Age and cultural gender equality as moderators of the gender difference in the importance of religion and spirituality: Comparing the UK, France and Germany

RESEARCH NOTE

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Abstract

A range of research studies has found that women report greater importance of religion and spirituality in their lives than men do. This study extends the literature on this phenomenon and the theories that aim to explain it, by looking at whether gender differences in the three European countries (UK, France and Germany) differ by adult age group (young adults 18-39, midlifers 40-59) and older adults 60+), and by the cultural gender equality of the countries in question. Participants provided data on the importance of religiosity and spirituality to their life. Significant gender differences were found within all three countries, for each of the three age groups. In line with predictions based on Global Gender Gap Report 2016, Germany showed the smallest difference, followed by France and the UK. Gender differences were smaller in the young adult samples than midlife adults or older adults.

Keywords: *Religion, spirituality, aging, gender, socialization, gender equality*

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Replication and review statement: The data used in the study are freely available for replication or review by contacting the first author.

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Age and national gender-equality as moderators of the gender difference in religion and spirituality: Comparing Germany, France and the UK

RESEARCH NOTE

INTRODUCTION

A range of research studies done in Western countries has found that women are more involved in, and interested in, institutional religion and de-institutionalized spirituality than men (Heelas and Woodhead 2005; Francis 1997; Stark 2002; Trzebiatowska and Bruce 2013). There is still considerable debate about what might explain this gender difference. The current study looks to test this gender difference in religiosity across three European countries (Germany, France and the UK) and three adult age groups, to explore whether or not the female dominance holds across demographically defined age groups and national groups that differ in normative gender equality and historical socialization factors.

Research on the gender difference in religiosity and spirituality has found that a higher proportion of females in Western nations attend church, pray daily, get baptized and confirmed, read scripture, report religious experience, watch religious TV programs, express belief in God, believe in life after death, and describe religion as personally important (Francis 1997; Stark 2002; Trzebiatowska and Bruce 2014). Furthermore, participation in holistic spiritual activities such as yoga or reiki in the UK is also more prevalent amongst women than men (Heelas and Woodhead 2005; Trzebiatowska and Bruce 2013), and non-materialist beliefs are expressed more by women than men (Trzebiatowska and Bruce 2014).

A number of explanations for this gender difference pattern in religiosity and spirituality have been put forward, which can be broadly categorized into firstly those that focus on intrapersonal differences such as biological sex differences or personality traits such as risk aversion or trait femininity (Francis and Wilcox 1996; Francis and Penny 2014; Miller and Hoffman 1995; Thompson 1991); secondly, those that focus on socio-cultural factors in gender roles and socialization patterns (Levitt 1995; Mol 1985; Nelsen and Potvin 1981); and thirdly,

those that combine both these levels of explanation (Collett and Lizardo 2009; Trzebiatowska and Bruce 2014). In this article we focus on whether there is evidence for the socialization explanation in terms of differences between age cohorts, and between European national cultures that differ in gender egalitarian values. However, following Trzebiatowska and Bruce (2014), we are of the view individual-level and socio-cultural forms of explanation both have a role to play in understanding the gender difference. They are by no means mutually exclusive.

The socialization approach to the gender difference in religiosity explains it as the product of how males and females are socialized into differing cultural values and socially-prescribed roles during their childhood, adolescence and adulthood, and how these influence religious participation and opportunities for such (Collett and Lizardo 2009). Socialization processes vary over time and culture, thus if they do explain the gender difference in whole or part, the difference will fluctuate in presence and extent across religions, societies and age groups (Sullins, 2006).

Evidence in support of the socialization hypothesis stems from a number of sources. One vein of evidence is the varying gender difference pattern across non-Christian religions. Hackett, Cooperman, Schiller and Cornibert (2016) concluded from a major global survey that in Muslim countries men participate in religious activities and attend services more than women. Within the UK, a study of religious groups found that frequency of religious participation and prayer was higher in men for Hindu, Jewish and Muslim groups, but not for Christians (Loewenthal MacLeod and Cinnirella 2002). Schnabel (2015) analyzed US data by religious group and found that the female gender imbalance was present in Christian groups, but not in Jewish or 'Other Religion' groups.

