

Does forming a nuclear family increase religiosity? Longitudinal evidence from the British Household Panel Survey

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Abstract

This study investigates how far the nuclear family—in terms of entering cohabitation and marriage and having a first and second child—affects religious salience, religious attendance, and activity in religious organizations. Previous research has shown that religious individuals are more likely to marry, and have higher fertility, than non-religious individuals. Less is known about how far the nuclear family also affects religiosity. This study presents longitudinal evidence on how religious factors change within the life-course of individuals after entering cohabitation or marriage and after having a first or second child in up to 14 waves of the British Household Panel Survey collected between 1991 and 2009. The comparison between longitudinal and cross-sectional results indicates how far religious factors affect family formation processes. All religious factors investigated (salience, attendance, activity) increased when people became parents, as well as when they married, but not when they started to cohabit. Most of these effects are long-lasting and they hold across age, gender and cohort groups.

Introduction

Religious factors correlate with marriage and parenthood. Religious individuals are more likely to be married and to have stable marriages. They also tend to have more children and start childbearing at a younger age than non-religious individuals (Mahoney, 2010; Berghammer, 2012; Adserà, 2013; Beaujouan and Berghammer, 2019; Dilmaghani, 2019). Such correlations may arise from two processes. First, religious individuals may be more likely to enter marriage and become parents than non-religious individuals. Religiosity affects demographic behaviour, labelled selection effects. A second possible explanation is that people become more religious after marrying and becoming parents. Demographic behaviour affects religiosity, labelled causation effects.

Different strands of literature have tended to focus on one of these two processes of selection or causation. For example, Heaton (2011), Ellison, Xu and Ruiz (2018) and Philipov and Berghammer (2007)

investigated how religion affects fertility (selection effects). These and similar studies have tended to take religiosity as a given, not accounting for life-cycle variation in religiosity, and thereby not explicitly addressing the potential effects of important life events such as family formation (union formation, childbearing) on religiosity (e.g. Heaton, 2011).

The processes of selection and causation have different implications for our understanding of historical changes in religiosity, including the hypothesis that many western societies are becoming more secular (Norris and Inglehart, 2004). If selection effects dominate, tendencies towards more secular societies could be balanced by higher fertility among initially religious than non-religious members of a society (Kaufmann, Goujon and Skirbekk, 2012). Intergenerational transmission of religion can imply that the higher fertility of religious populations contributes to maintaining religion in society. If causation effects dominate, this balancing effect could disappear because the higher

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religiosity among parents than non-parents arises after and not before they became parents.

Panel data can help to distinguish between the two processes of selection and causation. Panel regression models can identify how far religious factors change following entry into marriage and parenthood (causation). By comparing the results from otherwise similar cross-sectional and longitudinal models, we can also indicate how far religious factors affect the formation of the nuclear family (selection). Further, these methods can distinguish between the various stages of family formation, which may start with cohabitation and later move into marriage and parenthood, and they can enable us to investigate both slow and abrupt changes in religiosity following each stage of family formation.

Recent research has barely started to delve into these processes, and seemingly for a limited set of religious factors: social ties related to religious communities (Gurentz, 2017) and attendance at religious services (Tilley, 2003; Petts, 2009; Schleifer and Chaves, 2017). The current study investigates how three religious factors—religious salience (how much difference religious beliefs makes in life), the frequency of service attendance, and activity in religious organizations—change following cohabitation, marriage and having a first and a second child in the British Household Panel Survey (BHPS). In the following sections, we discuss possible causal relationships between family formation and religiosity before presenting our hypotheses, data and results. In the discussion section, we come back to the issue of how family formation might affect religious factors.

Why religiosity affects family formation?

Pro-natal traditions in the Abrahamic faiths include religious texts and commandments that encourage family formation and celebrate weddings and births (Lehrer, 2000; McQuillan, 2004). Pro-natal religion-based encouragement for having children and being part of a family-oriented community could make marriage more likely and boost fertility (Berghammer, 2009; McGregor and McKee, 2016; Peri-Rotem, 2016). Religious traditions, ceremonies and norms may increase the likelihood to marry, form a stable partnership at an earlier age, enter parenthood and have more children (Berghammer, 2009). Hence, religious individuals belonging to the Abrahamic faiths might be more likely to enter marriage and parenthood than non-religious individuals. In contrast, those who enter cohabitation and continue cohabiting relationships could be more secular than those who marry at a relatively young age (Lehrer, 2000; Village, Williams and Francis, 2010).

Religious practice (attendance and activity) and service attendance may both reflect and reinforce belief

and commitment to traditional religious and family values, and religious congregations might promote the formation of social networks, with informational, emotional and practical support (Peri-Rotem, 2016). There is also the possibility that religious beliefs and behaviour provide benefits to individuals after marrying and having children, an effect we scrutinize in the next section on causation effects.

Why family formation affects religiosity?

