

THE EFFECTS OF FAMILY LIFE:

A Study of Marital Instability, Activity, and Educational Outcomes

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Marital disruptions, such as divorced parents or absent fathers, are associated with lower educational attainment for the children of these families. The present study examines how youth volunteerism and employment mitigate the effect of these marital disruptions. The hypothesis is that vouth volunteerism and employment increase the likelihood that these youths will graduate from high school or obtain a GED by the typical time of high school graduation, at around age 19. The primary outcome measure was the completion of a high school diploma or GED by age 19 or 20. Using the National Longitudinal Survey of Youth 1979 (NLSY79) and accompanying Child/Young Adult (CYA) supplements, the estimated effects of youth volunteerism and employment on the probability of obtaining a high school diploma or GED by the age of 19 or 20 among those who ever obtain their high school diploma or GED, as compared to the base group of a nuclear family with the child neither volunteering nor employed, are 3.05 percentage points (p = 0.008) and 2.49 percentage points (p = 0.064), respectively, with employment having a (negative) differential effect for children who end up with a GED (-15.31 percentage points total, p < 0.1). There were no other significant interaction terms, indicating that volunteering is beneficial in its own right. These findings indicate that volunteer activities should be studied and utilized as a means to improve the outcomes of children of non-nuclear families.

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divorce, employment, family, household factors, marital disruptions, marriage, self-fulfillment, volunteerism, youth, work

INTRODUCTION

Before reviewing the relevant literature, I would like to elaborate on some terms used throughout this paper. An "intact" or a "nuclear" family is defined as a family where the mother is married and the father is present. A "marital disruption" is something that causes a nuclear family to become a non-nuclear family. Finally, an "active" youth is a youth who either volunteers or is employed and earns more than \$100 per year.

There were two National Longitudinal Survey of Youth surveys, one beginning in 1979 and one beginning in 1997. I use the former because there are more observations available, but also I use data from 1994 onwards due to the change in the survey that year, and because the difference in age of data between the 1979 survey and the 1997 survey is small. I abbreviate the former with NLSY79. The respective Child/Young Adult supplements are denoted by CYA. More information about the NLS can be found on the NLS website (www.nlsinfo.org).

Generally, divorce is seen as a trying and difficult time. The absence of a father, along with further differences based on the marital status of the mother (divorced, separated, or never married), reduces family income (Argys & Peter, 2001). There is a difference in the Behavioral Problems Index (BPI) and Peabody Individual Achievement Test (PIAT) PIAT-math and PIAT-reading assessment scores between children ages 5 to 14 years from intact families and those from non-intact families (Aughinbaugh, Pierret, & Rothstein, 2005). Youths aged 12 to 17 years from non-nuclear families are more likely to have a lower GPA, smoke, drink, use marijuana, or be arrested at least twice a month, and have sex with at least three partners (Pierret, 2001).

Pierret (2001) actually starts off his paper by proposing a theory that states that marital disruptions can be beneficial to the child, but admits that "the assumptions of the model are strong ones, and their failure to hold provides clues to the ways in which divorce actually can cause adverse reactions" (Pierret, 2001). But it turns out that Proto, Sgroi, and Oswald (2012) find that the recent divorce of parents (up to five years prior) may have non-negative effects on 18- to 30-year-olds, both on short-term and longterm happiness. They first conducted an experiment with University of Warwick students, and the non-negative (some insignificant, some marginally significant) results¹ further held in regressions with the British Household Panel Survey data. In their conclusions, they articulate that "there is a potential objection to these . . . findings [because] for some unobservable reason, those university students in our sample may be intrinsically different from . . . those students who come from families with no divorce" (Proto, Sgroi, and Oswald, 2012). Indeed, however, such a difference exists (see Arkes, 2015; Aughinbaugh, Pierret, & Rothstein, 2005).

Another drawback they discuss is that "the necessary maintained assumption in our experiment . . . is that what happens to the parent does not become innately passed on . . . to the child's happiness" (Proto, Sgroi, & Oswald, 2012). Pierret (2001) also warns it could be that the child is bad first, which leads to increased strain on the parents and possibly a marital disruption, and then I found the effect I observed, even though it was not caused by the marital disruption. Thus "the issue of causality remains murky" (Pierret, 2001).

