Sociological Forum

Sociological Forum, Vol. 38, No. 3, September 2023
DOI: 10.1111/socf.12934

Individual-Level Determinants of Religious Intergenerational Transmission: Evidence from Catholic Europe[1]

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Although there is a rich body of research on religious transmission, relatively little attention has been given to studying this within specific religious traditions such as Catholicism, especially in Europe. Using data from the 2018 round of the International Social Survey Programme (ISSP), this study uses regression analysis to investigate individual-level determinants of religious transmission in 12 European countries with a Catholic tradition. We find support for the idea that parental religious socialization impacts adults' religiosity. More specifically, we find that childhood religiosity has explanatory effects separate from the impact of parental religiosity and that the religiosity of the father has a greater impact on offspring religiosity than the religiosity of the mother. We also find that childhood church attendance has a stronger effect in former communist countries than in western European countries. Overall, this study suggests the religious socialization perspective should be considered more in religious group-specific terms.

KEYWORDS: Catholicism, Europe; family; politics; religious transmission, religiosity.

INTRODUCTION

The topic of religious transmission and its role in understanding dynamic trends in beliefs and practices has attracted considerable attention from social scientists (e.g., Denton and Flory 2020; Pearce and Denton 2011; Smith and Snell 2009; Storm and Voas 2012; Voas and Crockett 2005; Voas and Storm 2012). By religious transmission, we mean the passing on of religious beliefs, practices, and values from one generation to the next or, in other words, the transmission of parental religiosity to the offspring.

As religious transmission (or lack thereof) has been posited as a key driver of religious change more generally (e.g., Kelley and De Graaf 1997; Storm and Voas 2012; Voas and Doebler 2011), this makes it especially important for understanding religiosity nowadays. While the idea that parental religiosity impacts

[1] We thank the anonymous reviewers and editor for their very thoughtful comments and suggestions. An earlier version of this article was presented at The Fantasy-Reality Continuum: Science, Religion, Politics, Culture conference (supported by the Norbert Elias Foundation) at the University of Warsaw, Poland, 8–10 December, 2022. Open access funding provided by IReL.
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childhood religiosity is not novel and is, in fact, state-of-the-art understanding (e.g., Smith and Adamczyk 2021; Storm and Voas 2012), the determinants of religious transmission within single religious traditions (in this case, Catholicism) and how these may vary across countries have received relatively little attention, especially in a European context. Where Catholic-specific studies of religious transmission exist (e.g., Smith et al. 2014), the US tends to be the dominant case. Apart from this relative neglect, we also chose to focus on a single religious group as past research suggests that secularization processes can be understood as having religious tradition-specific effects, including for Catholicism (e.g., Need and Evans 2001). The Catholic case represents an interesting one for studying religious transmission in light of the significant erosion in commitment among adherents in advanced Western societies over the last few decades (Bullivant 2019; Clements and Bullivant 2022). And the International Social Survey Programme (ISSP) represents an ideal dataset for investigating within-group heterogeneity, providing recent data containing a range of relevant measures unrivaled by any other dataset.

Thus, drawing on ISSP data, this study asks the following research question: to what extent does parental religiosity impact childrens' religiosity in European countries with a Catholic tradition?

EXTANT RESEARCH ON RELIGIOUS TRANSMISSION

Over the years, a number of very insightful social scientific studies have been carried out about religious transmission, reflecting a breadth of methodological approaches (e.g., Bossi and Marraccoli 2022; Hoge et al. 2001; Smith and Adamczyk 2021; Smith et al. 2014; Voas and Storm 2012). More specifically, research on this topic falls into three basic categories. First, one group of studies employs a qualitative, fine-grained approach to understanding religious transmission (e.g., Bossi and Marraccoli 2022; Kelley et al. 2021; Pusztai and Demeter-Karászi 2019). Compared to quantitative approaches, research in this tradition allows us to gain a deeper understanding of religious transmission. For example, in their study of religiously committed families in Ireland and the UK, Kelley et al. (2021) identified parental modeling, religious group activities and family religious behavior as significant pathways through which parents socialize their children into religiosity.