While these disparities in gender rates of participation across religions can be explained as evidence for the importance of socio-cultural factors in religious participation, those who take the intra-individual perspective can argue that social-structural factors in certain patriarchal religions physically limit female religious attendance or involvement, and so negate any inherent

female preference for the religious life that would express itself if women were given equal opportunity with men (Trzebiatowska and Bruce 2014).

Socialization theory also infers that cultures or social environments that differ in gender egalitarian values would show a variable level of religiosity gender difference. Collett and Lizardo (2009) argued that social environments that operate using more egalitarian gender values should show less gender difference in religiosity than those with more patriarchal values because in egalitarian environments, both men and women are socialized to take risks and share child-rearing duties. They tested this at the level of households, and found that individuals raised in patriarchal and less egalitarian households presented a larger gender difference than those raised in egalitarian households.

Extending the logic of Collett and Lizardo's study of households, this study compares countries that differ in cultural values pertaining to gender equality but have the same dominant religion and similar levels of secularism (UK, France and Germany). The Global Gender Gap Report 2016, produced by the World Economic Forum, produces national rankings for gender equality are publically available, and can be used as a basis for comparing cross-national differences in religiosity and gender as a function of cultural gender equality. In relation to the three countries covered in the present study, Germany has the most gender egalitarian values (rank 13), followed by France (rank 17), with the United Kingdom being the least of the three (rank 20).

A key prediction of socialization theory is that gender differences in religiosity should not only differ across cultures, but also change over time as culture evolves (Woodhead 2016). A test of the socialization explanation along these lines was carried out by Miller and Stark (2002). They assessed whether religion-based gender differences in the USA had increased over the period of 1973 to 1998 in the General Social Survey, and found no difference. But 25 years may not have been enough to show a generational shift.

Another approach, which we take in this study, compare adult age groups spanning 18 to 80+. The socialization hypothesis suggests that gender differences should relate to age; younger

generations that have been socialized in a more egalitarian social environment than older adults should show less difference than their more elderly counterparts. There are no lifespan theories that would suggest a larger religiosity gender difference in older adults on the basis of age. If anything, lifespan development theory would argue that the gender difference would be reduced with increasing age (Bengtson, Silverstein, Putney and Harris 2015; Levin 1993; Levin, Taylor & Chatters 1994; Strough et al. 2007; Wink and Dillon 2002). Thus if gender differences are larger in older adults, there is a strong rationale for arguing that this is a function of changing social values.

The current study explores gender differences in the self-reported importance of religion and spirituality (IoRS) within a sample of professional individuals working in technical and health occupations, across three European countries (the UK, France and Germany), and across three adult age groups (young adults, midlifers and older adults). Three hypotheses were formed.

H1: Following the extensive body of work showing higher rates of female religiosity in nations where Christianity as the dominant religion, the first prediction of the study was that women would show significantly higher IoRS than men, and that this would hold for all age groups and countries.

H2: Secondly, we predicted that the gender difference would be smaller in young adults than midlifers or older adults, premised on the fact that generations since the 1970s have been socialized into more gender-egalitarian and more gender-fluid values than older generations (Park et al. 2013).

H3: The third prediction, also based on socialization theory, was that the size of the gender difference in IoRS would be smaller in proportion to a country's ranking for gender equality by the World Economic Forum. Based on this, it was predicted that Germany would show the smallest gender difference, then France, then the United Kingdom.

METHOD

Participants

Participants (N=3020) were recruited from the UK, France and Germany via a major multinational survey organization, using an online methodology. The survey investigated the frequency of religious/spiritual belief, spiritual practices and spiritual experiences within a sample who work in technical and health professions. The following were eligible occupations: Physicists, chemists and related professionals; Social science and related professionals; Life science professionals; Research scientists; Mathematicians, statisticians and related professionals; Computing professionals; Engineers; Doctors and nurses; Science technicians.