Family formation, in the sense of entering marital partnership and parenthood, may affect religiosity in several ways. It can be more rewarding to participate in religious services and organizations if your behaviour accords with the commandments of these organizations, meaning if you are married and have children (Uecker, Mayrl and Stroope, 2016). Further, by joining a religious community, you will also meet people with similar characteristics, which may lead to social inclusion and social support (Peri-Rotem, 2016).

Another reason is that religions and religious organizations can be helpful in organizing life during stressful periods, including the “rush hour of life” when one establishes oneself in the labour market, sets up a new home and forms a family (Schnittker, 2001; Stokes and Ellison, 2010). Many of those who are loosely tied to religious communities emphasize that religion is important in difficult times—and the period of entering marriage or parenthood is for many a stressful period (Ammerman, 2014). Some faith communities provide child-care services, counselling or a sense of belonging, which might help families cope with and manage some of the challenges of raising children (Edgell, 2005; Berman, Iannaccone and Gagusa, 2018). Many parents seek guidance, practical assistance and moral support, which religious institutions offer (Ingersoll-Dayton, Krause and Morgan, 2002).

A related reason is that entering partnerships and raising children are associated with risks of conflict between family members (see Kusner *et al.*, 2014; Dollahite, Marks and Dalton, 2018). In a marriage, and even more so when raising children, individuals can no longer act solely according to their preferences but must consider the preferences of their partner and children. Parents must negotiate over the division of household chores and child-care as well as time use and finances (Kusner *et al.*, 2014). Religious beliefs might be helpful in managing conflicts within a family (Mahoney *et al.*, 1999). Religions and religious organizations provide guidelines and various types of support for marital partners and parents that may assist with avoiding or resolving conflicts within a family (Ingersoll-Dayton, Krause and Morgan, 2002).

Religiousness and support from religious communities may buffer stress and help soften tensions and

conflicts that arise within families (Henderson, Uecker and Stroope, 2016). Married individuals could see religious beliefs and organizations as valuable for reinforcing marital commitments and providing the resources they need for adjusting to marital life (Gurrentz, 2017). Religious commandments in the Abrahamic faiths emphasize commitment to marital permanence, which may increase the motivation to forgive and to work at one's relationship (Lambert and Dollahite, 2006). Research indicates that the tendency to regard one's marriage as holy and sacred (labelled 'marital sanctification') is correlated with marital quality and relationship commitment (Mahoney *et al.*, 1999; Ellison *et al.*, 2011).

Support and guidelines from religious communities are likely to boost marital stability, which might be particularly important when raising children because many people are financially and socially vulnerable during this life phase (Stokes and Ellison, 2010). Religious individuals are less likely to divorce (Li, Kubzansky and VanderWee, 2018; Liefbroer and Rijken, 2019).

A further reason is that parents may regard religions and religious beliefs as beneficial for child development. Some parents encourage their children's religious socialization (Albrecht, Cornwall and Cunningham, 1988), perhaps because they would like to instil beneficial moral values in their children (Dilmaghani, 2019), or because they would like to pass on religious beliefs and customs to the next generation (Bengtson, Putney and Harris, 2015). Some parents might also be concerned about the risk of less beneficial social influences in non-religious arenas. Many religious communities and events are geared towards socializing children (Wilcox, Chaves and Franz, 2004). This partly reflects self-interest—seeing children as future community members (Wilson and Sherkat, 1994).

It is also possible that childbirth raises spirituality and boosts positive emotions in parents. A heightened level of spirituality after giving birth has been reported in one study (Crowther and Hall, 2015), and qualitative research has shown that many mothers see giving birth as a life transition that not only provides meaning but also leads to a strong spiritual experience (Lahood, 2007). Positive emotions related to giving birth (unlike positive emotions related to, for instance, humour) have been found to raise religiosity (Saroglou, Buxant and Tilquin, 2008). Much research on spirituality related to childbirth and parenthood has covered the experiences of new mothers (e.g. Moloney, 2006; Crowther and Hall, 2015). This could suggest that the spiritual effects of parenthood are stronger in women than in men.

Cohabitation and marriage will most likely have different implications for religious beliefs and behaviour. Religious commandments encourage marriage

over cohabitation (Lehrer, 2000). One reason is that marriage represents a stronger commitment, making it more difficult to end than cohabitation. Married individuals tend to invest more in their partnership and associated social networks than do cohabiting individuals (Brines and Joyner, 1999). Investments bind partners together and can lead to a stronger division of household tasks.

Marrying might also indicate a willingness to adopt religious commandments and social expectations regarding role performance as partners and parents, and to seek external support for handling stress and conflicts within the family, including support offered by religious organizations (Henderson, Uecker and Stroope, 2016). Cohabitation, in contrast, could lack the normative expectations of role performance and ways of handling partnership problems. Hence, marriage might lead to rising levels of religiosity while cohabitation is less likely to have such effects.

