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Long-Term associations between Parental Death and Economic condition: Evidence From The National Longitudinal Survey Of Adolescent To Adult Health

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Abstract

What is the association between parental bereavement and economic condition later in life? Panel data from the ADD Health dataset is used to measure this association using linear regression. Parental bereavement ought to have taken place at the first wave and economic condition is measured at the fifth wave. The respondents are then 10-18 and 33-42 years old, respectively. I find that more than 20 years after the parental bereavement it has no significant association with economic conditions anymore. So although parental bereavement has been associated with many negative outcomes in the short term, the association might fade in the long term. It could also be that there are never any associations at all when it comes to economic condition. The lack of significant results could also be due to power issues.

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1 Introduction

As Freud famously wrote about absent fathers in 1900, 'the loss of one's father is the greatest loss one can experience'. Although not entirely the same in theory, the loss of a parent through death instead of abandonment can have similar consequences for children. Parental death, the death of a parent before a child becomes an adult, can have long lasting negative effects. Children who experienced parental death during their childhood have been found to do less well later on in a life, over a variety of measurables. Such links have especially been found for outcomes that were measured around the age of 20-30 (Worden & Silverman, 1996). Most of these links have been made with measurables commonly researched in the field of psychology. For example suicidal tendencies and other forms of depression (Jakobsen & Christiansen, 2011). In this paper I will focus on economic outcomes. Understanding of the outcomes associated with parental death can help us make decision about allocating resources to combat the possible effects hereof.

Past research has studied the links between parental death and outcomes during their early adulthood. These researchers found parentally bereaved children at greater risk of depression, low self-esteem, delinquency and violence (Feigelman, Rosen, Joiner, Silva & Mueller, 2017). Using data from the ADD Health longitudinal data survey they confirmed the findings from earlier research. However, they also found that after a certain period of time these associations started to fade away, suggesting resilience among parentally bereaved children and suggesting that time does, at least partially, heal these wounds. This suggestion is also supported by other research, which was reviewed by Tennant et al.'s (1980). More recent Dutch research also found that the majority of children overcome the parental death without experiencing these negative consequences (Stikkelbroek, Prinzie, de Graaf, ten Have, & Cuijpers, 2012).

The presence of parents during childhood may be important for good economic condition later in life because it is vital in the processes that ensure the healthy maturing of children. Parental bereavement has been associated with a range of personality traits and characteristics, such as depression and anxiety. But mostly with outcomes measured in the early adolescence of the bereaved children. My objective was to examine the association between parental bereavement during childhood and economic condition later in life. Therefore this paper will focus on the general research question:

How is parental death associated with indicators of economic condition later in life?

This study examines how parental bereavement is associated with economic condition later in life. This association will be estimated using regression on longitudinal data that follows adolescent from 1994 up until 2016. Parental bereavement is defined as the loss of one or two biological parents before having reached the age of 18 years. This is thus when the first wave of interviews is conducted. Economic performance is measured on a scale of 1 to 5 that was created from variables containing information about things like income and debt. The unit of analysis is the individual and the analysis will focus on

the differences between individuals after around twenty two years. The respondents will then have reached an age of 33-42 years. I will use data from The National Longitudinal Study of Adolescent to Adult Health (hereafter ADD Health Survey). The ADD Health Survey conducts its first wave of surveys in 1995. They used a sample that was representative of the USA and contained 20,000 high school students form over 80 selected schools. I only have access to the public use version of this dataset, that contains the data of around 6,000 students. The fifth wave of surveys was conducted in 2016.

I expect to find that parental bereavement during childhood has negative associations with economic condition later in life. Which should be visible on the scale that we create from said variables. Giving the length between the first and fifth wave of the dataset this research will provide more insight in longer-term associations. Whereas previous research often did not have access to panel data of which the waves were so far apart. However, I also expect that there will be unobserved differences between parentally bereaved and non parentally bereaved children. Leaving differences in outcome and the strength of the association partly undetermined.