Focusing on this specific occupationally-defined sample group helped to ensure that cultural or age differences were not confounded by socio-economic differences between the samples taken from each country or age group. The total number of participants per country, males and females within each country, and numbers of the three age groups used within the subsequent analysis, are shown in Table 1.

INSERT TABLE 1 ABOUT HERE

Measure

In line with the World Values Survey methodology as used by Stark (2002), the perceived importance of religion and spirituality (IoRS) was assessed via a single item: "How important is religion or spirituality to the way you live your life?" Responses were coded on a 4-point Likert scale of *4. Very Important, 3. Fairly Important, 2. Not Very Important, 1. Not at all Important*. Respondents were given an option to not respond to this question. 8% of UK respondents, 10% of French respondents, and 10% of German respondents selected the non-response option.

RESULTS

Due to the number of hypotheses and associated statistical tests, the required *p* value for significance was corrected using a Bonferroni correction to $p<0.01$. In order to analyze the effect of age on importance of religion and spirituality (IoRS), as well as the moderating effect of age

on IoRS gender difference, adult age was divided into the three groups shown in Table 1. These broadly align with Erik Erikson's three stages of early adulthood, midlife and later life (Robinson 2013). Age was grouped in this way to facilitate an analysis of variance, with age group and gender as categorical independent variables.

INSERT FIGURE 1 ABOUT HERE

Figure 1 shows means for males and females within the three age groups, for each country. Visual inspection of the figure shows the gender difference are in the predicted direction; females outscore males within all age groups for all countries. To statistically test this prediction, an ANOVA was conducted for each country separately, with gender and age group entered as independent variables, and IoRS as the dependent variable. Gender emerged as a significant predictor of IoRS in the UK and France (UK: $F_{(1,914)}= 19.9$, $p<0.001$; France: $F= F_{(1,913)}= 11.8$, $p<0.001$), but not Germany ($F_{(1,893)}= 3.0$, $p=0.08$). Gender did not interact with age in any of the models, providing support for the visual evidence from the graphs that the gender difference is consistent across age groups.

To test the prediction that the IoRS gender difference would be smaller in young adults than midlifers or adults in later life, post-hoc *t*-tests were conducted to look at the size of gender difference within each age group for each country. The means and results of these tests are shown in Table 2. As predicted, within each country, the age group showing the smallest gender difference is the young adult group. In France and Germany, the gender difference in the young adult age group does not reach significance but for midlifers and/or older adults there is significance. In the UK, all age groups show significant differences.

INSERT TABLE 2 ABOUT HERE

Finally, it was predicted that the IoRS gender difference would be moderated by country, such that the extent of gender difference would be smallest in Germany, followed by France, and largest in the UK. All age groups were combined into one national group for this analysis. Mean differences were calculated for each country, and independent sample *t*-tests were run for each country separately. The outcome matched the predicted pattern with Germany showing the lowest

difference, which was non-significant (mean difference=0.16, t=-2.356, p=.019). France showed a larger difference, which was significant (mean difference=0.19, t=-2.858, p=.004). The UK showed the highest overall gender difference, and a greater significance (mean difference=0.32, t=-4.510, p<.001).

DISCUSSION

This study aimed to extend the literature on the gender difference in religion/spirituality, by exploring how perceived importance of religion and spirituality (IoRS) relates to adult age and cultural gender equality within three European nations, and whether that fits with the widely promulgated socialization explanation. In line with the finding that women in Western nations are generally more religious and spiritual than men, it was found that women have higher levels of IoRS in the UK, France and Germany, and that this holds across three adult age groups (young adults, midlifers and older adults). As hypothesized, Germany, which is the most gender egalitarian of the three countries according to the Global Gender Gap Report 2016, shows the smallest overall gender difference. France and the UK both have significant gender differences, and as predicted, France's difference was smaller than that of the UK. This finding is in line with socialization theory of religion and gender, which posits that the gender difference in religiosity is at least in part shaped by social values and gender roles that change over time and vary across nations and social environments (Collett and Lizardo 2009; Trzebiatowska and Bruce 2014). In the case of Germany, the difference has reached a level that may be due to chance.

