *Demographic Research*, 8(8), 245-260.
- Ricciuti, H. (2004). *On Mother's Day, a hopeful finding for single mothers and their children from a Cornell researcher*. Retrieved on January 23, 2007 from the Cornell News Web site <http://www.news.cornell.edu/releases/May04/single.parents.ssl.html>.
- Sandefur, G. D., McLanahan, S., & Wojtkiewicz, R. A. (1992). The effects of parental marital status during adolescence on high school graduation. *Social Forces*, 71(1), 103-121.
- Santrock, J. W. (1972). Relation of type of onset of father absence to cognitive development. *Child Development*, 53(2), 455-469.
- Servaty, H.L. (2001). Adjustment to loss among adolescents. *The Journal of Death and Dying*, 43(4), 311-330.
- Shinn, M. (1978). Father absence and children's cognitive development. *Psychological Bulletin*, 85, 295-324.
- Svanum, S., Bringle, R. G., & McLaughlin, J. E. (1982). Father absence and cognitive performance in a large sample of six-to-eleven-year-old children. *Child Development*, 53(1), 136-143.
- University of North Carolina, Chapel Hill, UNC Carolina Population Center. (2003). *Add health: A national longitudinal study of adolescent health*. Retrieved September 11, 2006, from the Add Health Web site: <http://www.cpc.unc.edu/projects/addhealth>.

U.S. Census Bureau, Population Division, Fertility & Family Statistics Branch. (2007). *America's families and living arrangements: 2006*. Retrieved March 9, 2008, from the US Census Bureau Web site:  
<http://www.census.gov/population/www/socdemo/hh-fam/cps2006.html>.