The long shadow of youth: Girls' transition from full-time education and later life subjective well-being in the English Longitudinal Study of Ageing (Final version)

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Abstract

Objectives.

To investigate whether the timing and nature of women's transitions out of full-time (FT) education are related to later life subjective well-being and the life course experiences that might explain any associations seen.

Method.

Data are from women in wave 3 of the English Longitudinal Study of Ageing who have participated in the life history interview and were aged 50+ at the interview (n=3,889). Using multichannel sequence analysis, we identified six types of transition out of FT education (ages 14-26). Regression models were used to examine associations between transition types and life satisfaction, quality of life, and depressive symptoms at age 50+.

Results.

Women who made early transitions to married parenthood and FT domestic labour had lower levels of wellbeing on all three later life well-being outcomes ($p<0.01$), compared to women who made later transitions to family life and remained employed. Women who remained single up to age 26 also had lower life satisfaction ($p<0.05$) and quality of life ($p<0.01$) in later life than their counterparts who married and had children. These associations were explained by the life course socioeconomic and relationship pathways. Advantaged childhood socioeconomic circumstances and higher educational qualifications set 'Later Marriage and Later employment' women apart onto advantaged trajectories and a better quality of life later ($p<0.01$).

Discussion.

The timing and nature of exits from FT education played a pivotal role in setting people onto lifecourse trajectories that influence wellbeing in later life for this older generation of women.

Keywords: Multichannel sequence analysis; Exit full-time education; Life course; ELSA

Introduction

Youth is a crucial time of life when young people begin to realise their aspirations, pursue economic independence and find their place in society. This busy period of the life course typically involves exiting full-time (FT) education, initiating labour force participation, and possibly entering into partnership and parenthood, each of which may exert long-lasting effects across the life course (Shanahan, 2000). These key transitions to adulthood accumulate, partially overlap and are interdependent. Most previous research on transitions to adulthood has focused on either the work or the family sphere, and there remains a lack of understanding of the long-term implications for well-being of the combined work and family transitions that young people make when leaving FT education. These transitions are likely to have been particularly meaningful for the generations of women in the UK who are currently post-state-pension age, as the social expectation to start families from a young age often set this generation of women onto more varied employment trajectories than those experienced by men or more recent generations of women (McMunn et al., 2015). This study aims to investigate: (1) whether the timing and nature of women's transitions out of FT education are related to later life subjective well-being among those who were born in the first half of the twentieth century, and (2) the life course experiences that might explain any associations seen. Data are 3889 women from the English Longitudinal Study of Ageing (ELSA) who were aged 50 and above at 2006 (wave 3). This study uses a multichannel sequence analysis technique which characterises women's work and family experiences post-FT education in *combination*.

Transition from FT education

Transition from FT education merits particular attention as a key period of the life course for the acquisition of social, economic and cultural capital. Life course theory emphasises the importance of the timing of key life course transitions, such as leaving school and entering parenthood, in determining their meanings and implications (Elder, 1994). The nature of transitions, that is what activities people are transitioning to, could also have different meanings, antecedents, and consequences (Aisenbrey & Fasang, 2010).

Finding gainful employment and becoming financially independent are important developmental tasks that typically take place after exiting FT education. Transitions out of education and into employment are key to setting people onto long-term trajectories of advantage, and potential social mobility. Exiting FT education is also a critical period in the development of self-identity and self-esteem. This self-identity is often linked with greater autonomy, self-expression, self-determination and self-sufficiency, which is often achieved through employment (Galambos, Barker, & Krahn, 2006). Besides, employment enables access to extended social networks and encourages wider participation in society (Van Der Noordt, IJzelenberg, Droomers, & Proper, 2014). Evidence suggests that strong ties to the labour market over long periods of the life course are associated with greater well-being (Dolan, Peasgood, & White, 2008).

Previous studies showed early parenthood to be linked with worse health and well-being even in the later life, including long-term illness, a higher risk of activities of daily living limitations, and greater levels of depressive symptomatology (Grundy & Read, 2015; Spence, 2008). Historic norms experienced by older generations of women often structure their adolescent transitions away from the health-enhancing factors of delayed childbearing, extended education and strong ties to paid work. Structural differences in the life paths available to men and women have meant that women experience greater interdependence between family and work (Scott, Crompton, & Lyonette, 2010). Gendered expectations ascribing women the main responsibility for care and family tasks have made women’s employment more interrupted and unstable than that of men (Worts, Corna, Sacker, McMunn, & McDonough, 2016). This is particularly true for the generations of women who are currently at retirement age or older as these generations of women faced strong social norms regarding early marriage, often quickly followed by parenthood (McMunn et al., 2015). Yet, we know very little about the *combined* work and family experiences during the key transition period out of FT education for these older generations of women and how that may set them onto trajectories of advantage or disadvantage.

The construct of work–family conflict which emanates from theories of role conflict or role strain claims that multiple roles create stressful conflict. The basic premise is that people have limited time and energy, and thus the more roles they have to fulfil, the less chance they have of meeting all their role expectations (Greenhaus & Beutell, 1985; Grönlund & Öun, 2010). Research has shown that work-family conflict has a negative influence on individuals' well-being (Geurts, Kompier, Roxburgh, & Houtman, 2003), and women who report a high level of work-family conflict are more likely to leave the labour market (Xue, Fleischmann, Head, McMunn, & Stafford, 2018). In contrast, role expansion theory argues that engaging in a multitude of activities and developing multiple roles and identities is beneficial (McMunn, Bartley, Hardy, & Kuh, 2006). For women, strong engagement in paid work could provide important financial and material rewards, which in turn could increase their power relations in the family and strengthen women's control over their lives (Baxter & Hewitt, 2012). In terms of transitions to adulthood, previous research has found that early transitions to FT domestic work after exiting education set young women onto trajectories of weak ties to paid work over the life course, and were associated with lower socioeconomic attainment in later life (Xue et al., 2020). Studies have assessed the concurrent or short-term influences of combined work and family experiences post-FT education and their results generally support that the active engagement in and commitment to meaningful social roles in young adulthood predict higher levels of subjective well-being in late 20s or early 30s (Maggs, Jager, Patrick, & Schulenberg, 2012; Sacker & Cable, 2010; Schoon, Chen, Kneale, & Jager, 2012). However, the life course impact of transition from FT education has not been examined. Subjective wellbeing is of particular importance to older adults, as it predicts mortality (Chida & Steptoe, 2008), onset of physical frailty (Ostir, Ottenbacher, & Markides, 2004), and cognitive decline (Gerstorf, Lövdén, Röcke, Smith, & Lindenberger, 2007). Subjective well-being in the academic literature has typically been conceptualised as being comprised of three broad domains: evaluative, affective, and eudemonic. Evaluative wellbeing is based on a global appraisal of one's life and relates to life satisfaction (Diener, Emmons, Larsem, & Griffin, 1985). Affective wellbeing concerns emotional states, including both positive and negative affect, and eudemonic wellbeing can be defined as the self-assessed worth of an individual's life (Jivraj, Nazroo, Vanhoutte, & Chandola, 2014).