Gender participation rates and interest levels have been compared across religions in a number of previous studies and reviews. By comparing three European nations that remain dominantly Christian as far as religion goes and have comparable secular cultures in many ways, we found systematic similarities in the higher mean level of female IoRS. This finding fits with a host of previous studies on Christian-centric nations (Stark 2002; Trzebiatowska and Bruce 2014).

We also found two clear trends in line with a socialization explanation; smaller gender differences in younger age groups and more gender-egalitarian environments. We re-emphasize that this does not preclude the validity of intra-individual theories such as risk aversion theory, and we concur with Trzebiatowska and Bruce (2014, p.170) that the gender difference phenomenon is likely to be the "sum of small differences" across multiple levels of analysis.

We predicted that young adults, being exposed to a more gender equal set of values while growing up than midlifers or older adults, would show a smaller gender difference than midlifers or older adults. Our data broadly support this hypothesis; within each country the gender difference was smaller in the young adult age group than in either of the older groups. However, due to differential sample sizes, the female-male difference in the UK midlife group (N=388) showed more significance than the young adult age group (N=304) despite a smaller effect. So while there is broad support from our data for this hypothesis, the support is tentative and requires further corroboration in future studies.

There are potential competing life course explanations of the age finding, for example it may be that as adults get older they become more differentiated in terms of gender roles and religious involvement. However, we are of the view that this life course interpretation does not fit with literature showing genders to actually become more androgynous with age (Strough et al. 2007). The cohort-based interpretation is more convincing.

The professional sample of the study provides both a strength and a limitation. All participants were working at the time of the study within technical and health professions that have a foundation in science. This adds to the comparability of the samples across the three countries, and hence to the validity of the findings. However, it also limits generalizability; the findings may not generalize to other demographics within these three countries. More research with other samples is needed to assess whether the gender difference pattern that we observed would also manifest in samples from other professions. Furthermore, continued change over time in the gender difference pattern would be expected with research in the future, as cultures continue to shift. The direction of that shift in the future – towards equality or division – is by no

means certain. It is essential with future studies to examine the effects and age and gender on other socio-economic groups, including blue-collar occupations, who tend to be more religious than white-collar professionals.

The current study employed a single-item measure, which has a higher likelihood of measurement error over multi-item measures. Future research would be best served by using validated religiosity and spirituality measures.

The study points towards several new avenues of research for the phenomenon of gender and religion in light of socialization influences. The study is, as far as we are aware, the first to look at how the gender difference is moderated by adult age. Future longitudinal research could explore whether our cohort-based interpretation is correct or whether a life course interpretation is viable too. Furthermore, our use of the Global Gender Gap Report allows for easy replication and extension of this work with other countries and with subsequent reports. The various components of the index could also be explored at a more fine-grained level as predictors of the religious/spiritual gender difference.

