

Are British childless adults richer but unhappier than parents? Evidence from Bayesian life course trajectories

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1 Introduction and Theory

It has often been suggested that childlessness is associated with lower subjective well-being (SWB) among women and men (for instance, see Hansen et al., 2009). Adults who have never had any children living in the household by the completion of childbearing (“eventually childless”) report lower life satisfaction and self-esteem as well as higher depression and loneliness than those who have had children living in the household (“eventual parents”). Three mechanisms have been put forward to explain the negative effect of childlessness on SWB. First, childless adults may have lower levels of well-being than parents due to stress from not meeting up to social expectations (Gana and Jakubowska, 2016; McQuillan et al., 2003). Second, childless adults may report lower well-being than parents as a consequence of social exclusion (Dykstra and Keizer, 2009; Graham, 2015; Turnbull et al., 2016). Third, the absence of children in the family or household may be related to lower senses of belonging, which in turn leads to lower well-being in adults (Keizer et al., 2009; Nomaguchi and Milkie, 2003; Umberson et al., 2010). Besides these social mechanisms, selection may play a role in the negative association between childlessness and SWB: individuals with lower SWB are more prone to remain single or divorce than those with higher SWB and are thus more likely to remain childless (Bures et al., 2009).

While we would expect the relationship between childlessness and SWB to be negative for both women and men, there are more complex gender dynamics in the relationship between childlessness and economic well-being (EWB). That is, the relationship between childlessness and EWB seems to be positive among women (e.g. Barthold et al., 2012) but negative among men (e.g. Dykstra and Keizer, 2009). Childless women report higher levels of income, education and occupation status than mothers, a phenomenon that the literature offers three explanations for. First, the opportunity cost of having children is higher for high-EWB women than low-EWB women, which is why the former may be more likely to remain childless (Becker, 1960, 1981). Second, childless women are more likely to remain on the labor market because their work is not interrupted by childbearing, which allows them to accumulate EWB over time compared to mothers who leave the labor market to bear and raise children (Baudin et al., 2015). Third, working mothers are generally perceived as less committed and less capable than working non-mothers, resulting in a so-called “motherhood wage penalty” (Budig et al., 2001). On the contrary, childless men are reported to have lower EWB than fathers for three reasons. First, men with lower levels of income, education and occupation status are less attractive on the marriage market and thus less likely to find a mating partner to have children with (Koropeckyj-Cox and Call, 2007; Miettinen and Szalma, 2014; Plotnick, 2009). Second, childless men are less likely to succeed in their career because of lacking the “male breadwinner motivation”, which drives fathers to increase their EWB to take care for the family (Christiansen and Palkovitz, 2001; Keizer et al., 2009). Third, employers often perceive fathers as more capable and committed than equally qualified childless men with the same marital status, thereby resulting in a “fatherhood wage premium” (Correll et al., 2007; Killewald, 2013).

Previous research has mainly examined the association between childlessness and EWB or SWB from a cross-sectional perspective. These research designs may not account for selection bias or reverse causation. In order to examine whether EWB and SWB differences between childless individuals and parents exist throughout the life course (also before parents transition into parenthood) or whether they emerge after parents transition into parenthood, a longer span of the life course needs to be considered. Our first contribution is that we take a life course perspective to obtain insight into when SWB and EWB differences between eventually childless adults and eventual parents emerge.

Research to date has looked at the associations between childlessness and SWB and childlessness and EWB separately. However, we may expect SWB and EWB to interact. That is, EWB may moderate the association between childlessness and SWB: childlessness is expected to have less negative consequences on SWB for high-EWB individuals than for low-EWB individuals (Zhang and Hayward, 2001; McQuillan et al., 2012). To assess whether a trade-off between SWB and EWB exists with regards to childlessness, our second contribution is that we consider SWB and EWB simultaneously in order to take into account and better understand this moderation.

We expect the association between childlessness and SWB and particularly EWB to be different for women and men. Gender differences in these associations have not been explored so far, because previous research has focused on either women or men but not both simultaneously. Our third contribution is to examine gender differences in the association between childlessness and EWB and SWB by considering women and men separately within the same study.

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We examine SWB and EWB differences between childless women and men and parents using the 1970 British Cohort Study (BCS70) data. Specifically, we aim to answer the following questions. First, do childless individuals and parents have different EWB and SWB? Second, when do the EWB and SWB differences between childless individuals and parents emerge in the life course? Third, how does EWB influence the association between childlessness and SWB? Fourth, are there gender differences with respect to the first three questions? In this study, we define childlessness as the absence of ever having had/parented children in the household, regardless of whether these children are biological, adopted or stepchildren, because non-biological children require similar psychological and economic investments as biological children in the household. In this paper, we do not examine the transition into parenthood and how that affects parents' subjective and economic well-being compared to those who do not make the transition into parenthood. Rather, we research whether there are differences in subjective and economic well-being between those who eventually become parents and those who eventually remain childless and whether these differences have always existed (i.e. the two groups are different already early in the life course) or whether they emerge around childbearing ages (i.e. the groups become different only once parents have children). In doing so, we compare the prospective SWB and EWB trajectories from ages 26 to 42 of adults who have remained childless up to age 42 (the "eventually childless") and adults who have become parents before age 42 (the "eventual parents"). We take this approach to assess whether differences in SWB and EWB between childless adults and parents are the actual consequence of permanent childlessness or whether they are rather due to selection.