This study

We aim to understand whether combined work and family experiences post-FT education set young women into particular life course experiences that influence their later life subjective well-being. We will use three well-being outcomes to measure three aspects of well-being at later life: life satisfaction (evaluative wellbeing), quality of life (eudemonic wellbeing) and depressive symptoms (negative affect). This study will apply a multichannel sequence analysis, a relatively novel technique which allows for the characterisation of longitudinal continuities and discontinuities in multiple life course domains simultaneously. Specifically, we consider education, employment, partnership and parenthood during the transition into adulthood. Based on previous work, we expect later transitions into partnership and parenthood combined with a strong attachment to employment to set women onto more advantaged life course trajectories leading to higher levels of wellbeing in later life.

Methods

Data

We used the third wave of the ELSA. ELSA is a longitudinal study that collects multidisciplinary data from a nationally representative sample of people aged 50 years and over living in private households in England that started in 2002/03. Data are collected every 2 years. At wave 3 (2006/07), a life history interview was conducted additionally to collect retrospective information in a number of areas such as childhood characteristics, education, employment, partnership and fertility transitions (Steptoe, Breeze, Banks, & Nazroo, 2013). Our analytic sample are women who have participated in the life history interview and have a valid measure of any of the later life well-being outcome measures (life satisfaction, quality of life, and depressive symptoms). They were all born before or in 1956, and the sample size is 3,889 (88% of the whole female sample who completed the life history interview).

Girlhood work-family transition

Girlhood was defined as 14 to 26 years of age, bridging the end of compulsory FT education (the school leaving age for women in this study was 15) and 26 was the age by which most young women in this generation had entered their first partnership (87% in our sample). Annual information on education, work, partnership and parenthood status was derived for ages 14–26 years from the life history interview. Work status includes 'FT education', 'FT work', 'part-time work', 'unemployment', 'FT domestic work' (looking after home/family/relative) and 'other non-employed' (sick/disabled/voluntary work/other). Family status includes 'single, no child', 'single, with child', 'cohabiting, no child', 'cohabiting, with child', 'married, no child', and 'married, with child'. All children are under age 18. A work-family variable was generated by combining the six work status and six family status (6x6=36 categories) at each year. Distinct work-family patterns between ages 14-26 were generated using multichannel sequence analysis (see Statistical analysis).

Later life subjective well-being

Later life subjective well-being outcomes were measured at wave 3. Evaluative well-being was measured using the five-item Diener Life Satisfaction scale (Diener et al., 1985). The scale examined how satisfied the individual is with his/her life, with response options on a seven-point scale. Responses were reversed and summed so scores ranged from 5 to 35, with higher scores indicating greater satisfaction with life. Eudemonic well-being was measured by the 19-item CASP quality of life questionnaire (Hyde, Wiggins, Higgs, & Blane, 2003). Respondents are invited to indicate the extent to which each item applies to themselves on a four-point Likert scale. Negatively worded items are scored 0-3 and positively worded items are scored 3-0, so summed high scores correspond to greater well-being (ranges 0-57). Affective well-being is not measured directly in this study. Rather, we use a shortened 8-item version of the Centre of Epidemiological Studies Depression (CES-D) scale. CES-D provides an indication of negative affect during the last week through questions which ask about depressive symptoms experienced. The items are answered using binary yes/no responses, which can be summed to give summary scores ranging from 0 to 8. We used a score of ≥4 to define caseness of higher depressive symptoms (Steffick, 2000).

Covariates

Covariates were all taken from wave 3 or the life history interview. Birth year was adjusted as a continuous variable. Childhood factors include occupation of father at age 14 (manager/professional, non-manual, manual, other), whether parents separated before age 16, number of books at aged 10, accommodation at aged 10 (number of people live in the household divided by number of bedrooms) and childhood health (good/poor). Highest educational qualification was categorised as degree (International Standard Classification of Education-ISCED level 6), higher education below degree (ISCED level 4 and 5), A-level (ISCED level 3), O-level (ISCED level 2), foreign/other, and no qualification. Life course employment history covariates include years of working FT and working PT between ages 27-

49. Family factors included number of children ever had until wave 3 (0/1/2/3/4 or more) and marriage history (first partner, never partnered, re-partnered, previously partnered). Later life occupational class was measured by the National Statistics Socio-economic Classification three-class version (managerial/professional, intermediate, and routine/manual). Later life financial resources were measured by household income and wealth. Household income was measured at the benefit unit level (a single person or a couple) and household size was considered using the OECD equivalence scale, which assigns a weight of 0.5 to second adults and dependent children aged 14+ and a weight of 0.3 to children under 14 (Oldfield, 2011). Household wealth was calculated as gross financial wealth minus financial debt. Later life health was measured by long-standing illness which was grouped into limiting long-standing illness (LLSI), long-standing illness without limitations (LSI), and no long-standing illness.