Longitudinal findings

Secularization and religious switching typically take place early in life, often in the late teens and early twenties, whereas by the late twenties there is less religious change (Hout and Fischer, 2002; Crockett and Voas, 2006; Glass, Sutton and Fitzgerald, 2015). Younger individuals follow a myriad of trajectories in terms of religious belief, several of which are tied to demographic events (Smith and Denton, 2009). Less religious conversion or secularization takes place in midlife and at later life stages.

Many studies have shown that religious factors correlate with marriage and parenthood (McQuillan, 2004; McGregor and McKee, 2016; Dilmaghani, 2019). Fewer studies have investigated these relationships longitudinally to explore how religious factors change following transitions into marriage and parenthood. Most of this research has only investigated attendance at religious services in data from the USA.

Schleifer and Chaves (2017) investigated attendance at religious services in the USA in three waves of the General Social Survey panel (2006, 2008 and 2010; 1,536 individuals). The authors could not identify any significant effects, and they suggested that the relationships between marriage and attending religious services and between parenthood and religious attendance could be spurious. Petts (2009) examined trajectories of religious attendance from early adolescence (age 10–14 years) through young adulthood (age 20–25) in the USA (2,472 individuals). Marrying was marginally related to higher attendance, whereas cohabiting was associated with decreased religious participation. A study of social ties related to religious communities (1,314 individuals) in the first two waves of the Portraits of American Life Study

(2006–12) suggested that marriage decreased close social ties to religious congregations, whereas rearing children within marital unions increased them (Gurrentz, 2017).

Finally, a semi-longitudinal study investigated how marriage and childbearing at one point in time were correlated with later church attendance, using the British Election Studies and the BHPS (Tilley, 2003). Those who married became more frequent attenders, whereas those who entered cohabitation had become less regular church attenders. Further, those entering motherhood had also become more frequent attenders, whereas those who had become fathers had become less frequent attenders. However, these latter findings may reflect selection effects (i.e. cross-sectional distributions) in addition to causal effects (i.e. longitudinal changes).

Hypotheses

Our considerations and previous research led us to two main hypotheses. The stronger hypothesis relates to parenthood, as childbearing can be a stressful period that may be mitigated and handled by religious communities and religious organizations. Hence, we expect that (i) becoming a parent will increase both religious salience and religious practice (attendance and activity). We also expect that (ii) marriage might increase both religious practice (attendance and activity) and religious salience because it represents a long-lasting commitment that is encouraged by religious commandments and associated expectations of role performance.

We also investigate the duration of these effects, but with few expectations, as theory and research provide little guidance. Follow-up analyses also distinguish between gender, first and later marriages, as well as age, period and cohort variation of how the transitions into nuclear families might affect religiosity. Because marriage and parenthood are less related among younger cohorts in the United Kingdom, as in many other European countries (e.g. Ermisch and Francesconi, 2000; Ermisch 2005), the transitions forming nuclear families are investigated as separate effects.

Methods

Data and sample

To investigate how religious factors change with family formation processes, it was necessary to investigate panel data. The BHPS was the most suitable dataset we could find for such analyses, considering the numbers of participants, waves and religious factors covered. It was collected annually over 18 years from 1991 (University of Essex, 2018). This analysis included only members of the original sample, meaning that the

boosted samples added to later waves (from Scotland, Wales and Northern Ireland, and for the European Community Household Panel) are not included. The main results change little when also including these additional samples. The participants were investigated up to age 65.

Variables

The BHPS contains the following three religious factors, which we investigated as dependent variables. Religious salience was investigated by the item: “How much difference would you say religious beliefs make to your life? Would you say they make... a little difference [1], some difference [2], a great difference [3], no difference [0]” (our values in brackets). This item was included in six waves, including the first (1991) and the last waves of the BHPS (mostly in 2008 but some also in 2009). Religious attendance was investigated by the item: “How often, if at all, do you attend religious services or meetings? Once a week or more [3], at least once a month [2], at least once a year [1], practically never [0], only weddings, etc. [0].” It was included in ten waves, including the first and the last waves of the BHPS. Religious activity was investigated with a set of questions that started “Are you currently active in” and included “Religious group or church organization”, with values of 1 for “active” and 0 for “non-active”. It was included in 11 waves, including the first and second to last waves of the BHPS.

The number of participants (with non-missing data) was slightly lower for religious salience (10,332) than for religious attendance (10,920) and religious activity (10,921). On average, individuals participated from 2.8 waves each for the item on religious salience, 5.4 waves for religious attendance, through 6.3 waves for religious activity. The full sample (10,931) included any respondent participating in two or more waves on any of the three dependent religiousness variables. The samples are the same in all statistical models for each outcome variable.

