

Family structure instability and the educational persistence of young people in England

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Research in the area of family structure and educational outcomes has often failed to account for instability in family structure. Furthermore, prior research in this area has been dominated by North American studies with a smaller body emerging from Europe. This study draws upon 10,783 young people and their parents from the Longitudinal Study of Young People in England to examine the association between family structure and family structure instability on post-16 educational persistence. Multivariate models indicate that family structure instability has a negative impact on educational persistence. After controlling for covariates, young people who had experienced family structure instability were 33% less likely to stay in education than young people who resided in married biological families during the four years prior to the end of compulsory schooling. The findings of this research provide evidence that young people who have experienced a change in family circumstances during these four years are potentially at risk of dropping out of school – this is the case irrespective of the nature of the change. Once covariates were accounted for, young people who resided in stable lone-parent households were just as likely as those in stable married biological families to continue to post-16 education. Analyses were also conducted to determine the educational persistence of young people from biological vs step-cohabitating families.

Background

Many researchers have demonstrated that a young person's life outcomes are impacted by their family's economic, social, behavioural and structural characteristics (e.g. Blanden & Gregg, 2004; Brown, 2010; Breen *et al.*, 2009; Cavanagh & Huston, 2006; Crosnoe & Cavanagh, 2010; McLanahan & Sandefur, 1994). Abundant research has highlighted marked differences in outcomes for young people residing across various family structures (Bjorklund *et al.*, 2007; Heard, 2007; Jeynes, 2006; Lampard, 2012; McLanahan, 1988; Mueller & Cooper, 1986; Song *et al.*, 2012; Wallerstein & Blakeslee, 1989) and has identified the occurrence of changes to family structure as a key determinant of life outcomes (Brown, 2006; Pong & Ju, 2000; Song *et al.*, 2012). For example, compared with those residing in two-parent households, young people living in lone-parent households are more likely to become lone parents themselves (McLanahan, 1988; Mueller & Cooper, 1986) and are less likely to form lasting relationships with their partners (Wallerstein & Blakeslee, 1989). Furthermore, marital instability or divorce can result in youth delinquency, alcohol and drug

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use, suicide and underage sexual conduct, (Andersen, 2010; Heuveline *et al.*, 2010; Uhlenberg & Eggebeen, 1986).

There is also significant evidence of the influence of family structure on many educational outcomes, including school persistence (Astone & McLanahan, 1991; McLanahan & Sandefur, 1994; Song *et al.*, 2012), school grades (Heard, 2007; McLanahan, 1985), college attendance (Beller & Chung, 1992), and achievement tests (Cherlin *et al.*, 1991; Downey, 1994). This evidence has been consistently found in national examinations (Ermisch & Francesconi, 2001) and international assessments (Hampden-Thompson, 2009, 2013; Hampden-Thompson & Pong, 2005; Pong *et al.*, 2003).

In this study we build on previous sociological and psychological research that demonstrates important influences of family structure and family structure instability on young people's educational outcomes (Aughinbaugh *et al.*, 2005; Cavanagh *et al.*, 2006; Cavanagh & Fomby, 2012; Fomby & Cherlin, 2007; Jonsson & Gahler, 1997; Pong & Ju, 2000, Sigle-Rushton *et al.*, 2005). We examine the combined and unique contribution of the nature of the family structure and instability to provide a holistic understanding of the overall effect (Thomson & McLanahan, 2012). This current study also adds to the existing literature on family structure by taking a trajectory, or dynamic, approach, recognising that family structure is not static. Taking advantage of nationally representative longitudinal research allows for the tracing of changes in young people's family structures during secondary schooling in England in order to answer the main research question of this study:

- What is the relative influence of family structure and family structure instability on young people's educational persistence? Specifically, when compared with the dominant family structure (stable married family), what is the association between family structure instability and educational persistence, as measured by participation in post-16 education?

While answering the main research question of this study, we address the following secondary research questions:

- Compared with young people who reside in stable married households, are there significant differences in post-16 participation in education by young people from other stable family structures (e.g. lone-parent families, cohabitating families)?
- What is the mediating role of household income and household income change on the association between family structure and family structure instability of young people's educational persistence?

An additional research question emerged during the course of the analysis concerning the association between the type of cohabitating household structure and educational persistence:

- When compared with young people in stable married families, are there differences in educational persistence among young people who reside in two-biological cohabitating families compared with those who reside in a cohabitating family with one biological parent (i.e. cohabitating stepfamily)?