The short version of the revised UCLA Loneliness Scale was used as a measure of later life loneliness. Scores range from 3 to 9, with higher values indicating greater loneliness, and were categorised to low (3) average (4/5) or high (≥6). A social isolation index at later life was computed, with respondents given points if they did not participate in any organizations, religious groups, or gyms/sports clubs; had less than monthly contact with children, other immediate family, and friends. Scores range from 0 to 4 and were categorised to low (0) average (1) or high (≥2). Further information on loneliness and isolation is available in Supplement 1.

Statistical analysis

Multi-channel sequence analysis

Multi-channel sequence analysis was used to group girls' work-family patterns during the transition from FT education to adulthood, using the combined work-family variable described above. First, we used Dynamic Hamming (DH) distances to generate a pairwise dissimilarity matrix that minimised the total transformation 'cost' of matching the girls' work-family patterns between age 14 and 26 (Lesnard, 2010). DH avoids insertions and deletions, thus the timing of transitions to alternate states is preserved when calculating the 'cost', which accords well with our interest in the timing of girls' transition (McDonough, Worts, Booker, McMunn, & Sacker, 2015). Next, we conducted a cluster analysis based on the pairwise dissimilarity matrix. The optimal number of distinctly identified clusters (i.e., work-family transition groups) was guided by two stopping rules, including the Calinski-Harabasz pseudo F (CH) index and the Duda-Hart (DH) index, and by investigating the chronograms for each cluster solution. Stopping rules suggested that 15 clusters solution is the best but group sizes are getting too small. Next best according to the DH index was seven clusters with eight and six clusters running a close second. Looking at the CH index for these three solutions suggested that the six clusters solution was the best. Therefore, we chose the six clusters solution (see chronograms in Supplement 2). Based on their characteristics, the six work-family groups were labelled as: Mixed family, some part-time employment ('Mixed Fam/PT'); Early married parenthood, early domestic labour ('Early Parent/Dom Lab'); Later married parenthood, later domestic labour ('Later Parent/Dom Lab'); Later marriage, early FT employment ('Later Marriage/Early FT'); Later marriage/single, later FT employment ('Later Marriage/Later FT'); Single, Early FT employment ('Single/Early FT'). We also conducted a sensitivity analysis using seven or eight clusters solution (Supplement 3).

Regression modelling

Regression models were applied to assess whether girls' transition groups between ages 14-26 were related to their well-being at age 50+. We chose 'Later Marriage/Early FT' as the reference group in multivariate regression models as it fits with our hypothesis that later transitions to family life and strong ties to paid employment will be associated with higher levels of wellbeing in later life. A sensitivity analysis using ‘Early Parent/Dom Lab’ as the reference group in multivariate regression models was also conducted (Supplement 4).

Linear regression was applied for continuous well-being outcomes (life satisfaction and quality of life) and logistic regression was used for the binary outcome (depressive symptoms). Unadjusted models were adjusted in nine stages, separately for each set of potentially explanatory covariates: (1) birth year, (2) childhood factors (father’s occupation, parents’ separation, childhood health), (3) education, (4) life course employment history, (5) family factors (marriage history and number of children), (6) later life occupational class, (7) later life household financial resources (income and wealth), (8) later life health, and (9) later life isolation and loneliness, followed by fully-adjusted models. All regression analysis was weighted by life history interview weighting provided by ELSA to minimise bias from unequal selection probabilities and differential non-response. To account for the potential multicollinearity among measures, a full model B adjusting for covariates (1) to (6) was shown in Supplement 5.

Our sample includes women from very different cohorts, and social norms and gender norms have substantially changed over time. Therefore, we also conducted the analyse (Supplement 6) which were stratified by three birth cohorts, i.e., pre-war (<1938), World War II (1939-1945), and post-war (1946-1956).

Missing data

Missing data on covariates (household income, wealth, isolation and loneliness) were imputed using multivariate imputation by chained equations, and 30 datasets were imputed (Supplement 7).

RESULTS

Girlhood work-family transition

Distributions of work-family transition types are shown in Table 1. The largest transition group (at 24%) was a mixture of family circumstances, including some lone parenthood as well as marriage with and without parenthood, combined with a mixture of employment profiles including some PT employment ('Mixed Fam/PT'). The next two most common transition groups were those who remained single up to age 26 combined with early transitions to FT employment, during the teenage years (at 19%, 'Single/Early FT') and those characterised by later transitions to married parenthood and from FT employment to FT domestic labour, during their mid-twenties (at 18%, 'Later Parent/Dom Lab'). Fifteen per cent of women made early transitions to married parenthood and FT domestic labour, during their late teens or early twenties ('Early Parent/Dom Lab') and 13% combined later marriage, without parenthood, and early transitions to FT employment, over their late teens ('Later Marriage/Early FT'). The smallest transition group, at 11%, was characterised by later marriage or remaining single combined with later transitions out of FT education into FT employment ('Later Marriage/Later FT').

Descriptive characteristics of the transition groups

Table 2 shows the descriptive characteristics of the sample by each transition type based on imputed data. Women in the group who combined later transitions to marriage or remaining single with later transitions from FT education into FT employment ('Later Marriage/Later FT') tended to be born later, to come from a managerial/professional class background (48%), to have much more books and a better living condition in childhood, to have a degree (64%) or some higher education (26%), and to spend more years of adulthood in FT employment. Women in this group were more likely to still be with their first husband/partner in later life (55%) but they were also more likely than women in other groups to have never partnered (9%) and to have remained childless (24%). They were most likely to be in a managerial/professional occupation themselves in adulthood and to be in the highest quintiles of household income and wealth, and least likely to have a long-term illness.

Women who combined early transitions into married parenthood and FT domestic labour ('Early Parent/Dom Lab') tended to be born in the 1930s or during World War II, to come from working-class backgrounds and were most likely to have experienced parental separation in childhood. They spent fewer years than other women in FT employment and more years not employed in adulthood (8.6 years) and had the largest families with over two-thirds having three or more children. They were less likely than other women to be in a managerial /professional occupation themselves (16%) and were most likely to have a LLSI (43%) and least likely to report low levels of social isolation in later life.