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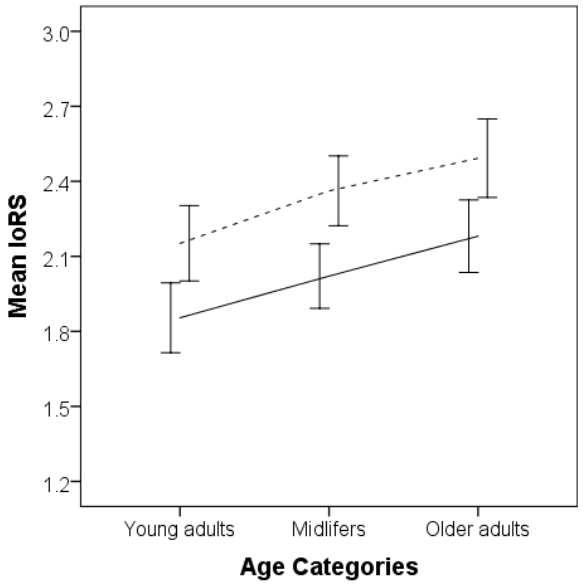
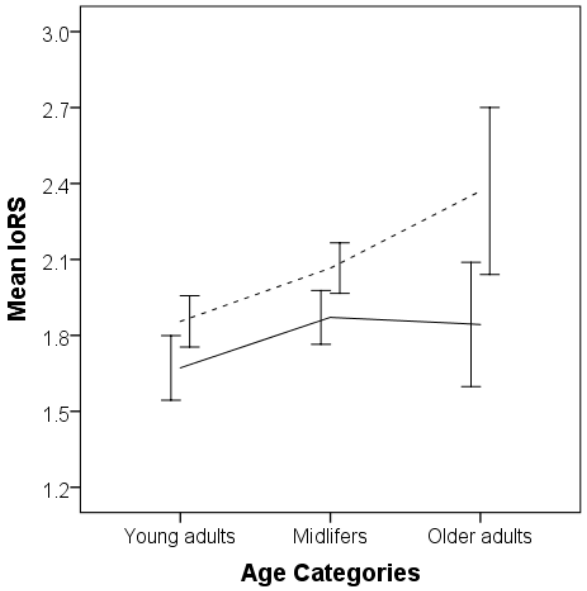
Figure 1: Mean Importance of Religion and Spirituality (IoRS) within age groups and gender across three countries

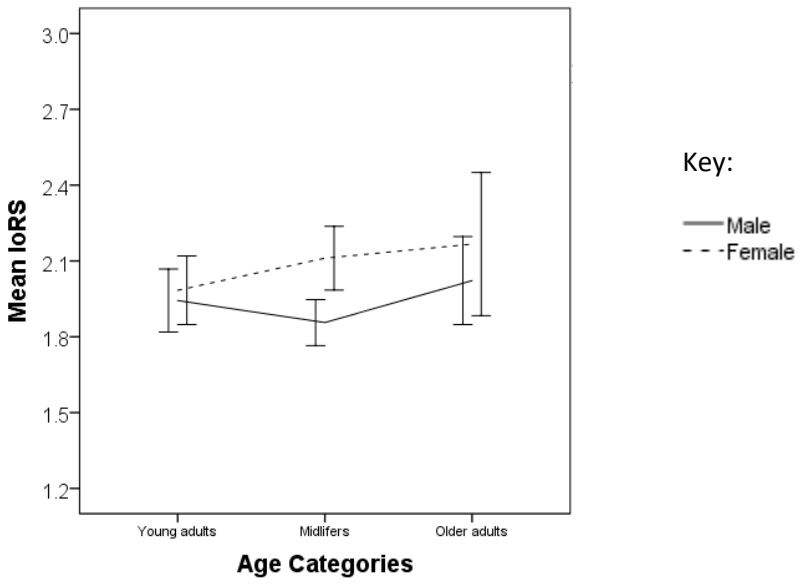
United Kingdom



France



Germany



Note: error bars: 95% Confidence intervals

Table 1: Total sample, gender and age group numbers for the three participating countries

	France	Germany	UK
Total sample	1003	1020	1000
Males	455	643	537
Females	565	357	466
Young Adult 18-39	394	316	304
Midlife Adult 40-59	542	547	388
Older Adult 60+	84	137	311

Table 2. Gender differences and *t*-test values (*t*, df, *p*) for each age group within each country

	Mean difference between genders	*t*	*df*	*p*
UK Young adults	.20	-2.40	274	.008
UK Midlifers	.34	-2.98	350	.003
UK Older adults	.31	-2.42	285	.008
France Young adults	.18	-1.84	357	.033
France Midlifers	.20	-2.21	474	.014
France Older adults	.53	-2.15	176	.009
Germany Young adults	.04	-0.36	283	.356
Germany Midlifers	.26	-2.68	487	.004
Germany Older adults	.14	-0.70	118	.242

Note: Positive gender difference value = female higher