School persistence and family structure and family structure instability

Family structure

Much research in the area of school persistence and family structure has been conducted in the USA and, to a lesser extent, in Europe, with findings relatively consistent since the 1980s. McLanahan and colleagues found that rates of high school graduation, college enrolment and college graduation for young people from lone-parent families were found to be below those of young people who resided in two-parent families (Astone & McLanahan, 1991; McLanahan, 1985; McLanahan & Sandefur, 1994).¹ Zimilies and Lee (1991), who used US data to compare the effects of different family structures on a young person's educational persistence, reported similar findings. Even after controlling for ability and socio-economic status, they established that young people from both step- and lone-parent families were three times less likely to graduate from high school as young people from two-parent families. Beller and Chung (1992), using educational outcome measures similar to those of Zimilies and Lee (1991), found that living in a mother-only household had a negative effect on educational outcomes for young people aged 16–20 years. This effect was consistent across all three measures: number of years of schooling completed, high school completion and entrance into college.

In a study using the US National Educational Longitudinal Study 1988 (NELS) dataset, DeLeire and Kalil (2002), after controlling for economic resources, parent behaviour, and various home and school characteristics, found that young people from never-married-mother homes were less likely to graduate from high school or to attend college than those who resided in divorced or two-parent households. In separate studies, Lang and Zagorsky (2001), Manski *et al.* (1992), and Painter and Levine (2000), all reported that young people with physically absent fathers were more likely to drop out of school than young people who lived with both biological parents. Similar findings as those observed in the USA have been reported in some European studies. Research in Switzerland, for example, found lower educational attainment and earlier transition to the workforce for children from lone-parent families compared with those living in two-parent homes (Oggenfuss, 1984). However, Bjorklund *et al.* (2007) discovered that the association between family structure and years of schooling was not significant in Sweden.

Family structure instability (or transition)

The research on family structure instability has also established associations between changes or transitions in family structure and young people's educational outcomes. Research by Pong and Ju (2000) using US eighth graders (approximately 13 years old) from the NELS data discovered that young people were three times as likely to drop out by the end of high school when their family structure changed from two biological parents to one. Similarly, more recent work by Song *et al.* (2012) considered the effects of both family structure and family transitions (instability) on school persistence (dropping out of high school). Using three waves of the NELS data, the

researchers concluded that young people are more likely to drop out of high school if a family transition was caused by parent divorce or separation. There was, however, no impact on dropping out of high school where young people experienced a family transition that resulted in marriage, remarrying, or the forming of a cohabitating relationship during high school.

Using the National Longitudinal Study of Adolescent Health ('Add Health' data) and a life course framework, Cavanagh *et al.* (2006) found an association between family structure instability and mathematics achievement, and between family structure instability and dropout status. Their findings suggest a stronger link between academic outcomes and family structure instability at the end of high school than at the beginning. From this research, we can deduce that young people may benefit from family structure stability at important educational transitions, such as the end of compulsory education. For the purpose of our own study, we consider the transition from compulsory education to non-compulsory education as a key transitional point for young people in England.

One study conducted in Sweden also examined the impact of family structure instability on two measures of educational persistence (school continuation post-16 and transition to the upper secondary academic track). Similar to our study, Jonsson and Gahler (1997) were interested in the relative importance of family structure instability prior to key educational transitions and whether the disruption effect could be attributed to a change in socioeconomic status. The researchers compared different combinations of stable vs unstable family structures (e.g. stable married vs divorced, separated vs stable cohabiting, remarried vs stable single). Their results indicated that young people who had experienced parental divorce between 1985 and 1990 were less likely to continue their post-16 education in the next two years than their peers whose parents had remained married. This was the case after adjusting for various control variables (e.g. sex, parents' age, immigrant status) and household resource indicators including household income. Overall, family instability during this 5-year period prior to educational transition resulted in lower levels of educational persistence. Jonsson and Gahler also reported in this study that the differences in persistence between young people from stable vs unstable family structures were largely explained by economic deprivation and downward social mobility. In a more recent study using Norwegian registry data, Steele *et al.* (2009) concluded that parental divorce (instability) was associated with a lower probability of going to college.