Women who combined later transitions to married parenthood with FT domestic labour ('Later Parent/Dom Lab') also tended to be born in the 1930s or during World War II, to come from working-class backgrounds, to spend more years not employed in adulthood, and less likely to be in a managerial/professional occupation themselves (16%). They were more likely than other women to still be in their first marriage or partnership in later life (53%).

Women who remained single and made early transitions from FT education to FT employment ('Single/Early FT') tended to be born in the 1920s or 30s, spent more adult years in FT employment, and less in PT employment, than other women and were more likely to have remained single throughout their lives (13%) and to have never had children (31%). They also tended to report loneliness in later life.

Women who combined later transitions to marriage with early transitions from FT education to FT employment ('Later Marriage/Early FT') were most likely to have O-level qualifications (31%), to still be with their first husband/partner in later life (56%) and were less likely to be socially isolated in later life. Women in the group with mixed family and employment patterns

(‘Mixed Fam/PT’) were most likely to be born later, in the early 1950s, more likely to be divorced or widowed (43%), less likely to be in a managerial/professional occupation in later life (20%), and more likely to have a LLSI (42%) and high levels of loneliness and social isolation in later life.

Descriptive characteristics are based on original data before imputation and percentages of missing data are shown in Supplement 7. The main reason for missing data was due to missingness in relation to the loneliness and social isolation variables (12% missing). These two variables were collected in a self-completion questionnaire and the response rate for the self-completion questionnaire was lower than the personal interview.

Girlhood work-family transitions and later life subjective well-being

Associations between girlhood transitions and later life satisfaction are shown in Table 3. In the unadjusted model, women who remained single to age 26 (‘Single/Early FT’) or made early transitions to married parenthood and FT domestic labour (‘Early Parent/Dom Lab’) or were in the mixed-biography with part-time employment (‘Mixed Fam/PT’) group had significantly lower life satisfaction scores in later life than women who combined later transitions to marriage with early transitions to FT employment (‘Later Marriage/Early FT’). The unadjusted coefficient for ‘Single/Early FT’ group, ‘Early Parent/Dom Lab’ group and ‘Mixed Fam/PT’ group was -1.05 ($p<0.05$), -1.08 ($p<0.05$), and -1.16 ($p<0.01$), respectively. This means that their scores were, on average, 1.05, 1.08 and 1.16 points less on the 30-point scale of life satisfaction scores than that of women in the ‘Later Marriage/Early FT’ group. This lower life satisfaction was attenuated by a mixture of socioeconomic factors (household income and wealth) and relationship factors (marital history, number of children, loneliness and social isolation). Adjusting for birth year, childhood factors, education, life course employment, and later life occupational class each individually did not explain the differences in life satisfaction between girlhood transition groups.

Similar to life satisfaction, women who remained single to age 26 or made early transitions to married parenthood and domestic labour or were in the mixed biography group had significantly lower quality of life in later life compared with women in the 'Later Marriage/Early FT' group (Table 4). The unadjusted coefficients for those who remained single, made early transitions to married parenthood, and the mixed biography groups were -1.61 ($p<0.01$), -1.95 ($p<0.01$), and -2.09 ($p<0.01$), suggesting that their scores were, on average, 1.61, 1.95 and 2.09 points less on the 57-point scale of quality of life than that of women in the 'Later Marriage/Early FT' group. Women who combined later marriage with later transitions to employment ('Later Marriage/Later FT') had, on average, 1.70 higher quality of life scores ($p<0.01$) than those in the 'Later Marriage/Early FT' group. Differences in household income and wealth had a role to play in explaining associations for all of these groups, although less so for women who were still single by age 26. Lower quality of life amongst single women was explained by remaining single and childless and being lonely or isolated in later life. The better quality of life for women who made later transitions to marriage and employment was explained by their advantaged childhood socioeconomic circumstances and higher educational qualifications, leading to a greater likelihood of being in a managerial/professional occupation in later life as well as higher levels of income and wealth.

As with quality of life, women who made early transitions to married motherhood and domestic labour, and women in mixed family biographies were more likely to have high levels of depressive symptoms. Their ORs were 1.79 and 1.93, which means that their odds of having high depressive symptoms at later life were 1.79 and 1.93 times greater than women in the 'Later Marriage/Early FT' group. As with quality of life, this was entirely explained by their lower levels of income and wealth (Table 5).

Sensitivity analysis

Several sensitivity analyses were conducted. First, the additional groups in the seven and eight-cluster solutions showed very similar results with the six-cluster solution (Supplement 3). The second sensitivity analysis (Supplement 4) used the ‘Early Parent/Dom Lab’ group as the reference in order to investigate potential differences between the three most disadvantaged groups identified in the main analysis (i.e., ‘Single/Early FT’, ‘Early Parent/Dom Lab’ and ‘Mixed Fam/PT’). We found no significant differences between ‘Early Parent/Dom Lab’ and ‘Mixed Fam/PT’ groups, while women in the ‘Single/Early FT’ had a lower risk of having higher depressive symptoms than ‘Early Parent/Dom Lab’. In terms of Full model B (Supplement 5, a model without later life household financial resources, health, isolation and loneliness), results are very similar to the original Full model shown in the main body of the paper except that we found significantly ($p<0.05$) worse life satisfaction amongst women in the ‘Single/Early FT’ group. This suggests the importance of later life household financial resources and isolation or loneliness in explaining worse well-being for this group. Cohort-stratified analysis (Supplement 6) show that disadvantages in later subjective well-being associated with women in ‘Single/Early FT’ or ‘Early Parent/Dom Lab’ or ‘Mixed Fam/PT’ groups were only observed in the World War 2 and post-war birth cohorts, but not in the pre-war birth cohort. The long-term impact was stronger for the post-war birth cohort than for the war cohort. Meanwhile, the better quality of life associated with ‘Later Marriage/Later FT’ was only found in the pre-war birth cohort.