2 Theoretic Framework

2.1 parental bereavement

Parental bereavement in the way that it is usually studied, as it is in my research, is the experience of the death of one of both parents before reaching the age of 18. Parental bereavement is just one of the many Adverse Childhood Experiences (ACE) a child could undergo. Examples of these ACE's are abuse, neglect and household dysfunction (K. Petruccelli, et al., 2019). This research aims to find results that will hold for bereaved children in western societies. Where there non-bereaved peers grow up in families that normatively have a mother and father present. Parental bereavement is also part of the broader psychological topic of child development in relation to the parent. Especially well known for making early contribution to this topic is Freud. Specifics hereof I will discuss later.

One of the first studies on the associations between parental bereavement and child development was conducted by Bowlby (1961). Bowlby worked and conducted research in the field of psychology. In relation to his work on attachment theory, Bowlby investigated the associations with early loss, primarily due to parental death, on children's emotional and psychological well-being. He found that children who experienced the loss of a parent often exhibited symptoms of grief, sadness, and anxiety, along with an increased vulnerability to mental health issues. He emphasized that this could possibly have negative effects in later life.

Previous research has discovered that adolescents who have lost a parent are more susceptible to a wide range of difficulties in adapting compared to their peers who have not experienced such loss. These bereaved adolescents have an increased likelihood of premature death (Li et al., 2014) and suicide attempts (Jakobsen & Christiansen, 2011). They are also more prone to experiencing depression (Jacobs & Bovasso, 2009; Mack, 2001; Schoenfelder et al., 2011), exhibiting more severe and numerous psychiatric issues (Dowdney, 2000), achieving lower grades and experiencing more academic failures (Berg, Rostila, Saarela, & Hjern, 2014), possessing lower self-esteem (Worden & Silverman, 1996), engaging in more juvenile delinquency (Draper & Hancock, 2011), having a higher likelihood of drug abuse (von Sydow, Lieb, Pfister, Höfler, & Wittchen, 2002), and being more involved in violent crimes (Wilcox et al., 2010). It should be noted that most of these studies have focused on the associations with outcome variables that occur during the adolescence and early adulthood fase of the child's life. Research has also suggested that differences in ages of children at the time of loss and the gender of the parent also matter in terms of associations (Rostila et al., 2016).

Several studies have also found evidence to support the claim that after time these associations fade away. Thus that the parental bereavement primarily or even solely is associated with negative outcomes when the child is still young and the moment of bereavement is still relatively recent. A study from Tennant et al. (1980) claims, "When experimental and control samples were most rigorously matched,

no association was found between childhood parental bereavement and depression in later life. Parental death in childhood appears to have little association with adult depressive morbidity." The same hypothesis was also confirmed by a study of Stikkelbroek, Prinzie, de Graaf, ten Have, & Cuijpers (2012). They found that most children are able to navigate through the loss of a parent during their childhood without encountering heightened mental health issues, diminished functional abilities, or an increased demand for mental health support as they transition into adulthood.

One of the first studies on the topic of ACE is The Adverse Childhood Experiences (ACE) Study, conducted by Felitti et al. (1998). It has made significant contribution to our understanding of the long-term impact of childhood adversity on health outcomes. The study investigated the relationship between adverse experiences during childhood, including abuse, neglect and household dysfunction, and later-life health. To find these relationships, a large scale survey of adults was used. These findings have since served as a cornerstone for further research on this topic.

In later studies there has been found an increase in negative outcomes with an increase in ACE ranking. Thus the more ACEs prevalent, the more negative the health consequences. There have been thousands of studies on ACEs, but primarily using the same datasets. These studies have been subject to review and meta-analysis. A study by Huang et al. (2015) found a positive correlation for ACEs with type 2 diabetes. The different ACEs seemed to have different influences, with the influence of neglect the strongest and the association with physical abuse the least strong. Exley, Norman, & Hyland (2015) found associations between ACEs and asthma. Kajeepeta, Gelaye, Jackson, & Williams (2015) found in their study significant correlations between various sleep disorders, such as sleep apnea, narcolepsy, distressing nightmares, sleep paralysis, and psychiatric sleep disorders, and a background of childhood adversity.

Sigmund Freud (1922) laid the foundations for many later research about the psychological processes involved in grief and depression. In his 1917 essay, "Mourning and Melancholia," Freud delved into this. Although Freud's focus was not specifically on parental bereavement, his insights provide valuable perspectives.