In the UK, Kiernan (1992) found that British young people who had experienced divorce and were living in a stepfamily arrangement were less likely to progress to non-compulsory education than those from intact and lone-mother families. This finding held after controlling for various background characteristics that included socioeconomic status and prior achievement. Focusing on family structure but not stability, Goodman *et al.* (2009), using three UK longitudinal datasets,² found that there were persistent educational advantages to children residing in married households. Consistent with the research by Steele *et al.* (2009), Goodman *et al.* (2009) established that the association between educational outcomes and family structure was weaker for the older cohort (11–16 years) than for the younger cohort.

Cohabitation

The fourth research question emerged during our analyses and it is concerned with differences between the educational persistence of young people who reside in a stable two-biological parent cohabitating family and those who reside in a stable cohabitating stepfamily. Prior cohabitation research has tended to focus largely on cohabitating stepfamilies with less attention paid to cohabitating biological families (Artis, 2007). In a study using US early childhood data, Artis (2007) examined differences across a number of measures of well-being, including educational outcomes between children who resided in a cohabitating biological family vs those children who resided in a cohabitating stepfamily. The author discovered that children in cohabitating stepfamilies had lower cognitive test scores than their counterparts in cohabitating biological families. However, children in both types of cohabitating families had lower educational outcomes than those children who reside in two-biological-parent married households. In research using the 1999 National Survey of America's Families data, Brown (2004) also distinguished between biological and step cohabitating families, using school engagement as one of two outcome measures. For the older cohort of children (ages 12–17), Brown concluded that adolescents living in two-biological-parent married families had higher levels of school engagement than those in all other family types. However, the research found no differences in levels of school engagement between young people in cohabitating biological parent families and stepfamilies. In a review of research and policy on marriage and child well-being, Brown (2010) concludes that 'biological parentage per se does not account for the advantages that children enjoy in two-biological married families' (p. 1064). On average, cohabitating biological families were more likely to be poor when compared with their married biological family counterparts (Manning & Brown, 2006).

The review of previous research concerning family structure and family structure instability, and differences within cohabitating family structures highlights a number of areas that require further examination or gaps where more research is needed. Compared with the USA, less research has been conducted in the UK on the association between family structure and educational persistence, particularly on family structure instability and educational persistence. A notable exception is the research conducted by Kath Kiernan and colleagues whose research on family structure and transition has largely focused on the impact of divorce. In this paper, we focus on the family structure and instability (or transition). We hypothesise that changes in family structure, regardless of the nature of the transitions, are prejudicial for a young person's educational persistence. Put differently, it is the change and related disruption that is detrimental to the young person and not the family structure itself. For example, even if there may be economic advantages for the family to transition from a lone-mother unit to a two-parent family, the transition still involves disruption to the family.

It is important to recognise that previous research has shown that economic resources are a key mediator of the associations between family structure, family structure instability and educational outcomes (Hampden-Thompson, 2009; Hampden-Thompson, 2013; Lopoo & DeLeire, 2014; Manning & Lamb, 2003; McLanahan & Sanderfur, 1994). Given that family instability could affect educational

persistence, at least partially, through the influence of economic household inputs, we also adjust for household income and income change over time to better understand the process.

Data, sample and methods

In order to address our research questions, we drew upon data from the Longitudinal Study of Young People in England (LSYPE). The LSYPE study, commissioned by the former Department of Education and Skills (DfES), measures the factors that affect young people's transition through secondary schooling, further education, higher education or entry into the labour market. The first wave of data was collected in 2004 when the students were aged 13 and 14. In total, seven waves of data have been collected on an annual basis from a nationally representative cohort of 15,770 students. An eighth wave of data collection is scheduled for 2015 when the cohort will be turning 25 years of age. For the first four years (waves 1–4), parents were also interviewed face-to-face. If a young person had remained in education and followed a 'typical' educational trajectory, she/he was in her/his second year of university by wave seven (19 or 20 years of age). Therefore, it is possible to track young people's educational trajectory over a 7-year period from age 13 or 14 to age 19 or 20.

We combined the LSYPE data with the National Pupil Database (NPD), which contains longitudinal student achievement data (e.g. individual pupil key stage achievement records) for all students in state schools in England. The NPD is a rich data source that can be directly linked to other related datasets such as the LSYPE. Therefore, for the 15,770 students that participated in LSYPE there is a full record of their attainment data from their primary, secondary and non-compulsory schooling. In this study, we analysed data from waves 1 to 4 (2004–2007). This allowed us to track the young people through to the end of their compulsory education. Mindful that we were interested in family structure and family structure instability, the sample was restricted to young people who had family structure data for all four waves.³ The final analytical sample was 10,783.