Discussion

Our hypothesis that later transitions to family life and strong ties to paid employment would be associated with higher levels of wellbeing in later life is supported by our findings. Compared to women who combined later transitions to marriage with early transitions to FT employment, women who made early transitions into married parenthood and FT domestic labour (Early

Parent/Dom Lab) had lower levels of wellbeing on all three later life subjective well-being outcomes. Worse later life subjective well-being outcomes were also found among those who were in the mixed family biographies with part-time employment. Household financial disadvantage was the key barrier preventing these two groups of women from achieving a similar level of later life subjective well-being as others. Our results support the idea raised by Xue et al. (2020) that it is important for young women to establish strong ties to employment early-on as they leave school, as those who do not are more likely to suffer longer-term financial disadvantage. Our results are also in line with previous studies which characterised young people's work and family roles in *combination* and found that early transitions into parenthood are associated with poor educational attainment and a reduced likelihood of being in full-time employment in early adulthood as well as low life satisfaction and high distress in the early 30s (Schoon et al. 2012). Similarly, other studies have investigated work and family dimensions simultaneously across the life course and found that women who made earlier transitions to parenthood and spent long periods of the life course out of employment to look after the home and family had poor health at later life (Lacey et al., 2017; Lacey, Sacker, et al., 2016; Lacey, Stafford, Sacker, & McMunn, 2016). More importantly, our study suggests that youth represents a sensitive period for setting young people into particular work and family life course trajectories. Early transitions into parenthood and weaker ties to employment after exiting FT education can have a life course impact for women.

In our study, women who remained single up to age 26 and made early transitions to FT employment had worse eudemonic and evaluative well-being than women who combined later transitions to marriage with early transitions to FT employment. Women in this group were more likely than other women to have remained single throughout their lives and to have never had children. According to the role expansion theory, it is likely that the lack of family role means these women have less access to social resources and support when they need them, for example, when having difficulties in employment (Nordenmark, 2004). Partnership is particularly known to be linked with better subjective well-being (Soons, Liefbroer, & Kalmijn, 2009), as a partner can help to cope with the strains in life, develop a positive sense of identity, and raise self-esteem (Brase & Guy, 2004). These single women in a generation for whom social norms regarding marriage were strong for women, which means that the pressure they received could be even higher and social resources available to them could be more limited than recent generations of women. In our study, relationship factors including marital history, number of children, loneliness and social isolation play an important role in explaining the association between remained single and worse well-being at later life. In addition, this group of women were the second most likely to be in the lowest quintile of household income, which may partly be due to the lack of a partners' contribution. Household financial disadvantage partly explained the worse well-being outcomes among women who remained single. Schoon et al. (2012) described those who were typically single, childless, and work FT at age 26 as 'slow starters' and found them have lower levels of life satisfaction in the early 30s than other adults. We extend this work by moving beyond adulthood and characterised the longer-term life course associations between their various transitions from FT education and later life well-being. These women who remained single did not show significantly higher depression scores than other groups of women, which is probably because depression is a more extreme form of negative affect than the other two domains of well-being.

Women in the group who combined later transitions to marriage with later transitions to FT employment (Later Marriage/Later FT) reported the best quality of life at later life. For this group of women, advantaged childhood socioeconomic circumstances and a higher level of educational attainment provided the foundation for the accumulation of life course capital (O'Rand, 2006) and set them onto trajectories of socioeconomic and health advantages. They were also most likely to be in the highest quintiles of household income and wealth at later life, which may suggest homophily with their partner's attainment as well. Cohort-stratified analysis showed that better quality of life for this group of women was only found for the oldest birth cohort, suggesting that educational attainment may have been a particularly strong pivotal life course transition setting people onto trajectories of advantages for this generation in which higher education was relatively rare for women.

This study focused on the generations of women in the UK, who are currently post-state-pension age. These women faced strong social norms regarding early marriage and many of them entered motherhood quickly after marriage, which makes them were much more likely than subsequent cohorts to have transitioned to domestic work and looking after a family FT (Lacey et al., 2017; Lacey, Stafford, et al., 2016). Our findings indicate that social norms regarding motherhood and the opportunities available to those with degrees may have contributed to greater gender inequality between women of older generations in terms of later life well-being. Today, much higher proportions of women experience higher education, and few will make transitions to significant periods of FT domestic labour even amongst those who do become mothers by age 26, which might suggest that current generations are set onto more advantageous trajectories leading to greater wellbeing in later life. However, much of the benefit of higher qualifications in our study was linked with financial and material advantage. Partly due to the much higher prevalence of degree-level qualifications today, as well as the changing nature of working conditions and job security, access to higher education may not result in the same financial returns experienced by the generation of women born pre-war in our study (Zajacova & Lawrence, 2018). In fact, it seems women’s happiness levels did not improve in the US over that last part of the Twentieth Century (Stevenson & Wolfers, 2009). In addition, there is evidence to suggest that those who do not access higher education or have weaker ties to employment may now be at an even greater life course disadvantage than ever (Lacey et al., 2017).

Our study benefits from using a more holistic approach- multichannel sequence analysis- to capture the timing and nature of transitions into adulthood across the work and family domains. We also measured a variety of indicators of well-being in later life. However, several limitations should be considered in relation to our findings. First, our subjective well-being outcomes and later life socioeconomic conditions were measured at only one point in time. Previous research has found that subjective well-being, as well as many other socioeconomic factors, may change over the life course (Jivraj et al., 2014). The bi-directional relationship between subjective well-being and life course socioeconomic factors may influence the long-term impact of girlhood transition on well-being. Future research should consider examining time-varying socioeconomic factors and long-term trajectories of later life well-being. Second, life course information was retrospectively reported in ELSA rather than collected prospectively; we thus need to consider potential recall bias. Yet, the ‘event history calendar’ approach used in the life course interview is believed to improve the accuracy of recall (Jivraj, Goodman, Ploubidis, & de Oliveira, 2020). Third, work and family states used in our sequences were measured annually; thus, we may have bypassed some short period events and underestimated the diversity of transitions out of education. Last, a considerable percentage of the women in the sample were in their late 70s and 80s at the time of the survey, thus our results may suffer from mortality bias.