Explanatory variables included partnership status, parenthood, age, and main activity (see Table 1). Partnership status was investigated with dummy variables for (current) cohabitation, marriage, and previously married (“separated”, “divorced”, “widowed”), with the “never married” as the reference group. Parenthood was investigated with dummy variables for a “first child” and a “second child” (including subsequent children), with “childless” as the reference category; 2,028 respondents entered one or more marriages while 1,751 respondents had a first child and 1,540 respondents had a second child between the waves of the analytical sample. Because of collinearity a joint estimate of having children typically gives more

Table 1. Descriptive statistics of the variables at the wave level of the BHPS

Variables	N	Mean	Standard deviation	Low	Max
Religious salience	29,111	1.1	1.2	0	3
Religious attendance	59,150	0.6	0.9	0	3
Religious activity	66,054	9.9%		0	1
Age	82,116	39.3	12.9	17	64
Females	82,116	51.8%		0	1
Cohabiting ^a	82,116	13.3%		0	1
Married ^a	82,116	57.3%		0	1
<15 years	82,116	0.6	0.7	0	1.5
>15 years	82,116	0.3	0.5	0	1.5
Previously married ^a	82,116	9.0%		0	1
First child ^b	82,116	64.0%		0	1
<15 years	82,116	0.7	0.7	0	1.5
>15 years	82,116	0.3	0.6	0	1.5
Second child ^b	82,116	47.6%		0	1
<15 years	82,116	0.5	0.7	0	1.5
>15 years	82,116	0.2	0.5	0	1.5
Working ^c	82,116	72.6%		0	1
Studying ^c	82,116	4.4%		0	1

Notes: Reference groups are a never married b childless c non-active.

significant findings than the individual effects of having a first and a second child.

Some analyses also distinguished between different durations of marriage and ages of first and second children, using linear slopes from 0 to 15 years and 15 to 30 years of duration (for marriages) or age (for children). While the dummy variables indicate abrupt changes in religiosity, the slopes following marriage and parenthood indicate slow changes. Age was investigated with three linear slopes separated at 35 and 50 years. The main activity was investigated with dummy variables for “working” and “studying”, meaning the “non-active” (e.g. unemployed, caring for home and family, disabled, retired) were the reference group.

Analytical strategy

The main results were investigated longitudinally using regression coefficients estimating changes within the life-course of individuals that control for all time-invariant (fixed) characteristics of the individual participants (e.g. gender, education level, religious denomination), and models only how far a change in a situational factor (e.g. entering marriage, having a first child) is associated with a change in the outcome (religiosity) variables. Religious salience and religious attendance were investigated using linear models with fixed effects for the individuals, whereas religious activity was

investigated using logit models with random effects for the individuals in combination with mean values over the two or more waves on all explanatory variables for each individual (the latter “between effects” are not presented).¹ Test statistics from the linear models were corrected for heteroscedasticity and the non-independence of multiple observations for individuals using the cluster option in Stata.

Because most published research on religious factors relating to the nuclear family is cross-sectional, we also present similar cross-sectional estimates. The difference between cross-sectional and longitudinal estimates (coefficients) indicates selection effects—for example, to what extent religious individuals are more likely to marry or have children than non-religious individuals. Comparing the two types of estimates can also help in understanding historical changes (i.e. age, generational and period effects). Additional analyses tested if the results varied by gender, age, period and cohort, and if the changes in religious salience and attendance could be stronger among initially religious and non-religious individuals, using interaction terms or separate models for men and women.

Findings

Our regression results are presented cross-sectionally (Model 1 in Tables 2–4) and longitudinally with fixed

effects for individuals (models 2 and 3 in Tables 2–4). The most relevant results are in Model 2, while the other two models can help us understand how religious factors **change** with demographic transitions, including the duration of a family (Model 3 only).

We find that individuals became slightly more religious when they married, in the sense that religion became more important in their lives (increased religious salience), but this was not found when they cohabited (Table 2, Model 2). Rising religious salience associated with marrying (model 2) was also an important explanation for why married people were more religious than the non-cohabiting never married (model 1: $0.079/0.132 = 60\%$). Cohabiters, on the other hand, were less religious than other groups (Model 1). Because low religious salience among cohabiters was not explained by any similar drop in religious salience when entering cohabitation (comparing models 1 and 2), it must be explained by the fact that people low in religious salience were more likely to cohabit (a selection effect).

People also reported more religious salience when having children (a joint 2 d.f. estimate of having children is significant at the 1% level in Model 2). Religious salience tended to decrease to pre-parenthood levels as a first child reached teenage. However, no similar

decrease in religious salience was observed for growing age for a second child (Model 3). Hence, the data indicate that a first child led to a temporary increase in religious salience while a second child led to a more permanent rise in religious salience.

Other results in Table 2 indicate that religious salience was positively associated with age but negatively associated with historical time (Model 1). Both effects applied between generations because there were no similar effects within people's lives (models 2 and 3). Students were more religious than non-active individuals of a similar age (Model 1). This effect was explained solely by selection effects as religious individuals were more likely to be studying (comparing models 1 and 2).