Educational persistence at the end of compulsory education was the dependent variable. This variable (W7FinAct29_B11) is a dichotomous variable indicating whether the young person stayed in education past compulsory schooling (yes = 1). The variable was derived from the May 2007 bulletin that can be found in the *main activity file*. Family structure and family structure instability was the main independent variable of interest in this study. This variable was constructed from information on young people's family structure from when they were 13–14 years (year 9 in school) to 16–17 years of age.⁴ Information from waves 1, 2, 3 and 4 (w1famtyp, w2famtyp, w3famtyp, w4famtyp, respectively) were used to create this variable. Each young person in the study was coded as residing in one of the following family types: stable married biological, stable married step, stable cohabiting biological, stable cohabiting step, stable lone-mother, stable lone-father, and stable no parents. If a change in family structure was reported from one year to the next during the four years then the young person was coded as experiencing family structure instability. The reference group for this variable was stable married family.

The household income and household income change variables were constructed from the *W1inc1estMP* (wave 1) and *W4inc1estMP* (wave 4) variables. These variables represented the total gross yearly income for both parents. For compatibility purposes, the wave 4 income data was re-coded in order to be consistent with the wave 1 data. In the final step, seven income brackets were created (up to £10,399; £10,400 up to £15,599; £15,600 up to £20,799; £20,800 up to £25,999; £26,000 up to £31,199; £31,200 up to £36,399; £36,400 and over). For the income change, each young person received a coding of 1 if their household income bracket was lower in wave 4 than in wave 1. The variable income change was coded as 0 if the young person's income brackets were the same in both years or if the bracket in wave 4 was higher than the one in wave 1. Following Piesse and Kalton (2009), we implemented a model-based strategy of multiple imputation to compensate for missing household income data. Piesse and Kalton produced a report specifically concerned with how to handle missing data in LSYPE. They indicate that household income is a prime candidate for imputation. In order to impute missing income data, we imputed all predictor variables (e.g. parent education, employment status). However, we only used the imputed data for household income in the interest of maintaining the integrity of the data. We believe that this was an appropriate strategy, but recognise that different approaches might have been adopted.

In addition to the family structure and family structure instability, and the household income and household income change variables, the multivariate analyses included a number of control covariates collected at wave 1. These variables included the young person's sex, parents' education, socio-economic classification for the family (National Statistics Socio-economic Classification), and ethnicity. We also included a prior achievement measure (Key Stage 3 combined mathematics, science, and English scores – *cvap3aps*), which came from the NPD.⁵

A two-stage strategy was employed to answer the primary research questions. First, descriptive analysis was used to explore the (1) family structure and family structure instability between 2004 and 2007, and the unadjusted (no controls) post-16 educational persistence rates in 2007 by family structure. We also analysed (2) household income by family structure, and (3) the income change between 2004 and 2007 by family structure. In the second stage of the analysis, logistic regression was used to examine the relative influence of family structure and family structure instability on young people's educational persistence. Three models were specified to answer the research questions. Data was weighted using the *W4Weight_MAIN* weight, which is recommended for waves 1–4 longitudinal analyses (Department for Education, 2010). Analyses were conducted with SAS 9.3 *SURVEYFREQ* and *SURVEYLOGISTIC* procedures in order to take into account the complex cluster sample design and nesting structure of the LSYPE data. LSYPE utilised a stratified clustered sampling approach and not simple random sampling for selecting participants. The *SURVEY* procedures in SAS take into account the intracluster correlation owing to sampling design when calculating estimates and standard errors. Comparisons made in the text were tested for statistical significance to ensure that any differences larger than might be expected were due to sampling variation. The statistical significance of the differences between estimates is at $p \leq 0.05$ as measured by two-tailed Student's *t*-tests.

Results

Educational persistence by family structure and family structure instability

The majority of young people (55%) resided in a stable married biological family between 2004 and 2007 with 5% living in a stable married stepfamily. About one-fifth of youths (19%) lived in stable lone-mother families, 4% in stable cohabiting families (2% biological and 3% step), and 2% in stable lone-father families. Around 13% of young people had experienced family structure instability between 2004 and 2007; 89% of which had only experienced one change during that time. The most common change in family structure experienced between 2004 and 2007 was from a married family to a lone-mother family.