In conclusion, our study suggests that exits from FT education played a pivotal role in setting people onto trajectories of advantage or disadvantage in relation to human, social and economic capital. This study focused on the generations of women in the UK who are currently reaching or post the state pension age. For this generation of women, delayed participation in the labour market or not establishing a partnership appear to cast a long shadow on women’s well-being, while achieving higher educational qualifications set women apart onto particularly advantaged trajectories. Given the continually changing nature of education, employment and partnership, continued investment in longitudinal data amongst current cohorts will allow us to one day see whether transitions characterised by attending higher education or remaining single into one's mid-twenties cast the same long shadow for generations of women for whom these states have become the norm.

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Table 1. Distribution of six girls' transition groups between ages 14-26 years [a]

Transition groups	% (n=3889)
Mixed family, some PT employment (Mixed Fam/PT)	23.8
Early married parenthood, early domestic labour (Early Parent/Dom Lab)	14.8
Later married parenthood, later domestic labour (Later Parent/Dom Lab)	18.2
Later marriage, early FT employment (Later Marriage/Early FT)	13.2
Later marriage/single, later FT employment (Later Marriage/Later FT)	11.4
Single, Early FT employment (Single/Early FT)	18.6

[a] Abbreviations: PT (part-time); FT (full-time)

Table 2. Descriptive characteristics of six transition groups, based on imputed data [a]

	Mixed Fam/ PT (n=925)%	Early Parent/ Dom Lab (n=577)%	Later Parent/ Dom Lab (n=706)%	Later Marriage/ Early FT (n=512)%	Later Marriage/ Later FT (n=444)%	Single/ Early FT (n=725)%	Total (n=3889) %
Birth cohort				$p < 0.001$			
<1930	18.3	19.4	16.0	18.2	9.2	29.9	19.2
1930-1938	21.5	23.9	27.8	24.6	18.5	23.0	23.4
1939-1945	19.2	22.9	25.1	19.5	20.7	19.2	21.0
1946-1949	16.0	17.5	15.3	18.2	20.1	12.6	16.2
1950-1956	25.0	16.3	15.9	19.5	31.5	15.3	20.3
Father's occupation				$p < 0.001$			
Manager/Prof	14.1	11.4	11.6	19.1	48.0	16.3	18.2
Non-manual	18.4	16.3	15.6	22.7	23.0	23.2	19.5
Manual	37.8	43.9	46.5	36.5	15.1	36.7	37.3
Other	29.7	28.4	26.4	21.7	14.0	23.9	25.0
Childhood books				$p < 0.001$			
None/very few	32.9	28.5	28.4	23.0	5.5	20.8	24.8

1 shelf	25.1	27.1	27.6	25.1	12.1	25.2	24.4
1 bookcase	27.8	28.8	33.2	32.4	27.9	34.6	30.8
2 bookcases	8.0	9.8	6.4	12.5	22.8	10.5	10.7
≥3 bookcases	6.2	5.8	4.5	7.0	31.7	8.9	9.3
Childhood accommodation				$p < 0.001$			
mean(sd)	1.98	1.95	1.89	1.75	1.44	1.81	1.83
Childhood parent's separation				$p < 0.001$			
Yes	7.8	8.7	4.5	3.5	2.9	3.6	5.4
No	84.0	81.6	89.0	90.8	94.1	89.5	87.6
Other	8.2	9.7	6.5	5.7	2.9	6.9	6.9
Childhood health				$p =0.207$			
Good	85.3	85.1	87.3	86.7	85.4	89.1	86.5
Poor	14.7	14.9	12.8	13.3	14.6	10.9	13.5
Education				$p < 0.001$			
Degree	7.8	4.3	3.7	10.2	63.7	8.4	13.4
< Degree	8.5	7.3	8.6	10.7	25.9	15.6	12.0
A-level	7.2	5.4	6.7	9.4	5.4	8.6	7.2
O-level	20.4	21.8	24.2	30.5	3.8	21.5	21.0

Foreign/other	11.9	14.2	15.6	14.7	1.1	13.8	12.4
No qualification	44.1	47.0	41.2	24.6	0.0	32.1	34.2
FT work years				p =0.006			
mean (sd)	10.04(9.81)	7.20 (8.59)	7.02(8.84)	9.14(9.41)	13.23(9.50)	11.67(9.32)	9.62(9.51)
PT work years				$p < 0.001$			
mean (sd)	6.60 (8.84)	7.24 (8.37)	7.49(8.48)	7.52(8.91)	4.91(8.14)	4.74(7.51)	6.44(8.47)
No work years				$p < 0.001$			
mean (sd)	6.36 (8.24)	8.55(8.32)	8.49(8.17)	6.34(7.30)	4.86(6.92)	6.59(7.69)	6.94(7.97)
Marriage history				$p < 0.001$			
First partner	33.5	44.9	53.0	56.1	54.5	41.2	45.5
Never partnered	3.2	0.0	0.0	0.0	8.8	12.6	4.1
Re-partnered	19.9	18.0	13.2	13.3	12.2	8.8	14.6
Previous partnered	43.4	37.1	33.9	30.7	24.6	37.4	35.8
No. children				$p < 0.001$			
0	7.1	0.9	3.0	13.5	24.1	30.5	12.6
1	17.4	7.3	16.3	27.0	18.7	20.7	17.7
2	34.3	34.5	46.6	40.2	34.7	29.8	36.5
3	21.7	30.0	20.8	12.9	14.6	12.3	19.1