People also attended religious services more frequently when they were married but not when they were cohabiting (Table 3, Model 2). Rising levels of religious attendance associated with entering marriage were as important as the selection effect of more religious people entering marriage for explaining the higher frequency of attending religious services among married individuals than among non-married individuals (comparing models 1 and 2). The effect of marriage seems to peak 10–15 years after marrying (Model 3) but decreased thereafter if the marriage did not include

Table 2. Regression results of religious salience (0–3) as related to life-course positions/transitions

Variables	Cross-sectional (1)	Longitudinal (2)	Long. with slopes (3)
Age <35 ^a	0.006** (.002)	-0.025 (.035)	-0.025 (.035)
Age 35–50 ^a	0.008** (.002)	-0.017 (.035)	-0.015 (.035)
Age >50 ^a	0.012** (.003)	-0.016 (.035)	-0.019 (.035)
Cohabiting ^b	-0.114** (.031)	-0.035 (.042)	-0.055 (.043)
Married ^b	0.132** (.032)	0.079† (.047)	0.046 (.049)
0–15 years ^a			0.005 (.032)
15–30 years ^a			0.020 (.042)
Previously married ^b	0.021 (.042)	0.034 (.060)	0.018 (.062)
First child ^b	-0.043 (.029)	0.099* (.042)	0.113* (.044)
0–15 years ^a			-0.166** (.064)
15–30 years ^a			-0.033 (.069)
Second child ^b	-0.002 (.026)	0.055 (.040)	0.107* (.044)
0–15 years ^a			0.023 (.059)
15–30 years ^a			-0.015 (.064)
Working ^b	-0.005 (.021)	-0.039 (.025)	-0.032 (.025)
Studying ^b	0.212** (.044)	-0.019 (.057)	0.001 (.058)
Period effects ^a	-0.012** (.001)	0.009 (.035)	0.014 (.035)

Notes: Coefficients with standard errors in parentheses. 29,111 observations for 10,332 individuals.

^aYears/10.

^bCoded 1/0.

* $P < 0.05$.

** $P < 0.01$ (two-sided tests).

† $P < 0.10$.

Table 3. Attendance at religious services and meetings (0–3) as related to life-course positions/transitions

Variables	Cross-sectional (1)	Longitudinal (2)	Long. slopes (3)
Age <35 ^a	0.005** (.002)	0.017 (.011)	0.014 (.011)
Age 35–50 ^a	0.005** (.002)	0.022* (.011)	0.025* (.011)
Age >50 ^a	0.010** (.003)	0.024* (.011)	0.023* (.011)
Cohabiting ^b	–0.202** (.021)	0.000 (.016)	0.001 (.016)
Married ^b	0.116** (.027)	0.068* (.021)	0.060** (.021)
0–15 years ^a			0.028† (.014)
15–30 years ^a			–0.099** (.023)
Previously married ^b	0.010 (.036)	0.048† (.027)	0.039 (.026)
First child ^b	0.020 (.023)	0.106** (.017)	0.083** (.017)
0–15 years ^a			0.046 (.028)
15–30 years ^a			–0.046 (.031)
Second child ^b	0.037 (.023)	0.095** (.017)	0.089** (.018)
0–15 years ^a			–0.080 (.027)
15–30 years ^a			0.028 (.032)
Working ^b	–0.049** (.018)	–0.015 (.010)	–0.013 (.010)
Studying ^b	0.154** (.028)	0.010 (.018)	0.011 (.019)
Period effects ^a	–0.015** (.001)	–0.034** (.011)	–0.031** (.011)

Notes: Regressions coefficients with standard errors in parentheses. 59,150 observations for 10,920 individuals.

^aYears/10.

^bCoded 1/0.

* $P < 0.05$.

** $P < 0.01$ (two-sided tests).

† $P < 0.10$.

children (controlled for in these models).² Cohabitors, on the other hand, were less likely to attend religious services than other groups (Model 1), and the difference was explained only by the fact that less religious individuals were more likely to cohabit (comparing models 1 and 2).

People also attended more religious services when they had children, and having a second child increased service attendance beyond the effect of a first child (Model 2). The effect of a first child did not seem to diminish as the children grew older (Model 3). However, there is the possibility that the additional effect of a second child diminished as the children grew older.³

The other results in Table 3 indicate that religious service attendance increased with rising age (Model 2). However, this ageing effect was counterbalanced by a negative period effect. Hence, the net effect of ageing and period effects (in Model 2) was a slight (non-significant) decrease in service attendance in the sample in the study period.⁴

People were more likely to become active members of faith organizations when they were married, but not when they were cohabiting (Table 4, Model 2). This effect of marriage did not decrease with years

of marriage (Model 3). Cohabitors were less likely to be active in religious organizations than other groups (Model 1), and most of this difference reflected the fact that less religious individuals were more likely to cohabit (comparing models 1 and 2). Still, entering cohabiting unions was also associated with reduced probabilities of being active in faith organizations.