As Table 1 indicates, three-quarters of young people stayed in education post-16. There were differences by family structure and family structure instability, however. Young people residing in married biological families (81%) were more likely to stay in education post-16 compared with all other family structures. Differences in educational persistence were also found between young people who reside in lone-mother families and those who had experienced a change in family structure (69% persisted vs 63%, respectively). Not all other apparent differences were statistically significant at the 0.05 level.

Income distribution and change by family structure and instability

Table 2 shows the distribution of the young people's household income in 2007 by family structure and the percentage of young people who experienced household income change between 2004 and 2007. As the data indicates, young people who resided in stable married biological families experienced a higher household income than all other family structures. Nearly half (49%) of young people living in these families had a household income of £36,400 or more, whereas only 8% living in lone-mother families had this same income level. About 21% of young people who had experienced a change in family structure were in the highest income bracket. At the other end of the income range, one-third of young people from lone-mother families had incomes that were £10,399 or less.

Table 1. Percentage of young people in education at 16 (post-compulsory) in 2007 by family structure status between 2004 and 2007

Family structure status	Participation in post-compulsory education	SE	Unweighted <i>n</i> 's
Total	74.7	0.64	10,783
Married biological	81.0	0.65	6,268
Married step	70.5	2.15	516
Cohabiting biological	68.3	3.47	213
Cohabiting step	62.9	3.56	246
Lone mother	68.8	1.35	1,998
Lone father	67.7	4.25	151
No parent	64.2	6.19	82
Unstable family structure	62.8	1.49	1,309

Table 2. Percentage distribution of income in 2007 and change in income between 2004 and 2007 by family structure

Income	Total	Married biological	Married step	Cohabiting biological	Cohabiting step	Lone mother	Lone father	No parent	Unstable family structure
Income brackets									
Up to £10,399	14.8	7.4	6.4	15.0	8.5	33.7	22.7	42.9	20.3
£10,400 up to £15,599	12.7	7.3	12.2	12.1	12.8	24.6	15.5	30.7	16.8
£15,600 up to £20,799	10.3	8.2	8.0	11.5	13.9	13.9	18.8	8.4	12.4
£20,800 up to £25,999	9.8	8.7	11.3	11.0	9.7	10.4	14.0	4.6	12.0
£26,000 up to £31,199	9.5	10.3	13.5	11.2	13.2	5.8	10.0	5.1	9.6
£31,200 up to £36,399	7.8	9.3	9.0	11.3	7.3	3.5	2.0	1.8	7.7
£36,400 and over	35.2	48.8	39.7	28.0	34.7	8.1	17.0	6.6	21.2
Income change									
Less income	39.0	39.8	42.5	43.3	43.0	36.3	43.1	22.9	37.0
No change in income	41.5	43.9	38.3	31.1	38.3	44.3	36.4	51.7	31.8
More income	19.5	16.4	19.2	25.6	18.7	19.5	20.5	25.5	31.2

Table 2 also contains the percentage distributions for changes in household income from 2004 to 2007. For all young people, 42% experienced no change in their household income bracket between 2004 and 2007, while 39% experienced a drop in income. Regarding the income change of young people who had experienced family structure instability between 2004 and 2007, just under one-third experienced living in a household with a higher income bracket in 2007 than in 2004 – a statistically greater percentage than the one observed for all stable family structures, with the exception of stable no-parent families. Given the differences found in terms of household income and change in household income by family structure and family structure instability, it is important to account for both these factors in the multivariate analyses. This will assist in isolating whether income change is a key factor in determining post-16 educational persistence, or if household income and change are both salient mediating factors.

Family structure and family structure instability and educational persistence

Table 3 contains the logistic regression coefficients and standard errors alongside the odds ratios. The odds ratios (*OR*) provide an indication of the likelihood that a young person from a certain family structure, household income bracket and other background characteristics will continue into post-16 education. Model 1 is a parsimonious model with only one predictor, which is family structure and family structure instability. When compared with young people from stable married biological families, those who have experienced family structure instability (*OR* = 0.40), or who are from any of the other stable family structures, are less likely to persist in post-16 education. Broadly speaking, Model 1 indicates that young people who do not reside in stable married biological households are half as likely to continue their education compared with those who do. For example, young people who have experienced family structure instability are 60% less likely to stay in post-16 education than their counterparts from stable married biological families.