2.2 economic condition
Ultimately we are interested in the wellbeing of individuals and as society as a whole. To better understand why these levels of wellbeing are the way they are we often look at proxies like 'health' or in this case 'economic condition'. Research has repeatedly shown that despite increasing levels of income there is no corresponding increase in subjective well-being (Ferrer-I-Carbonell, 2005). He also

discusses possible explanations hereof in which he also suggests that these findings may not be so trustworthy, among other things because the well-being is self-reported. Although there might be discussion about the marginal effects of income, at a high level, on wellbeing, it is well documented that extremely low levels of income and other indicators of low economic performance do have a negative effect on well-being.

Research by Tay et al. (2017) did a meta-analysis from multiple papers and found negative association between being in debt and subjective well-being. There is also evidence that suggests that the income of an individual relative to the rest of the society, as opposed to absolute levels, does matter for one's subjective wellbeing. McBride (2001) finds this in his study.

Over the long term, the economic performance of a society can exert lasting influences on multiple facets of communal life, such as education, healthcare, infrastructure, and social services. Analyzing economic outcomes enables researchers to grasp the intricate interactions between economic factors and other societal realms, yielding a comprehensive understanding of societal advancement and progress. By studying the long-term implications of economic performance, researchers gain insights into the dynamics that shape societal development as a whole.

2.3 relationship parental bereavement and economic condition

As mentioned parental bereavement has a negative association with a great number of outcomes. Although most of these outcomes being in the health and emotional development domain, this relationship has also been studied in the economic domain.

Parental bereavement has been linked to lower enrollment in school programs (Gertler et al., 2004). It has also been associated with lower economic well-being in adulthood, measured by Böckerman et al. (2023) in absence from work due to illness. Individuals who had been exposed to adverse childhood experiences also showed more health-risk behavior when they are adults (Ramiro et al., 2010). Furthermore they have found to be more often poor and unemployed in adulthood (Meltzer et al., 2017). Adults who experienced four or more ACEs in childhood were multiple times more likely to be unemployed or living in households of poverty. These same conclusions were drawn by Sansone et al. (2012) and Covey et al. (2013). Currie and Widom (2010) found a 14% gap for adults at the age of 40, with or without history of abuse and neglect.

This yields the following hypotheses:

H1: Parentally bereaved children will have a lower economic condition later in life.

H2: The association of parental bereavement with economic condition will be different for boys than for girls.

H3: The association of parental bereavement with economic condition will be different for maternal death than for paternal death.

Almost all of the above discussed associations with parental bereavement have also been associated with Social Economic Status (hereafter SES) and with racial minority ((Williams et al., 1997; Muntaner, 2004). SES and racial minority have also been associated with parental bereavement itself (Feigelman et al., 2016). Both SES and racial minority have also been associated with the outcome variable of this research, economic performance (PGPF, 2023). Meaning that both of these variables influence both the outcome variable and the treatment variable and are thus confounders that should be controlled for in the regression.

3 Methodology

3.1 Data

For this research I make use of the National Longitudinal Survey Of Adolescent To Adult Health (hereafter ADD Health). It follows over 20,000 adolescent who were in grades 7-12 during the 1994-95 school year, when the first wave of surveys was collected. The second wave of surveys was only conducted a year later. A part of this initial group was followed up until 2016-18, when the fifth, and as so far final, wave of surveys were collected. The data was collected by The University of North Carolina and aimed to include a nationally representative sample of children. The children were at the time of the first surveys thus mostly 12-18 years old and reached the age of 33-42 years when they were questioned for the fifth time. The surveys were conducted in several ways. When the children were younger there was made use of in-home questionnaires, often with a parent or caregiver present, given the young age of the respondents and their nescience about certain subjects that they were asked about. In later waves surveys were sent out that the respondents could fill in and send back. The period between the first and fifth wave is over 20 years and naturally respondents have opted out from the study. Among other reasons because they refused to be part of it or because they could not be tracked down anymore. Although the total sample size is over 20,000 I only have access to the public available version of the data which contains around 4,000 respondents.

3.2 Variables

Biological sex of the respondent is registered at the first wave of questionnaires. This is observed by the interviewer and can be male (0) or female (1).