>=4	19.5	27.4	13.3	6.5	7.9	6.8	14.1
Occupation				$p < 0.001$			
Managerial/ prof	19.5	16.1	15.9	30.3	67.1	30.5	27.2
Intermediate	25.8	23.6	32.4	36.1	22.3	33.5	29.1
Routine /manual	52.3	57.4	49.9	31.8	10.1	34.3	41.8
Other	2.4	3.0	1.8	1.8	0.5	1.7	1.9
Household income				$p < 0.001$			
Lowest quintile	27.2	24.9	21.6	14.6	7.8	25.3	21.6
2	22.4	25.6	23.4	19.9	7.6	17.7	20.2
3	19.9	21.7	21.1	22.7	11.9	20.3	19.9
4	16.9	16.8	19.9	22.5	23.4	19.9	19.5
Highest	13.6	11.1	13.9	20.3	49.4	16.8	18.8
Household wealth				$p < 0.001$			
Lowest quintile	28.4	25.6	17.2	10.4	6.7	16.5	18.9
2	22.3	27.2	20.1	18.3	7.3	21.6	20.2
3	19.3	18.1	23.3	25.3	15.8	21.4	20.6
4	15.5	17.8	23.1	22.8	24.4	21.5	20.3
Highest	14.6	11.4	16.5	23.2	46.0	19.0	20.0

Illness				$p < 0.001$			
No	40.9	37.3	42.9	47.7	55.2	45.7	44.1
LSI	17.6	19.8	22.2	19.9	19.8	20.0	19.8
LLSI	41.5	43.0	34.8	32.4	25.0	34.3	36.1
Loneliness				$p < 0.001$			
Low	41.0	43.2	47.2	50.5	53.8	42.4	45.4
Middle	29.5	29.9	30.5	26.2	26.9	30.5	29.2
High	29.5	26.9	22.3	23.3	19.4	27.2	25.4
Social isolation				$p < 0.001$			
Low	51.0	49.4	57.4	58.7	69.5	58.2	56.4
Middle	46.4	49.0	41.8	40.8	30.0	41.1	42.3
High	2.7	1.6	0.8	0.6	0.5	0.7	1.3

[a] Average across 30 imputed datasets. Data resource: English Longitudinal Study of Ageing

Table 3 Association between girlhood transition and life satisfaction at later life (results are coefficients from multivariate linear regression, n=3345) [a]

	Unadjust	Birth year	Childhood	Education	Employment	Marriage &children	Occupation	Income &wealth	Health	Loneliness &isolation	Full model
Transition group											
Mixed Fam/PT	**-1.16****	**-1.15****	**-1.07****	**-1.33****	**-1.13****	-0.61	**-1.02***	-0.35	**-0.92***	-0.41	0.07
Early Parent /Dom Lab	**-1.08***	**-1.11***	**-0.97***	**-1.23****	**-1.12***	-0.77	**-0.88***	-0.21	-0.73	-0.47	0.02
Later Parent /Dom Lab	-0.02	-0.01	0.05	-0.14	-0.07	0.03	0.12	0.32	0.03	0.03	0.08
Later Marri. /Early FT	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
Later Marri. /Later FT	0.19	0.40	-0.07	0.12	0.31	0.14	-0.04	-0.65	-0.08	-0.13	-0.13
Single/ Early FT	**-1.05***	**-1.20****	**-1.07****	**-1.15****	**-0.98***	-0.68	**-1.03***	-0.66	**-1.01***	-0.52	-0.61
Birth year		**-0.06**									**-0.09****
Childhood social class											

Manager/Prof	0.23	-0.02
Non-manual	0.37	0.04
Manual	ref	ref
Other	-0.07	-0.04
Childhood books		
None/very few	ref	ref
1 shelf	-0.12	-0.05
1 bookcase	-0.22	-0.28
2 bookcases	0.37	0.15
≥3 bookcases	0.43	-0.02
Childhood accommodation	-0.02	0.06
Childhood parent's separation		
No	ref	ref
Yes	-1.00	-0.35
Other	0.32	0.38
Childhood health		
Good	ref	ref

Poor	**-0.91***				-0.52
Education					
Degree		-0.51			**-1.41****
< Degree		-0.48			**-1.43****
A-level		0.10			-0.69
O-level		**-1.42****			**-1.83****
Foreign/other		-0.46			**-0.85****
No qualification		ref			ref
FT work years			-0.03		-0.01
PT work years			0.0004		-0.01
No. children					
0				-0.14	0.13
1				0.27	0.34
2				ref	ref
3				0.04	-0.09
>=4				-0.17	-0.14
Marriage history					
First partner				ref	ref

Never partnered	**-1.95****			-0.75
Re-partnered	**-1.31****			**-0.69***
Previous partnered	**-3.32****			**-1.46****
Occupation				
Managerial/prof		**0.89****		0.06
Intermediate		**0.72***		-0.05
Routine/manual		ref		ref
Other		1.13		0.84
Household income				
Lowest			ref	ref
2			-0.02	-0.31
3			0.25	-0.06
4			0.67	0.38
Highest			**1.20****	**0.83***
Household wealth				
Lowest			ref	ref
2			**2.23****	**1.05****
3			**2.95****	**1.48****

4	**3.50****			**1.66****
Highest	**4.16****			**2.14****
Illness				
No		ref		ref
LSI		**-0.87****		**-0.53***
LLSI		**-3.29****		**-1.93****
Loneliness				
Low			ref	ref
Middle			**-3.11****	**-2.77****
High			**-8.19****	**-7.23****
Social isolation				
Low			ref	ref
Middle			**-0.98****	**-0.87****
High			-2.16	-1.68

[a] Data resource: English Longitudinal Study of Ageing. * indicates p<0.05; ** indicates p<0.01

Table 4 Association between girlhood transition and later quality of life (results are coefficients from multivariate linear regression, n=3250) [a]

	Unadjust	Birth year	Childhood	Education	Employment	Marriage &children	Occupation	Income &wealth	Health	Loneliness &isolation	Full model
Transition group											
Mixed Fam/PT	**-2.09****	**-2.11****	**-1.67****	**-1.72****	**-2.06****	**-1.43****	**-1.58****	-0.71	**-1.66****	**-0.90***	-0.04
Early Parent /Dom Lab	**-1.95****	**-1.91****	**-1.58****	**-1.48****	**-1.68****	**-1.45***	**-1.32***	-0.47	**-1.35***	**-0.99***	0.29
Later Parent /Dom Lab	-0.98	-0.99	-0.65	-0.55	-0.75	-0.84	-0.53	-0.44	-0.93	-0.82	-0.30
Later Marri /Early FT	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
Later Marri /Later FT	**1.70****	**1.47****	0.71	0.35	**1.65****	**1.74****	0.88	-0.06	**1.09***	**1.20****	-0.36
Single /Early FT	**-1.61****	**-1.44****	**-1.64****	**-1.43****	**-1.48****	-1.04	**-1.54****	**-1.05***	**-1.54****	-0.74	-0.59
Birth year		**0.07****									0.02
Childhood social class											