People were also more likely to become active members of faith organizations when they had a first child (Model 2). This effect also seemed to be long-lasting: there was seemingly no decline as the child grew older. However, a second child did not seem to increase the probability of being active in faith organizations beyond the effect of a first child. The other results in Table 4 indicate that working was associated with a reduction in activities in faith organizations (models 2 and 3), and that there could be a long-term trend that fewer people were active in these organizations (Model 1).

We also estimated the combined effects of having two (or more) children [with two degrees of freedom (*df*)] as well as the combined effect of both marrying and having two (or more) children from these statistical models (Tables 2–4). All six combined effects were statistically significant (with two or three *df*) at the 1 per cent level for all three religious factors investigated.

Table 4. The probability of being active in religious organizations as related to life-course positions/transitions

Variables	Cross-sectional (1)	Longitudinal (2)	Long. slopes (3)
Age <35 ^a	0.029** (.008)	0.116 (.091)	0.107 (.091)
Age 35–50 ^a	0.024** (.006)	0.147 (.091)	0.154 (.091)
Age >50 ^a	0.016* (.007)	0.138 (.091)	0.143 (.091)
Cohabiting ^b	-1.184** (.013)	-0.368* (.167)	-0.340* (.169)
Married ^b	0.220* (.011)	0.462** (.148)	0.460** (.155)
0–15 years ^a			0.146 (.113)
15–30 years ^a			-0.041 (.144)
Previously married ^b	-0.108 (.013)	0.133 (.167)	0.221 (.175)
First child ^b	0.063 (.009)	0.649** (.138)	0.503** (.143)
0–15 years ^a			0.614** (.235)
15–30 years ^a			-0.144* (.239)
Second child ^b	0.057 (.008)	0.212† (.123)	0.117 (.134)
0–15 years ^a			-0.640** (.211)
15–30 years ^a			0.077 (.224)
Working ^b	-0.133* (.006)	-0.202** (.076)	-0.200** (.076)
Studying ^b	0.307** (.010)	-0.073 (.154)	-0.096 (.156)
Period effects ^a	-0.021** (.001)	-0.162† (.090)	-0.163† (.091)

Notes: Logit coefficients with standard errors in parentheses. 66,054 observations for 10,921 individuals.

^aYears/10.

^bCoded 1/0.

* $P < 0.05$.

** $P < 0.01$ (two-sided tests).

† $P < 0.10$.

The effects of having two or more children were larger than the effects of marrying for all three religious outcome variables. When adding all three effects (marrying and having two or more children), our estimates corresponded to 19 per cent of the standard deviation (in Table 1) for religious salience and 29 per cent for religious attendance. Perhaps more illuminating is that the combined effect of these family formation processes on activity in religious organizations (0.46 + 0.65 + 0.21 = 1.32 in Table 4, Model 2) would raise the probability of being active in religious organizations from, say, 5 percentage points (log-odds = -2.94) to more than 19 percentage points [$\exp(-2.94 + 1.32)/(1 + \exp(-2.94 + 1.32))$], a considerable effect considering that only 10 per cent of the sample was active in such organizations. Hence, the nuclear family, in terms of marriage with two (or more) children, is important for all three religious factors investigated.

Our findings indicate that marriage and childbearing affect both religious salience and religious behaviour (attendance and activity). It is possible that among individuals who are already somewhat religious, religion becomes more important when forming a nuclear family, and the formation of nuclear families make people more religious across any previous level of

religiosity. “Return to religion” theory is one example: that those who were religiously socialized early in life are likely to become more religious after marriage and childbearing (Uecker, Mayrl and Stroope, 2016; Bengtson and Silverstein, 2018). Additional analyses (see Supplementary Table S1) show that religious attendance increased more strongly among individuals who attended religious services also before having children than among those not attending such services before entering parenthood (significant at the 1 per cent level for a first child, and a first and second child tested jointly). Because we have no data about religious socialization in early in life, this finding is merely consistent with, but no strong test of “return to religion” theory.

Gender and life-course

Some previous research has suggested that parenthood affects women and men differently because childbearing could be particularly important for female religiosity and spirituality (Argyle and Beit-Hallahmi, 2013; Crowther and Hall, 2015; PEW Research Center, 2016). Women are generally more religious than men (PEW Research Center, 2016). This gender religiosity gap could in part relate to the female experience of

childbirth (Crowther and Hall, 2015). We did not find any gender difference for the importance of religion in one's life in the BHPS (Supplementary Tables S2 and S3, column 1). However, we did find that children had stronger effects on attendance at religious services and activities in religious organizations among women than among men (columns 2 and 3, same tables). Marriage, on the other hand, appears to increase religious activities more among men than among women (columns 2 and 3, Supplementary Tables S2 and S3).