I have created a variable *deceased parent* that indicates whether at least one of the respondents parents were deceased at wave I (1) or that this was not the case (0). This variable was created from the *father deceased* and *mother deceased* variables. These variables were based upon the question 'is your biological father respectively mother still alive' at wave I. The answer to this can be no (0), yes (1) and a legitimate skip (7), which results from answers that previously indicated that the mother or father still lived in the house with the respondent.

Our outcome variable of interest is *economic condition* at the time of questionnaire wave V, which can take on five distinct values on a scale from 1 till 5. At the time this valuable is measured the individuals are thus 33 to 42 years old. The value hereof is based on the value of 8 variables, that each weigh equally in determining the value of the variable *economic condition*. These variables are: *personal earnings, household earnings, education debt, other debt, net worth, bills, eviction, self-identified socioeconomic position*. Which I presume to be all self-explanatory, except for *bills* and *self-identified socioeconomic position*. The *bills* variable is based on the question: '' In recent years, many people have experienced financial difficulties and even trouble paying their bills, especially since the

2008 economic recession. Since 2008, did you or your spouse/partner fall behind on paying your bills?'' to which the answer can be no (0) or yes (1). The *self-identified socioeconomic position* variable is based on the question: ''Think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States.'' As an answer to this the respondent chooses a number from 1 to 10, that they think is correspondingly with their socioeconomic position.

Racial minority is deemed to be everything other than white. It is based on a question in the first wave of questionnaires: '' What is your race?'' Where '*white'* could be not marked (0) or marked (1).

*Social economic status (*hereafter *SES)* was created from the *household income* of the respondent at wave I and the *educational achievement of the parent.* Which both weighed equally towards the value of *SES,* which can take 5 values on a scale of 1 to 5. This variable was measured when the children were no older then 18 and it thus concerns the SES of the household they grew up in.

In table 3.3 the statistics for these variables are noted. There are multiple times more children with deceased father than there are with deceased mothers. Economic condition seems to largely follow a normal distribution. SES appears to be skewed towards high SES.

Table 3.3 Descriptive Statistics for Categorical Variables

		Obs.	Freq.
Biological sex	male (0)	1 797	0.43
	female (1)	2 381	0.57
Deceased parent	no (0)	3 998	0.96
	yes (1)	180	0.04
Deceased mother	no (0)	4 131	0.99
	yes (1)	47	0.01
Deceased father	no (0)	4 247	0.97
	yes (1)	140	0.03
Economic condition	Level 1 (1)	0	0.00
	Level 2 (2)	154	0.04
	Level 3 (3)	1 413	0.34
	Level 4 (4)	2 426	0.58
	Level 5 (5)	185	0.04
SES	Level 1 (1)	88	2.38
	Level 2 (2)	343	9.29
	Level 3 (3)	913	24.72
	Level 4 (4)	1 289	34.90
	Level 5 (5)	1 060	28.70

| Racial minority | no (0) | 2 904 | 69.68 |
| | yes (1) | 1 264 | 30.32 |

Table 3.3 contains the descriptive statistics for categorial variables.

3.3 Method

For this study OLS regression will be used to estimate the association of the treatment variable with the outcome variable. As mentioned during the discussion of variables, our outcome variable will be *economic condition*, which is determined by having a *deceased parent,* a *deceased mother* or a *deceased father*. All these associations will be measured for the two *genders* together and for *males* and *females* separately. All these regressions will be done with and without the control variables *SES* and *racial minority.* These combinations will thus result in the following equations, all for male, female and male and female together.

(1) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ parent_i + \varepsilon_i$$

(2) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ parent_i + \beta_2 SES_i + \beta_3 Racial\ minority_i + \varepsilon_i$$

(3) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ mother_i + \varepsilon_i$$

(4) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ mother_i + \beta_2 SES_i + \beta_3 Racial\ minority_i + \varepsilon_i$$

(5) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ father_i + \varepsilon_i$$

(6) $$Economic\ condition_i = \beta_0 + \beta_1 Deceased\ father_i + \beta_2 SES_i + \beta_3 Racial\ minority_i + \varepsilon_i$$

4 Results

4.1 Linear regression results

In table 4.1 the regression results can be seen for general parental bereavement, thus without taking into account if the death concerned the father or the mother. Equations (1 and 2) are used here. To illustrate the effect of the control variables they are left out in column 1, 3 and 5. We find negative associations for girls (-0.907) and boys (-0.138) which combines to a general association of -0.115. Meaning that having a deceased parent is associated with a decrease in economic condition of 0.115, on a scale of 1 to 5. The results are rather small and not significant for girls, while for boys significant at the 10% level and for boys and girls together at the 5% level. These results have little to no meaning due to the confounding effect of control variables that were left out in this regression.