Manager/Prof	0.62	-0.14
Non-manual	0.73	0.002
Manual	ref	ref
Other	-0.23	-0.23
Childhood books		
None/very few	ref	ref
1 shelf	**1.32****	0.51
1 bookcase	**1.85****	0.58
2 bookcases	**2.41****	0.87
≥3 bookcases	**2.52****	0.35
Childhood accommodation	**-0.41***	-0.16
Childhood parent's separation		
No	ref	ref
Yes	-0.27	0.35
Other	-0.25	0.15
Childhood health		
Good	ref	ref

Poor	-0.15				-0.22
Education					
Degree		**3.14****			-0.05
< Degree		**1.82****			-0.65
A-level		**3.30****			0.51
O-level		**1.17***			**-0.79***
Foreign/other		**1.15***			0.17
No qualification		ref			ref
FT work years			**0.10****		0.04
PT work years			**0.12****		0.03
No. children					
0				0.23	0.39
1				0.30	0.33
2				ref	ref
3				-0.40	-0.22
>=4				-0.69	0.22
Marriage history					
First partner				ref	ref

Never partnered	**-3.06**			0.26
Re-partnered	-0.33			0.004
Previously partnered	**-3.52**			**1.24****
Occupation				
Managerial/ prof		**2.94****		0.37
Intermediate		**2.17****		0.05
Routine/manual		ref		ref
Other		-0.30		0.51
Household income				
Lowest			ref	ref
2			-0.05	-0.13
3			0.19	-0.44
4			**1.53****	0.37
Highest			**2.75****	**0.97***
Household wealth				
Lowest			ref	ref
2			**2.78****	**2.00****
3			**4.45****	**2.94****

4	**5.51****			**3.49****
Highest	**6.71****			**4.34****
Illness				
No		ref		ref
LSI		**-1.44****		**-0.88****
LLSI		**-7.08****		**-4.59****
Loneliness				
Low			ref	ref
Middle			**-4.52****	**-4.15****
High			**-11.78****	**-10.54****
Social isolation				
Low			ref	ref
Middle			**-2.01****	**-1.50****
High			**-4.61****	-2.48

[a] Data resource: English Longitudinal Study of Ageing. * indicates $p<0.05$; ** indicates $p<0.01$

Table 5 Association between girlhood transition and later life higher depressive symptoms (results are odds ratios from multivariate logistic regression, n=3869)[a]

	Unadjust	Birth year	Childhood	Education	Employment	Marriage &children	Occupation	Income &wealth	Health	Loneliness &isolation	Full model
Transition group											
Mixed Fam/PT	**1.79****	**1.79****	**1.64****	**1.62****	**1.75****	**1.45***	**1.60****	1.28	**1.64****	**1.54***	1.09
Early Parent /Dom Lab	**1.93****	**1.93****	**1.82****	**1.70****	**1.78****	**1.70****	**1.68****	1.38	**1.70****	**1.80****	1.19
Later Parent /Dom Lab	1.26	1.26	1.18	1.13	1.16	1.21	1.14	1.04	1.27	1.28	1.01
Later Marri /Early FT	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref	ref
Later Marri /Later FT	0.73	0.74	0.90	1.16	0.73	0.70	0.86	1.17	0.84	0.80	1.38
Single /Early FT	1.31	1.29	1.31	1.27	1.24	1.07	1.29	1.11	1.31	1.16	1.04
Birth year		1.00									**1.02****

Childhood social class		
Manager/Prof	0.88	0.97
Non-manual	0.94	1.06
Manual	ref	ref
Other	1.01	0.98
Childhood books		
None/very few	ref	ref
1 shelf	**0.69****	**0.73***
1 bookcase	**0.60****	**0.70***
2 bookcases	**0.43****	**0.54****
≥3 bookcases	**0.61***	0.94
Childhood accommodation	1.05	0.99
Childhood parent's separation		
No	ref	ref
Yes	1.02	0.82
Other	1.01	0.94
Childhood health		

Good	ref				ref
Poor	1.22				1.14
Education					
Degree		**0.38****			0.65
< Degree		**0.53****			0.87
A-level		**0.60****			1.07
O-level		**0.72****			1.13
Foreign/other		**0.60****			0.77
No qualification		ref			ref
FT work years			**0.97****		**0.97****
PT work years			**0.95****		**0.96****
No. children					
0				1.34	1.32
1				1.25	1.27
2				ref	ref
3				**1.36***	**1.37***
>=4				**1.57****	1.35
Marriage history					

First partner	ref			ref
Never partnered	**2.13****			1.13
Re-partnered	1.10			1.00
Previously partnered	**2.66****			1.29
Occupation				
Managerial/ prof		**0.57****		1.08
Intermediate		**0.59****		0.90
Routine/manual		ref		ref
Other		1.07		0.67
Household income				
Lowest			ref	ref
2			1.03	1.21
3			0.98	1.29
4			**0.72***	1.02
Highest			**0.44****	0.70
Household wealth				
Lowest			ref	ref
2			**0.66****	0.87

3	**0.47****			**0.71***
4	**0.32****			**0.53****
Highest	**0.22****			**0.38****
Illness				
No		ref		ref
LSI		**1.36***		1.29
LLSI		**4.36****		**2.88****
Loneliness				
Low			ref	ref
Middle			**2.72****	**2.39****
High			**12.4****	**9.40****
Social isolation				
Low			ref	ref
Middle			1.24	1.14
High			**2.07***	1.40

[a] Data resource: English Longitudinal Study of Ageing. * indicates p<0.05; ** indicates p<0.01