2 Data and Methods

The data used for this study is the 1970 British Cohort Study (BCS70) data. All individuals in the BCS70 sample were all born in one week of April in 1970 in Great Britain and have been followed at ages 5, 10, 16, 21, 26, 29, 34, 38 and 42. The survey contains information with regards to well-being, life-satisfaction, social cohesion, employment, economic status, education and family situation.

The BCS70 is particularly suitable for this study because respondents are followed for quite a long time span, which allows us to examine when EWB and SWB differences between eventually childless adults and eventual parents emerge. The sweeps in the BCS70 sample are also timed well regarding capturing childbearing ages compared to other cohort studies. For example, we do not use the 1958 National Child Development Study because that survey has a sweep at age 23 (mostly missing the information we require) and then the next sweep at age 33, thereby missing the period in which most individuals had children. Further, information on SWB and EWB are available in the majority of the sweeps, thereby allowing us to explore the interaction between the two outcomes simultaneously. However, attrition may lead to bias in the data: it seems that in both surveys non-response is more likely among disadvantaged men from lower social backgrounds (Mostafa, 2014; Mostafa and Wiggins, 2014). This possible source of bias needs to be carefully taken into account when interpreting our results.

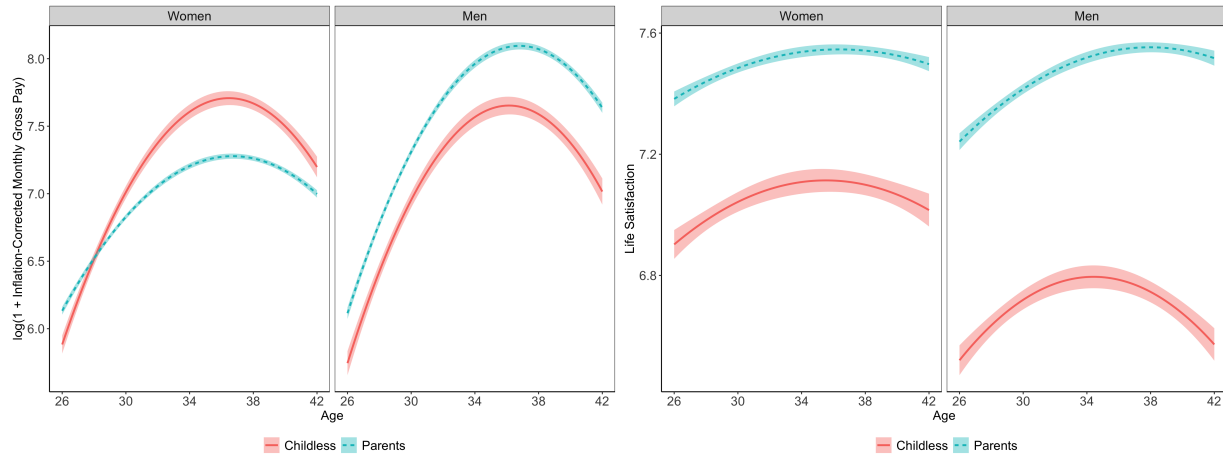
We look at individuals who have remained childless up to age 42 and individuals who have become parents before age 42 and we compare their retrospective life course trajectories of SWB and EWB from age 26 to 42. We have chosen this age range because all surveys in this age span contain our variables of interest. We further exclude the sweep at age 21 because this is a sub-sample survey with a limited amount of relevant variables. Even though the sweep at age 38 contains no information on SWB, we do use the survey to examine EWB trajectories.

We estimate multivariate Bayesian hierarchical models predicting EWB as the $\log(1+x)$ of monthly gross pay and SWB as life satisfaction. Our main independent variable is childlessness, which we also interact with first- and second-order orthogonal polynomials of time as well as the dependent variable not being estimated (as to examine the moderation of SWB and EWB on each other's relationship with income). We further control for marital status, education, economic activity and general health. Our total sample includes 25,478 and 23,086 observations for women and men, respectively. On average, women are observed during 4.3 sweeps and men during 3.8 sweeps. Up to age 42, about 20% of women and 29% of men have remained childless, corresponding to the numbers found by Berrington (2017) and Kneale and Joshi (2008).