When adding control variables in column 2, 4 and 6, the association lowered for all three categories and the results for none of the three categories were significant anymore, at the 10% level. Indicating that most of the association we had seen in column 1, 3 and 5 was due to a correlation with the more driving variables SES and racial minority. These variables showed an association of .130 for SES, that was roughly the same for boys and girls. Racial minority had a negative association with economic condition, with the association being larger for girls (-0.137) than for boys (-0.119). The association of the control variables were both significant at the 1% level, for all three categories.

In table 4.2 the same results are shown but instead with only paternal parental bereavement as independent variable. The association was slightly larger and more significant for girls then for boys here, (-0.117 and -0.105 respectively) while being -0.115 overall. The associations decrease multiple times over and lose significance at the 10% level when the control variables are added.

In table 4.3 regression is carried out for maternal parental bereavement. The association is almost 4 times larger for boys , than it is for girls (-0.176 and -0.045 respectively). For none of the categories was the association significant, even without the use of control variables. When control variables were added the association of the deceased mother with the outcome variable decreased greatly. Overall the associations for parental bereavement and economic condition did seem to be larger for boys than girls, although as mentioned these associations were not significant.

Overall in all the regressions economic condition was primarily explained by the control variables, SES and racial minority. The coefficients hereof were largely consistent, also between maternal and paternal bereavement. The treatment group was small to begin with, 180. Then we also divided this group by their own gender and by the gender of the deceased parent. We also lose some individuals in the treatment group due to information on SES or racial minority not being available. In some

regression this leaves us with a very small treatment group. This can lead to power issues and thus insignificant results.

Table 4.1 The association of parental bereavement with economic condition

	All		Boys		Girls	
	(1)	(2)	(3)	(4)	(5)	(6)
Deceased parent	-0.115**	0.010	-0.138*	-0.053	-0.097	0.055
	(0.048)	(0.051)	(0.073)	(0.079)	(0.063)	(0.068)
Deceased mother						
Deceased father						
SES		0.130***		0.130***		0.129***
		(0.010)		(0.015)		(0.013)
Racial minority		-0.133***		-0.119		-0.137***
		(0.018)		(0.029)***		(0.023)
Constant term	3.637***	3.049***	3.704	3.118***	3.587***	3.006***
	(0.100)	(0.039)	(0.015)	(0.062)	(0.013)	(0.051)
Observations	4 178	3 693	1 797	1 607	2 381	2 086

*Table 4.1 contains linear regression results of the association of having a deceased parent with one's economic condition. This is done for boys (3), girls (5) and boys and girls together (1). The same regression is done with the control variables SES and racial minority added (4), (6) and (2) respectively. Robust heteroskedastic standard errors are given in brackets. *p-value<0.10, **p-value<0.05, ***p-value<0.01.*

Table 4.2 The association of paternal parental bereavement with economic condition

	All		Boys		Girls	
	(1)	(2)	(3)	(4)	(5)	(6)
Deceased parent						
Deceased mother						
Deceased father	-0.115**	-0.009	-0.105	-0.048	-0.117*	0.021
	(0.054)	(0.058)	(0.084)	(0.089)	(0.070)	(0.075)
SES		0.130***		0.130***		0.129***
		(0.010)		(0.015)		(0.013)
Racial minority		-0.133***		-0.120***		-0.136***
		(0.018)		(0.029)		(0.023)
Constant term	3.636***	3.051***	3.701***	3.116***	3.587***	3.010***
	(0.010)	(0.040)	(0.084)	(0.061)	(0.013)	(0.051)
Observations	4178	3 693	1 797	1 607	2 381	2 086

*Table 4.2 contains linear regression results of the association of having a deceased father with one's economic condition. This is done for boys (3), girls (5) and boys and girls together (1). The same regression is done with the control variables SES and racial minority added (4), (6) and (2) respectively. Robust heteroskedastic standard errors are given in brackets. *p-value<0.10, **p-value<0.05, ***p-value<0.01.*