In Model 2, we examined the impact that household income and household income change may have on the relationship between family structure, family structure instability and education persistence. In other words, can income explain differences in education persistence across the various groups? When controlling for household income and income change, as in Model 2, the odds of educational persistence for young people from a family who has experienced instability and from all other family structures are still significant compared with those young people who reside in stable married biological households. Young people who have experienced family structure instability are still half as likely to stay in education as those young people from stable married biological families.

Accounting for income significantly improved the odds of staying in education for young people in unstable families and those who resided in lone-mother families. Controlling for household income and income change, the odds of young people in unstable family structures improves slightly from Model 1 to Model 2 (*OR* = 0.40 vs *OR* = 0.50, respectively). This is also the case for young people living in lone-mother

Table 3. Logistic regression coefficients and odds ratios for educational persistence of young people

Variables	Model 1			Model 2			Model 3		
	β	SE	Odds ratio	β	SE	Odds ratio	β	SE	Odds ratio
Family Structure									
(ref: married biological)									
Married step	-0.58	0.107**	0.56	-0.53	0.108**	0.59	0.21	-0.124	0.81
Cohabiting biological	-0.68	0.167**	0.51	-0.52	0.165**	0.59	0.15	0.192	1.16
Cohabiting step	-0.92	0.161**	0.40	-0.85	0.164**	0.43	-0.49	0.193**	0.61
Lone mother	-0.66	0.072**	0.49	-0.27	0.077**	0.76	-0.11	0.097	0.89
Lone father	-0.71	0.200**	0.52	-0.44	0.207*	0.65	-0.05	0.273	0.95
No parent	-0.87	0.288**	0.42	-0.20	0.315	0.82	0.23	0.549	1.26
Unstable family structure	-0.93	0.072**	0.40	-0.69	0.078**	0.50	-0.41	0.095**	0.67
Income									
Gross household income									
(2007) (ref: up to £10,399)									
£36,400 and over				1.16	0.095**	3.19	0.25	0.133	1.28
£31,200 up to £36,399				0.65	0.121**	1.92	-0.07	0.154	0.94
£26,000 up to £31,199				0.75	0.116**	2.11	0.26	0.145	1.30
£20,800 up to £25,999				0.61	0.108**	1.83	0.14	0.141	1.15
£15,600 up to £20,799				0.54	0.103**	1.72	0.17	0.126	1.18
£10,400 up to £15,599				0.42	0.101**	1.52	0.26	0.121*	1.29
Change in income between 2004–2007									
(ref: no change or higher income bracket)									
Lower income bracket				-0.37	0.057**	0.69	-0.14	0.066*	0.87
Constant	1.45	0.042**		0.81	0.078**		-2.51	0.309**	
-2 Log-likelihood	11,998.6			11,929.6			10,078.3		
Pseudo R ²	0.028			0.048			0.162		
N	10,783			10,783			10,783		

Notes: ** $p = 0.001$, * $p = 0.05$. In the interest of space, the background characteristic variables for model 3 are not reported in this table. In addition to the variables shown in the table, model 3 includes sex, parent's education, social class, ethnicity, and prior achievement. The coefficients for young people who reside in no-parent households should be interpreted with caution because of small sample sizes of 82.

families ($OR = 0.49$ vs $OR = 0.76$, respectively). Once household income is accounted for, the odds of these young people staying in education post-16 improved from 51% less likely to 24% less likely than their counterparts in stable married households. While the odds appear to improve for young people in the remaining family structures, the changes in the odds between Model 1 and Model 2 are not statistically significant.

In Model 3, we added key control variables: young person's sex, ethnicity and prior attainment (Key Stage 3 combined mathematics, English and science score), and parents' education and social class.⁶ Once we controlled for the various background characteristics alongside the two income measures, the association between educational persistence and stable lone parenthood (both lone-mother and lone-father) and cohabitating biological families was no longer statistically significant when compared with young people in stable married biological families. The same was found for young people residing in households with no parents.