I hypothesize that the non-negative results found in Proto, Sgroi, and Oswald (2012) are due to some sort of pre-divorce tension. Perhaps the parents just don't get along but are for some reason or another staying together. This tension may cause the youth to feel irritated and unhappy. Once the divorce happens, there is some sort of release of that tension and the youth feels instantly happier because a decision has been made, for better or worse.

Recent work has looked at the effects of the disruptions taking place before the divorce or separation. Arkes (2015) looks at more than 4 years before and after the disruption and finds that children ages 7 to 14 are negatively affected by the disruption process, and negative effects become apparent at least 2 to 4 years before the actual disruption. These findings seem to support the idea that the non-negative results in Proto, Sgroi, and Oswald (2012) are just due to a pre-divorce tension.

Proto, Sgroi, and Oswald (2012) conclude their paper by saying that their results should be used with caution and that the focus of the study "was on those with newly-divorced parents, and not on the longerrun lifetime impact of parental divorce."

For long-term impact, I looked to the findings of Wallerstein, Lewis, and Blakeslee (2000), who followed individuals for 25 years. They interviewed many grown children of divorced parents, obtaining a deep insight into their lives, and found a negative romantic effect of divorce. It seems that there is a cycle much like that of poverty. A disrupted family will cause the child to have lower romantic success, and the cycle repeats for that child's child. In investigating the benefits of volunteerism and employment for youths of non-intact families, I see a potential way out of this cycle.

Perhaps the child is more open to negative societal influences because of inattention on the part of the parents. It could also be that the child is forced to work at an earlier age, either to keep busy or to help support the family, and at this workplace the youth finds a sense of purpose and self-fulfillment. Perhaps a child who is more apt to volunteer or find work is more likely to climb out of the divorce cycle by obtaining a higher level of education.

Wallerstein, Lewis, and Blakeslee (2000) also note that faith is an aid to successful children of divorced parents. It could be that religion motivates the child to volunteer or to work and gives him or her a sense of purpose. In any event, I have reason to believe volunteering and employment are mitigating factors of a disrupted family.

The rest of the paper is organized as follows. In the data section I discuss my sample. In the methods section I discuss the regression I used. The results section elaborates on my findings, and the conclusion summarizes and proposes policy recommendations.

DATA

My data comes from the NLSY79 and CYA supplements. I chose to use only the data of youths who have earned their high school diploma or GED. The variable for high school or GED completion was set up by taking the year that the diploma was obtained and subtracting the birth year, which yielded more observations than the coded variable in the NLSY79 and CYA. Although this choice limits the extent of my findings to youths who have completed high school or obtained their GED, this means that I intrinsically control for some form of motivation since each person in the sample did complete a high school equivalence.

The sample consists of 6,296 children from 3,129 mothers. In particular, I chose all 19- or 20-year-olds over the even years 1994–2012 (i.e., 1994, 1996, ..., 2010, and 2012), since 1994 was the first year that contained all the variables, and since, beginning in 1994, the NLSY79 and the CYA supplements were administered biannually. I chose 19- and 20-year-olds because by that age people who finish on time would have completed their high school diploma. It may

seem that using both 19- and 20-year-olds doublecounts some individuals, but because of the biannual nature, in any given survey year, a youth is either 19 or 20, and in the next survey year, that youth is either 21 or 22 and so no longer eligible for my data. Moreover, the number of observations matches the number of unique youths.

I make the assumption that births are randomly allocated over the course of two years, so that the results of 19-year-olds are not systematically different from the results of 20-year-olds, although I do control for age to account for possible bias. Looking at Figure 1, one can see that there is a large difference between the proportion of 18-year-olds who have graduated and the proportion of 19-, 20-, and 21-yearolds who have graduated, whereas the difference in proportions of graduates between 19- and 20-yearolds is barely discernible, indicating a sort of constant state.



Figure 1. High school or GED completion status by age.

METHODS

The primary outcome measure was the completion of high school or the obtaining of a GED by the survey year. In order to avoid bias, I include many socioeconomic variables as controls. Since I am dealing with binary data, I estimate a probit regression model.

Specifically, my independent variable is the completion of high school (or obtaining a GED) by the age of 19 or 20, and my primary dependent variables are volunteerism and employment (including wage and the square of wage). The controls are family status (marital status of the mother and the presence of the father) and other socioeconomic controls (gender, number of siblings, living in an urban/rural area, region of residence, net family income, religion, poverty status, race, type of high school, year of survey, age, and highest grade completed by the mother).