Entering marriage is associated with more frequent religious behaviour (attendance and activity). However, some people have multiple marriages. Does the positive effect of entering marriage on religious behaviour also hold for subsequent marriages? Our data do not give any clear answer as the estimates for subsequent marriages are smaller for the two behavioural outcomes but still not small enough to dismiss this possibility (Supplementary Table S4). Still, the data indicate that subsequent marriages are not associated with an increase in religious salience.

We have estimated how religious factors changed within the life-course of individuals (with growing age, when forming a nuclear family) when also controlling for period effects. This modelling framework also allows for estimating how far the changes in religious factors following the two life-course transitions (marriage and parenthood) varied by age, period and cohort (see Supplementary Tables S5–S7). Let us start with age. The results show that having a second child at a relatively young age affects religious behaviour (attendance and activity) more than having a second child later in life (columns 2 and 3, Supplementary Table S5).

Activity in religious organizations increased when people had a first child but did not change much when having a second child (Table 4). The effect of a first child increased during the study period while the smaller second child effects decreased (Supplementary Table S6). We find, on the other hand, no strong or significant indications that these effects vary between the cohorts of parents (Supplementary Table S7).

Discussion

This research has shown that both religious salience and religious behaviour increase following the formation of nuclear families in terms of marrying and having children. Whereas several cross-sectional and qualitative studies have discussed these effects, such effects have seemingly not been documented in previous longitudinal research. We have not found any such studies on religious salience, and the few studies on attendance at religious services have provided

mixed evidence regarding the roles of marriage and parenthood.

One potential explanation for these divergent results could be data quality. The BHPS allows for the investigation of larger samples over longer periods than previous longitudinal studies. The few previous studies that have a similar character to ours (Gurrentz, 2017; Schleifer and Chaves, 2017) investigated 1,300–1,500 individuals, whereas we investigated 12,000–13,000 individuals. Larger samples are more efficient and allow for more robust analyses and the detection of more significant findings.

The BHPS also allows for the investigation of periods of 17–18 years, compared to six years in the two previous studies mentioned (Gurrentz, 2017; Schleifer and Chaves, 2017). Shorter periods may reflect honeymoon effects and the effects of younger children (e.g. those aged below 5 years). However, the results from the current analysis did not change much when splitting the time intervals from <15 and >15 years of marriage or having children (in Model 3, Tables 2–4) to <5 and >5 years for both family transitions (see Supplementary Table S1). Alternatively, these effects may vary between countries—in this case between Britain and the United States. For example, Schleifer and Chaves (2017) found rising religious attendance among parents in the US with children aged 6–12 but not those with younger or older children, in contrast to our BHPS data where there were no similar differences (Supplementary Table S1).

The current study has investigated three measures of religiosity—religious salience, religious attendance, and activity in religious organizations. Our findings indicate similar effects across the three measurements. While there can be some differences between the estimated effects in magnitude and statistical generalisation, these differences are never even close to being significantly different when adjusting our estimates for the standard deviation statistics of the three outcome variables. Hence, we can conclude that the nuclear family tends to raise all measures of religiosity investigated, rather than some measures more than others.

Panel regression models allow for estimating both abrupt and slow changes in religiosity. Our results indicate that the rising levels of religiosity following the formation of nuclear families occurred rapidly. Most of these changes are also long-lasting, with a couple of exceptions. A first child is associated with higher levels of religious salience only when the child is young, while the effect of a second child is seemingly long-lasting. The effect of marriage on attendance in religious services lasts longer but perhaps not beyond 20 years.

Forming a nuclear family had similar effects on the religiosity of men and women when measured as the importance of religion in one's life (religious salience).

This finding is seemingly at odds with recent research on spirituality and the experience of giving birth (e.g. [Crowther et al., 2020](#)). It appears that becoming a parent can be a spiritual experience for both fathers and mothers.

The behavioural outcomes from marriage and parenthood are different for men and women, however. Marrying mainly enhances men's activities in religious organizations, whereas parenthood enhances women's attendance at religious services more than men's attendance. The first finding might reflect an effect of adhering to the stereotype of a good family man. The latter finding might indicate that motherhood leads to more searching for spiritual experiences than fatherhood does. If so, both findings add support to a more general finding that the nuclear family contributes to more gender-specific roles.

Our results suggest that entering marriage in contrast to cohabitation is not only an issue of taking on more prescribed social roles that are typically associated with a more traditional division of work between men and women (e.g. [McMunn et al., 2020](#)). It also changes the importance of religion in people's lives and enhances religious behaviour. Most likely, these effects reflect the fact that marriage (compared with cohabitation) is a stronger interpersonal commitment that accords more strongly with religious commandments and the social expectations within faith-based organizations. Only the impact on activity in faith-based organizations was strong, however, both substantively and statistically. Hence, it might have gone unnoticed in previous research using smaller samples and different outcome variables—typically limited to attendance at religious services.