In addition, the inclusion of control variables improved the odds, from Model 2 to 3, of educational persistence for those young people who had experienced family structure instability or lived in stable cohabiting stepfamilies when compared with their counterparts from stable biological married families. Controlling for household income, household income change, sex, parent's education, social class, ethnicity and prior achievement, young people from families that had experienced structure instability or stable cohabiting stepfamilies were 33% and 39%, respectively, less likely to have stayed in post-16 education than young people from stable married families.

Summary

It was hypothesised that family structure instability would be a salient factor in explaining educational persistence among young people. We found this to be the case. After controlling for household income, change in household income and various background characteristics that included prior achievement, the findings indicate that young people from family structures that experienced a change between 2004 and 2007 were less likely to remain in education post-16 compared to children from stable family structures. As previously indicated, we were interested in whether instability occurred and not in the nature of the change in family structure. While divorce may result in a reduction in household income, which in turn may be detrimental, there may also be benefits: parents' separation may lead to an improvement in family relations and provide relief from a high-conflict atmosphere within the home, for example (Amato *et al.*, 1995).

In many ways, a noteworthy finding is the similarity in the results for young people who experienced family structure instability between 2004 and 2007 and those from stable cohabitating stepfamilies. Young people in these cohabitating families experienced no change in family structure during the 4-year period. This is a somewhat unexpected result given that we predicted instability in family structure to have a negative association with educational persistence when compared with any stable family structure.

Discussion

The last 4 years of a young person's secondary education is a critical time for her/his future well-being and occupational mobility. Early exit from formal education is an enduring worldwide issue. Leaving school is often wrongly viewed as a single event in which a young person decides one day to interrupt her/his education. Instead, the process is gradual and it can be better characterised in terms of 'fading out' rather than dropping out (Hampden-Thompson, 2013). The findings of this research provide evidence that young people who have experienced a change in family structure are potentially at-risk of dropping out of school – this is the case irrespective of the nature of the change.

The primary focus of this research was to examine the relative influence of family structure and family structure instability on young people's educational persistence in England. The multivariate analysis provided a strong indication that family structure instability has a negative impact on educational persistence. As we hypothesised, it is the disruption or change in family structure that is detrimental and not the family structure itself. After controlling for background characteristics, household income and household income change, and prior achievement, young people who had experienced family structure instability were 33% less likely to stay in education than young people who resided in stable married biological families. Put differently, these young people were more likely to drop out of school than their peers from married biological families who experienced no instability during the last four years of compulsory schooling. Such findings are consistent with other studies of family structure instability conducted in the USA and in Sweden (Pong & Ju, 2000; Jonsson & Gahler, 1997).

A secondary aspect of this research was to examine differences in educational persistence by family structure. The findings of this study suggest that, while at first blush the percentage of young people from lone-parent families persisting in education is lower than that of young people from married families, this is not the case once we accounted for various background factors. When we consider the likelihood of staying in education between young people in married families and those residing in lone-parent families, the differences are accounted for by income and background characteristics. These results suggest that the association between lone-mother families and educational persistence is related to the economical disadvantages observed in this type of family and not to any intrinsic difficulties in the nature of the relationships between lone-mothers or lone-fathers and their children. This finding contradicts that of Goodman *et al.* (2009). Using the same dataset (LYPSE) and focusing on cognitive educational outcomes (i.e. performance in Key Stage assessments), these authors concluded that differences between young people in married households and their peers in lone-parent households still persisted after controlling for socio-economic factors. Our research appears to demonstrate that not accounting for stability and instability when examining family structure differences may be an oversight. Of course, it should be recognised that the outcome variables of these two studies are different, as we focus on educational persistence, whereas Goodman *et al.* focus on cognitive achievement. However, a replication of the Goodman *et al.* (2009) study, accounting for family structure instability, would be insightful.

The fully specified model provides evidence to indicate that young people who resided in a stable cohabitating stepfamily from 2004 to 2007 were still less likely than their married biological family counterparts to continue with their education. The disaggregation of cohabiting families in two groups (i.e. biological and step) allowed for a more nuanced examination of the association between cohabitation and educational persistence. This approach was well justified, as the findings suggest that these two types of cohabitating families confer different advantages and disadvantages on their children. For those young people who resided in a cohabitating family that included only one biological parent, we found that they were significantly less likely to stay in school than their counterparts in two biological parent married families were. In contrast, there were no discernible differences between those residing in cohabiting biological families and those from married biological families. Our results contradict findings from Brown (2004) in that there are no differences in educational outcomes between young people from married biological families and those from cohabitating biological families. It should also be noted that Brown (2004) examined school engagement and not persistence as the outcome measure, and that instability could not be accounted for given the cross-sectional nature of the sample. In the UK, continued research that provides a more nuanced examination of the impact of family structure instability on young people's educational outcomes, by taking into account the diversity of possible educational outcomes, is needed.