I consider a youth to be employed if he or she makes at least an inflation-adjusted real wage of \$100 per year. I include the square of the wage since the marginal return to wage might be a concave function (Løken, Mogstad, & Wiswall, 2012).

Due to data issues and the impracticality of having a job or volunteering before the age of 16, I use lagged volunteerism and employment data from when the youth was 18 or 19 years old. Similarly, due to data issues but also given the consistency of family status across time, I use lagged family status from when the youth was 15 or 16 years old. Moreover, I would expect that the effects of marital disruption and youth activity are generally not instantaneous but appear after some time, hence the use of the lagged variables.

Some observations have missing data for some variables, and since I found that these missing values are correlated with high school completion, and since the NLSY79 has special codes for missing values, I simply included an indicator variable for the type of missing value.

RESULTS

First, I found that, in line with past research, as seen in Figure 2, a higher proportion of children of non-nuclear families do not graduate on time as compared to children of nuclear families. This means that children of non-nuclear families have a lower probability of graduating on time.

Next, I look at activity and high school completion. I found that a higher proportion of youths who are active (volunteering or employment) graduate on time (Figure 3, with a more detailed breakdown by volunteering and employment in Figure 4). This means that active children have a higher probability of graduating on time.

Then, I examined how volunteering and employment mitigate the damage caused by marital disruptions. From Figure 5, one can see that, given a family status (fixing a row), as opposed to how I previously did everything in general in Figures 3 and 4, a higher proportion of youths who are active graduate on time. Regardless of the type of family (nuclear or non-nuclear), active children have a higher probability of graduating on time. Among those who graduated from high school or obtained a GED, with the base case of a nuclear family and the child neither volunteering nor employed, I initially found that the estimated effects of volunteering and employment on the probability of obtaining a high school diploma or GED by the typical age of 19 or 20 are practically positive and statistically significant. These results are reported in Table 1.

Specifically, regression (1) is simply the correlation between family status and on-time high school completion; (2) includes an indicator of activity, revealing whether or not the child was a volunteer or employed at age 18 or 19; (3) separates the previous effect into employment and volunteering; (4) then adds the effect of (real) wage given that the child is employed (so a wage less than \$101 is considered as \$0); (5) is the model in (4) but with a logit regression; and (6) shows ordinary least squares (OLS) results. Because all of my estimates are approximately the same in the last three columns of Table 1, one can see that the regressions are robust.

I interpreted the data using the probit model (4) of Table 1. The coefficient on volunteerism is 0.0432 (p < 0.01) and employment is 0.0207 (p < 0.05). This means that, given two youths identical except for volunteering, the one who volunteers is about 4% more likely to graduate from high school (or earn a GED) by the age of 19 or 20. Also, given two youths identical except for employment, the one who is employed is about 2% more likely to graduate from high school (or earn a GED) on time. These results are suggestive, but there remains an issue to be acknowledged.



Figure 2. High school or GED completion status by family status.



Figure 4. High school completion by activity (detail).



Figure 3. High school completion by activity (general).



Figure 5. High school or GED completion status by family status (rows) and activity of youth (columns).

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Has HS Diploma or GED					
Volunteer or Employed		0.0440*** -0.00937				
Volunteer			0.0422*** (0.00837)	0.0432*** (0.00836)	0.0372* (0.0212)	0.0339*** (0.00830)
Employed			0.0339*** (0.00854)	0.0207** (0.00965)	0.0145 (0.0112)	0.0240** (0.0113)
Child's Total Earnings in \$100s				0.000229*** (8.24e-05)*	0.000217*** (7.54e-05) -1.59e-	0.000238*** (8.09e-05)
Child's Total Earnings Squared				-1.69e-07** (7.05e-08)	07*** (5.86e-08)	-1.56e-07** (7.06e-08)
Father Not Present	-0.0200** -0.00931	-0.0206** (0.00916)	–00198** (0.00895)	-0.0197** (0.00892)	-0.0166 (0.0118)	-0.0192* (0.0101)
Never Married	-0.0280** (0.0115)	-0.0262** (0.0113)	-0.0252** (0.0110)	-0.0246** (0.0110)	-0.0194 (0.0138)	-0.0514*** (0.0144)
Separated	-0.00185 (0.0126)	-0.00213 (0.0125)	-0.00197 (0.0122)	-0.00214 (0.0121)	-0.00180 (0.0102)	-0.00627 (0.0154)
Divorced	-0.00285 (0.0104)	-0.00188 (0.0103)	0.00196 (0.0100)	-0.00132 (0.00999)	-0.00123 (0.00856)	-0.00550 (0.0117)
Widowed	0.0107 (0.0262)	0.0145 (0.0257)	0.0164 (0.0251)	0.0161 (0.0250)	0.0149 (0.0225)	0.0193 (0.0316)
Constant	0.813*** (0.0963)	0.790*** (0.120)	0.763*** (0.116)	0.761*** (0.0993)	1.051*** (0.104)	0.884*** (0.207)
Observations	5,708	5,708	5,708	5,708	5,708	6,296
R-squared						0.124