The parenthood effects were generally stronger than the marriage effects. All three religious factors investigated increased following parenthood. We have presented several potential explanations for why parenthood might increase both religious salience and behaviour: the value of practical support during the stressful period of raising children; the fact that faith networks engender a sense of inclusion and meaning; the possibility that parenthood enhances spirituality and positive emotions and that religious faith and guidance help support and stabilize the relationship between parents; and religions can be seen as beneficial for child development. The current study cannot distinguish between these explanations. Some may appear simpler than others for explaining the long-lasting effect of parenthood on the importance of religion in people's lives (e.g. inclusion and meaning). Still, it is also possible that some parents are initially motivated by the offer of practical support, but other explanations gain importance later on. Anyway, for faith organizations, the results indicate that parents

of younger children can be a promising target for recruitment.

A first marriage appears to be more important than subsequent marriages, and cohabitations do not lead to an increase in religiosity at all and reduces activities in faith organizations. A reduction in activity in faith organizations associated with entering cohabitations may reflect a discord between own behaviour and the commandments of these organizations. However, because cohabitation was often a prelude to marriage during the study period ([Ermisch and Francesconi, 2000](#)), there are reasons to believe that cohabiters also became more religious and were more likely to attend religious services and activities when they subsequently married. This, and similar pathway explanations, should be subject to future research.

Our main results indicate that family formation is associated with parallel changes in religiosity. The fact that forming nuclear families and changing religiosity are close in time makes it difficult to pinpoint a single direction of causality. Most likely, changes in religiosity tend to follow changes in family formation because having children and marrying are long-lasting commitments, typically also subject to long-term planning, while participation in religious services and organizations can change more easily and frequently. Still, there is the possibility that the two types of commitments are made jointly, that marrying and having children are related to joining religious communities, or that a sudden change in religious orientation (e.g. stronger religious beliefs) leads some people to marry and enter parenthood.

Today, family formation starts later than in previous periods, and most countries see tendencies of declining fertility. This research might help explain some of these changes. Older parents of two or more children are less likely to attend religious services or be active in faith organizations than younger parents, and over time we also see a declining probability of such activities when having a second child but not when having a first child. There is the possibility that contemporary families are involved in so many alternative activities, including full-time employment for both parents, that they are not able to participate in religious settings when having two children. These potential explanations should be the subject of further research.

Limitations

While longitudinal data allow us to come closer to some of the processes of relating nuclear families with religiosity, they have also limitations. Longitudinal survey data are subject to attrition because of refusal or inability to contact previous respondents. A comparative study ([Lipps, 2009](#)) shows lower attrition

in the BHPS than in similar data from Germany and Switzerland. Still, attrition rates in the BHPS are correlated with individual characteristics such as low activity with friends or in local communities (Uhrig, 2008) as well as living non-partnered (Lipps, 2009). It is difficult to say how these correlations may affect our analysis of religiosity following family formation processes.

Our results suggest a tendency toward declining religious beliefs and religious behaviour over the study period, which seemingly accords with the secularization hypothesis (Bruce, 2011; Martin, 2017). However, this finding may also reflect the fact that our data included only the members of the original BHPS sample. The historical trends we have estimated could be counteracted by immigration, as immigrants to Britain and other western countries are generally more religious than natives of these countries (García-Muñoz and Neuman, 2012; Peters, 2017; Shibuya, Fong and Shu, 2020). Such changes, and their net effects, can be investigated using a series of cross-sectional data with information about religious factors in combination with demographic characteristics such as migration and family formation. A further limitation is that we did not investigate non-Abrahamic religions (such as Sikh, Hindu, Jain or other minority religions) as they constitute a too few respondents in the BHPS.

Notes

- 1 Regression models with fixed effects for the individuals or random effects in combination with covariates for the mean value of each explanatory variable over the waves, provide the same estimates of how an outcome variable (e.g. religiosity) changes with a change in an explanatory variable (e.g. marriage, parenthood).
- 2 The estimates in model 3 indicate that religious salience rose by 0.060 when marrying, then it increased by a further 0.042 ($0.25 * 1.5$ for 15 years) to 0.102 ($0.060 + 0.042$) up till 15 years after marrying, before it started to decrease at a rate of 0.099 for each 10-years (the time unit used in all regression models). Taken together, these results indicate that salience peaked at 15 years or some years before 15 (e.g. 10–15) years after marrying.
- 3 Even if the duration effect is not significant, its magnitude indicates that the net effect is 0 when a second child is 11 years old ($0.089 - 0.080 * 1.1$ for 11 years = 0).
- 4 The longitudinal estimates in model 2 indicate that people participated more in religious services as they got older. However, this finding arises from an empirical model that also controls for a period effect which works in the opposite direction, indicating that people participated less in religious services over historical time. Because people age with historical time (these are overlapping processes), the net effect of ageing and period effects show how the attendance at religious services changed in the sample in the study period.

Supplementary Data

Supplementary data are available at *ESR* online.

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