Table 4.3 The association of maternal parental bereavement with economic condition

	All		Boys		Girls	
	(1)	(2)	(3)	(4)	(5)	(6)
Deceased parent						
Deceased mother	-0.102	0.107	-0.176	-0.043	-0.045	0.224
	(0.092)	(0.102)	(0.137)	(0.153)	(0.124)	(0.137)
Deceased father						
SES		0.130***		0.131***		0.129***
		(0.010)		(0.015)		(0.013)
Racial minority		-0.133***		-0.120***		-0.138***
		(0.018)		(0.029)		(0.023)
Constant term	3.636***	3.047***	3.700***	3.113***	3.583***	3.007***
	(0.010)	(0.040)	(0.148)	(0.061)	(0.013)	(0.051)
Observations	4 178	3 693	1 797	1 607	2 381	2 086

*Table 4.3 contains linear regression results of the association of having a deceased mother with one's economic condition. This is done for boys (3), girls (5) and boys and girls together (1). The same regression is done with the control variables SES and racial minority added (4), (6) and (2) respectively. Robust heteroskedastic standard errors are given in brackets. *p-value<0.10, **p-value<0.05, ***p-value<0.01.*

5 Discussion

5.1 Discussion

My results are both similar and different to the existing literature. Because in my research there is such a long time between the parental bereavement and the moment we look at the outcome, it can not directly be compared to existing literature. The negative association that other papers found in the short term and for outcomes in the domain of psychology and health could not be replicated (Li et al., 2014 ; Jakobsen & Christiansen, 2011 ; Jacobs & Bovasso, 2009; Mack, 2001; Schoenfelder et al., 2011 ; Dowdney, 2000; Berg, Rostila, Saarela, & Hjern, 2014; Worden & Silverman, 1996; Draper & Hancock, 2011; von Sydow, Lieb, Pfister, Höfler, & Wittchen, 2002; Wilcox et al., 2010). However, again, this does not mean that my findings are not in line with this literature, since the studies looked at different outcomes and periods of time.

During my review of literature I also found studies that indicated that the associations with parental bereavement faded after time (Tennant et al., 1980; Stikkelbroek, Prinzie, de Graaf, ten Have, & Cuijpers, 2012). Because we looked at the associations after a very long time, it is very well possible that the associations have faded to zero. In that case my results would be in line with the research that suggested fading associations of parental bereavement with the outcome variables.

As to the associations of gender, both that of the child of the bereaved parent as that of the bereaved parent itself. None of the results we found were significant, so we can not say anything about different associations with the genders, nor compare them to previous literature.

5.2 Conclusion

In this thesis I have looked at the economic condition of adults who did and did not experience the loss of a parent when they were younger. Previous research has shown that parental bereavement has negative associations on the short term and in other areas than economic condition. Therefore the question that I studied was: ''How is parental bereavement associated with economic performance later in life?''

To answer this question individuals in the ADD Health data set were compared to one another, more than 20 years after the parental bereavement had taken place. Linear regression was used to estimate the associations hereof. When adding the control variables no associations of significance were found.

This study therefore concludes, that no evidence was found of an association between parental bereavement and economic condition, conditional on SES and racial minority.

5.3 Limitations

Because I could only make use of the publicly available ADD Health dataset, my sample size was not as big as would have been optimal. There were only around 180 parentally bereaved kids total. With

splitting between paternal and maternal death this left us with only 47 individuals who had lost their mother during childhood. When the associations are rather small, a bigger sample size and treatment group is needed to demonstrate significance.

Another possible limitation is that we had only a limited amount of variables that offered us insight in ones economic condition. Income and debt are not the only determinants of ones economic condition. It is also heavily dependent on where someone lives whether their income can be seen as high or low. Because ones place of residence could also be correlated with the likelihood of parental bereavement this might be a confounding variable that should be reckoned with during future research.

5.4 Future research

Potentially future researchers could thus look at results for a larger sample size. To confirm either theory of the results fading away or not being there to begin with it could be helpful to check for the results at different times in the individuals life and not just when they have fully transformed into adulthood.

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