Standard errors in parentheses.

*** *p* < 0.01, ** *p* < 0.05, * *p* < 0.1

Table 1. (1)–(4) Probit regression marginal effects; (5) Logit regression marginal effects; (6) OLS results of youth activity on educational attainment. Family status is lagged four years. The data is for children currently 19/20. The base case is a nuclear family four years ago, where the mother is married and father is present, and for (2)–(6), and an inactive child who is neither a volunteer nor employed. Indicators for missing values are in use.

Maybe in his junior year of high school a youth finds employment as an auto mechanic. Given the steady job and his liking for it, he quits school but eventually goes on to earn his GED, although later in life than if he had stayed in school and earned a high school diploma. This example illustrates an objection to my model. I do not separate finishing high school from earning a GED and so confound the results because those who will earn their GED will probably do so later than they would have completed high school.

In fact, this turns out to be true. In Figure 6, I distinguish between those who earn a GED and those who earn a high school diploma by the age of 19 or 20. One can see that there indeed is a large difference between the two graphs. A youth who will earn a GED is less likely to finish on time. Additionally, from Figure 7, one can see that the type of education is correlated with the type of family. Children of non-nuclear families have a higher probability of being on a GED track. Because of this, I reran the main regression but included a variable indicating a high school diploma or GED and then included many interaction terms. The point of including the interaction terms was to try to remove any issues such as a youth from a non-nuclear family being more likely to eventually earn a GED, which in turn is more likely to be earned late. These results are reported in Table 2.

I interpreted regression (3) in Table 2 since it contains all the interaction terms I wanted (the other regressions should be seen as building up to regression [3]). As compared to a nuclear family with an inactive child (neither a volunteer nor employed), the effect on the probability of finishing a high school equivalency on time is as follows: a 3.05 percentage point increase for volunteers



Figure 6. On-time completion status by type of diploma.



Figure 7. Type of diploma by family status.

(p = 0.008); a 2.49 percentage point increase for employed children (p = 0.064); a 14.1 percentage point decrease for children who will get their GED (p < 0.001); and a 3.70 percentage point decrease for employed children who will ever earn their GED (p = 0.023).

From these results, one can take away a few things. Most importantly, since none of the other effects are significant, one can conclude that volunteering is beneficial in its own right, regardless of whether the youth will earn a high school diploma or a GED. Moreover, the effect of volunteering remained fairly constant in regressions (1)–(3), despite the addition of many interaction terms, further indicating that volunteerism is beneficial independently of any factor. On the other hand, a youth who is employed and will earn a high school diploma has an increased probability of finishing high school on time, but if that same youth will earn a GED, he is actually 15.31 percentage points less likely to earn it on time (0.064 < p < = 0.087 by the Bonferonni adjustment).

CONCLUSION

Divorce and marital disruptions have been documented to have a negative impact on the child, including lower romantic success (Wallerstein, Lewis, & Blakeslee, 2000). This means that when the child grows up, he or she will have an increased probability of a marital disruption, and so his or her progeny will fall victim to what the child experienced.

I investigated the mitigating effects of volunteerism and employment. I found that volunteering is a decisive means of increasing the probability of graduating on time, regardless of the situation in the household. This means that volunteer activities should be studied and utilized more as a means to improve the outcomes of children of non-intact families. Unfortunately, the issue of employment was a bit more delicate and dependent on the type of track the child was on (high school versus GED) not as independent as volunteering. Thus, programs seeking to help children of disrupted families should focus on where and how the child works.

Children of traumatic marital events like divorce may benefit from volunteering. The question as to why this is the case is more psychological; I reason that volunteering helps a child forget about deep scars while making quality friendships. Additionally, it could be that observing others helps the child recognize the good in his or her life or the good that could be, or that the volunteer work gives the child a sense of purpose and joy.