It is important to highlight the prominent limitations of this research. Foremost, the results of this study are fundamentally associative in nature and cannot support causal inferences. The focus of this research was to examine the impact of family instability at a crucial time of a young person's education. The longitudinal nature of the LSYPE data allowed us to subset those young people who experienced a change in family structure between 2004 and 2007, but we were unable to account for instability/stability prior to 2004. LSYPE did collect historical data from the families of the participants, but the data was not a complete record of family structure from birth and was collected retrospectively. While historical data was not essential to this analysis, prior instability/stability may have been an important and interesting control variable. The timing of parent separation, for example, has the potential to be a salient factor. It is quite possible that a young person who experienced parent divorce at an early age will have different outcomes from a young person who experienced it later in life. Another important limitation of this study is that we were not able to identify the specific mechanisms through which family structure and family instability positively or negatively influenced educational persistence. Future studies should strive to directly measure some of the process variables that mediate the relationships between these constructs.

In spite of its limitations, this research makes a number of important contributions. As previously discussed, much of the research in this area in recent times has been focused in the USA, and European research has been lacking. This research enhances our understanding of the impact of family structure, family structure instability and educational persistence in the UK and also bolsters the European knowledge base. Furthermore, this research has highlighted the need to understand more about the nature of cohabitating families; most of the research on this topic does not examine the family context that is specifically related to the different types of cohabitating

families. Additionally, there are important policy implications that can be drawn from this study to prevent the negative consequences of family instability.

Mindful that young people who drop out of school tend to fade out gradually from the education system, there are plenty of opportunities for families and schools to implement preventative measures specially designed for young people who may be at risk of not continuing their education post-16. Ensuring effective communication links between families and schools is vital for all aspects of a young person's education. However, it is particularly salient for young people who maybe struggling owing to, for example, the breakdown of their parents' relationship. It is, therefore, important that schools build relationships with parents and encourage families to share information that allows schools to support young people during difficult times. We recognise that schools are already doing so much, however, the facilitation of, or referral to, support groups and educational materials that provide assistance to young people experiencing family instability may be beneficial. It could be the case that these young people are managing the transition well, but that their parent/s are less involved in their education owing to other stresses. Therefore, an awareness on the part of schools and teachers to provide additional educational support and post-16 pathways advice for young people experiencing instability and where home-based parental involvement is lacking, would be helpful.

In terms of research that may inform policy, tracking the educational progress of young people who are facing multiple at-risk factors is essential. Much research, for example, compares the educational outcomes of young people by poverty status. In many cases, this is measured in terms of free school meals qualification. However, research like this one indicates that poverty, while extremely prominent, is only one potential at-risk factor. We need to work towards identifying a group of factors that have consistently been shown to be associated with poorer educational outcomes in the UK, and then identify young people in terms of how many of these factors they are facing.

NOTES

¹ It should be noted that in the US literature, 'lone' parent is often referred to as 'single' parent. For the purposes of the review of literature and for the rest of the paper, we have adopted a consistent terminology in which the term 'lone' parent is used.

² The three datasets were the Millennium Cohort Study, the Avon Longitudinal Study of Parents and Children, and the Longitudinal Study of Young People in England.

³ It should be noted that sample attrition occurred between waves 1 through to wave 4. This, of course, is not unusual for a longitudinal study. Approximately 4,000 young people dropped out of the study over this period (28%). Patterns of attrition varied by family structure. A higher percentage of young people residing in married households stayed in the study through wave 4 than those who dropped out of the study. Equally, a larger number of young people in lone-mother households dropped out of the study by wave 4. For more discussion on missing data and imputation strategies for the LSYPE data, please see Piesse and Kalton (2009).

⁴ About two-thirds of the original sample (wave 1) were born in 1990 and about one-third were born in 1989. Compulsory education for this cohort ended in Year 11 when the young people were about 16 years of age.

⁵ The reduced NPD file is supplied alongside the LSYPE datasets.

⁶ The coefficients and odd ratios for control variables are not reported in Table 3 in the interest of space.

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