3 Results

Figures 1a and 1b show the predicted EWB and SWB from our total models with all control variables, respectively. Our results show that eventually childless adults, particularly men, report lower SWB than eventual parents. This differential is consistent in direction and magnitude throughout the life course, only slightly increasing among men. These findings provide evidence for the selection hypothesis that low-SWB individuals may be less likely to find a mating partner and thus more likely to remain eventually childless than their high-SWB counterparts (Bures et al., 2009). The slight increase in the male SWB differential suggests that there may be other mechanisms in place as well, for example that eventual childlessness increases social exclusion (Dykstra and Keizer, 2009; Graham et al.,

2011; Graham, 2015; Hadley and Hanley, 2011; Keizer et al., 2009; Turnbull et al., 2016), stress from not meeting up to social expectations (Gana and Jakubowska, 2016; Greil, 1997; McQuillan et al., 2003; Pearlin et al., 1981) or decreases feelings of purpose and belonging (Nomaguchi and Milkie, 2003; Umberson and Gove, 1989; Umberson et al., 2010; Nelson et al., 2014; Keizer et al., 2009). These findings also correspond to conclusions from previous studies that childless men suffer more from childlessness in terms of SWB than childless women indirectly through a larger conditioning on partnership status (Dykstra and Wagner, 2007; Umberson et al., 2010).



(a) Predicted EWB trajectories for women and men from total model M6 (b) Predicted SWB trajectories for women and men from total model M6

Figure 1: Predicted (a) EWB and (b) SWB trajectories for women and men from total model M6

Further, as expected, the association between childlessness and EWB is positive for women and negative for men. The male EWB difference is consistent and slightly increases throughout the life course, suggesting that some selection occurs where low-EWB men are less likely to find a mating partner than high-EWB men (Koropecj-Cox and Call, 2007; Miettinen and Szalma, 2014; Plotnick, 2009). Additionally, the increase in the male EWB differential suggests that other mechanisms may be in place as well, advantaging eventual fathers possibly as a consequence of increased motivation as part of the “male breadwinner role” (Keizer et al., 2009; Christiansen and Palkovitz, 2001; Knoester and Eggebeen, 2006) and/or improved perception in terms of commitment and capability in the labour force (“fatherhood wage premium”) (Correll et al., 2007; Killewald, 2013). The female EWB differential favouring eventually childless women only emerges around age 28, decreasing up to age 36 and decreasing but remaining hereafter. In contrast with our expectations, it does not seem that high-EWB women are more likely than low-EWB women to remain childless because of higher opportunity cost of children (Becker, 1960, 1981). Rather, the results show that the female EWB difference only emerges around the time that eventual mothers give birth, suggesting that the EWB differential may be the result of discrimination against mothers in the labour force (“motherhood wage penalty”) (Budig et al., 2001) or eventual mothers’ (temporary) discontinuation of labour (Baudin et al., 2015).

Regarding the moderation of SWB and EWB in each other’s relationship with childlessness, we have found that they both positively affect one another for both men and women. While SWB does not seem to affect the negative relationship between male childlessness and EWB, we observe that the female EWB differential is slightly higher at higher levels of SWB. The male SWB difference, favouring fathers, disappears at higher values of EWB, while the female SWB difference only exists at low to moderate levels of SWB. These results confirm with findings from previous research (Zhang and Hayward, 2001; McQuillan et al., 2012).

The results from our multivariate hierarchical Bayesian models showed that childlessness explains the SWB differential between eventually childless adults and eventual parents for both women and men. This differential seems to be further affected by differences in marital status, education, economic activity and health between eventually childless adults and eventual parents, given that being higher educated, healthy, in a relationship and in full-time self-employment positively affects SWB, confirm with Hansen et al. (2009); Koropecj-Cox et al. (2007). Childlessness also explains the EWB differential between eventually childless women and eventual mothers. The male EWB differential seems to be explained not by childlessness but rather indirectly by differences in marital status, economic activity and health between eventually childless men and eventual fathers. The former less often tend to be (re)married, healthier and in full-time employment (Kreyenfeld and Konietzka, 2017), leading them to have lower EWB than the

latter. As expected, for women, education plays a role as well: eventually childless women are more often higher educated than their parental counterparts (Kreyenfeld and Konietzka, 2017), leading to higher levels of EWB.

4 Conclusion

We have shown that eventually childless adults have lower levels of SWB than eventual parents consistently throughout the life course, mainly suggesting that low-SWB individuals are less attractive in the mating market. While selection also seems to play a large role in explaining the EWB differential between eventually childless men and eventual fathers, favouring the latter, the positive relationship between female childlessness and EWB may be the consequence of (temporary) discontinuation of labour around childbirth and/or labour market discrimination against mothers in terms of perceptions on commitment and flexibility. To reduce inequality in particularly EWB between eventually childless adults and eventual parents, employers, policy makers and institutions could focus on reducing discrimination against mothers (and childless men) and providing more support and benefits for working parents. This way, gender equity in childcare could be achieved and family-work dilemmas could be resolved. Therefore, future research could benefit from extending this analysis to countries outside of Britain to gain more insight in the impact of childlessness on SWB and EWB, allowing for an indirect comparison of family and partnership values and labour market discrimination by gender and parental status across countries.

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