	(1)	(2)	(3)		
Variables	Has HS Diploma or GED				
Volunteer	0.0372***, (0.0104)	0.0330***, (0.0109)	0.0305***, (0.0115)		
Employed	0.0228**, (0.0115)	0.0304**, (0.0120)	0.0249*, (0.0134)		
Child's Total Earnings in \$100s	0.000193*, (0.000108)	0.000129, (0.000116)	0.000135, (0.000131)		
Child's Total Earnings Squared	-1.04e-07, (1.17e-07)	-7.53e-08, (1.10e-07)	-7.27e-08, (1.40e-07)		
Volunteer * Non-Nuclear Family	-0.0293**, (0.0138)	-0.0311**, (0.0138)	-0.0259, (0.0158)		
Employed * Non-Nuclear Family	-0.0211, (0.0139)	–0.0163, (0.0147)	-0.0136, (0.0148)		
Child's Earnings * Non-Nuclear Family	0.000115, (0.000159)	8.48e-05, (0.000191)	0.000116, (0.000228)		
Child's Earnings Squared * Non-Nuclear Family	-2.48e-07, (2.36e-07)	-2.47e-07, (4.29e-07)	-4.36e-07, (5.09e-07)		
Non-Nuclear Family	0.00519, (0.0180)	0.00479, (0.0181)	0.00352, (0.0186)		
Widowed	0.0141, (0.0209)	0.0149, (0.0209)	0.0143, (0.0207)		
Father Not Present	0.00449, (0.0166)	0.00442, (0.0167)	0.00441, (0.0166)		
GED	-0.141***, (0.00987)	–0.137***, (0.0115)	-0.141***, (0.0144)		
Volunteer * GED		0.0204, (0.0164)	0.0316, (0.0259)		
Employed * GED		-0.0320**, (0.0155)	-0.0370**, (0.0163)		
Child's Earnings * GED		0.000240, (0.000195)	0.000318, (0.000263)		
Child's Earnings Squared * GED		-1.81e-07, (4.28e-07)	-3.63e-07, (4.67e-07)		
GED * Non-Nuclear Family			0.00703, (0.0144)		
Volunteer * GED * Non-Nuclear			-0.0183, (0.0329)		
Employed * GED * Non-Nuclear			0.0108, (0.0132)		
Earnings * GED * Non-Nuclear			-0.000122, (0.000337)		
Earnings Squared * GED * Non-Nuclear			3.85e-07, (6.94e-07)		
Constant	0.547***, (0.0897)	0.567***, (0.0903)	0.561***, (0.0903)		
Observations	5,687	5,687	5,687		
Standard errors in parentheses					

Table 2. Probit regression marginal effects of the composition of family on educational attainment. Family status is lagged four years. The data is for children currently 19/20. The base case is a nuclear family four years ago, where the mother is married and father is present, and an inactive child, who is neither a volunteer nor employed. Indicators for missing values are in use. "GED" refers to whether the child (ever) obtained a GED. A high school diploma and GED are mutually exclusive.

Sociologists and psychologists should examine how volunteerism (and employment to an extent) is an orthodox, holistic, and beneficial therapy.

The government has a vested interest in these children because children are the future, and if the nation's human capital decreases (say, from a lack of education), the economy will start to dwindle. The government may want to offer jobs and volunteer work to youths of disrupted families by possibly including innovative clauses in their public procurement contracts that state that at least a certain percentage of man-hours need to be performed by youths of disrupted families. For example, in building the Olympic Park, the London government specified a minimum percentage of apprenticed workers for various jobs (Department for Environment, Food & Rural Affairs, 2013; M. Bryant, personal communication, July 2013).

An objection to this study is the possibility that a child who is a volunteer or employed is more motivated, and so just naturally finishes on time. By having a dataset that is conditional on ever finishing a high school equivalency, I implicitly control for some of this endogeneity of motivation.

Further studies may want to examine how educational outcomes are affected for children in general, not only for children who have ever finished high school or earned a GED. The results of this paper can be used to provide evidence that there is indeed a positive association between volunteerism and educational outcomes.

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NOTE

1. "Our data record formal marital breakdown; they do not cover the dissolution of cohabiting relationships" (footnote 8 of Proto, Sgroi, & Oswald, 2012).

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