Another body of research employs a quantitative, big-picture approach (e.g., Bengtson et al. 2009; McPhail 2019; Smith 2021), using either national surveys or cross-national ones. For example, Bengtson et al. (2009) investigated how grandparents shape religious transmission in the US context using data from the Longitudinal Study of Generations. They found that grandparents have important impacts on the religiosity of their grandchildren, net of any impacts their parents may have, even if these are reducing over time. This may especially be the case with regard to the impact of grandmothers on their granddaughters. Similarly, Smith (2021) investigated the impact of parental religious ideology on the transmission of beliefs and practices to offspring using data from the National Study of Youth and Religion, finding that conservative religious groups are more successful transmitters than their more liberal counterparts, where religious socialization tends to be weaker. Within

this category of research, some cross-national research also exists (e.g., Kelley and De Graaf 1997; Storm and Voas 2012; Voas and Storm 2012). For example, Kelley and De Graaf (1997) investigate the role of broader social contexts in religious socialization in a group of 15 mostly European countries, showing how parental socialization patterns vary between religious national settings and secular ones, though this work has recently been challenged (e.g., Voas and Storm 2021).

A third body of research mixes these two approaches by combining the breadth of social surveys with the depth of interview-based research (e.g., Denton and Flory 2020; Smith and Adamczyk 2021; Stolz et al. 2016). Drawing on nationally representative social survey data alongside interview data regarding parents from a diverse range of religious groups, Smith and Adamczyk (2021) find that close interpersonal interactions with children is arguably the most important factor in successful religious socialization. Where these interactions are characterized by conflicting messages, mismatches between what parents say and what they do, and overreaching, failed socialization is more likely. Similarly, other US-based work shows the importance of parents in shaping young adults' religious lives, even if they increasingly distance themselves from their early religiosity (Denton and Flory 2020). In a European context, Stolz et al. (2016) show how religious socialization in Swiss society has been made more challenging by the greater availability of secular lifestyle options, which tend to crowd out attention to religious transmission.

Overall, prior studies within the quantitative strand of research, the one most relevant to the present study, tend to focus on religiosity in general rather than specific religious traditions, reflecting a tension in the literature between developing large-scale theories that apply across all religious groups versus testing universal theories within specific religious traditions (Conway and Spruyt 2018). This is surprising as past research suggests that religious transmission does not necessarily occur in exactly the same way across religious traditions, with some transmission actors being more significant in some religious groups than others (Vaidyanathan 2011). Also, although this body of research often looks at the influence of parents separately and together (e.g., Storm and Voas 2012), it does not commonly attempt to separate out the relative influence of mothers and fathers in specific religious groups. Similarly, past quantitative studies seldom consider generational and country differences in parental transmission within specific confessional traditions.

THEORY AND HYPOTHESES

Religious Socialization Perspective

The basic insight of this perspective, which is strongly inspired by social learning theory, is that human behavior in general, including religious behavior, may best be understood as a learned process (Desmond et al. 2010; Petts 2014; Storm and Voas 2012; see also Gillis and Krull 2019). Thus, this perspective centers the role of parents as the principal socialization agents of children in fostering their religiosity (Storm and Voas 2012; Vaidyanathan 2011).

Of course, this perspective should not be overstated either. As children grow older, parents increasingly compete with a range of secular alternatives to religion,

such as sport, peer groups, etc. (Baker-Sperry 2001; Kelley and De Graaf 1997; Stolz et al. 2016). These rival spaces may operate as alternatives to religion as sources of meaning in young adults' lives, potentially weakening the internalization of religious values. Relatedly, the challenge of religious socialization may also vary substantively between religious versus secular countries (Kelley and De Graaf 1997), tending to be greater in the latter than the former. In secular contexts, religious parents tend to exert more effort at crowding out secular competitors, compared to parents in religious contexts where religion is "in the air" (Kelley and De Graaf 1997). More recent research, however, challenges the claim that religious socialization depends on the societal milieu, arguing that parental socializing effects are basically the same across secular and religious contexts (Voas and Storm 2021).

Regardless of national setting, parents usually exert influence on their offspring's religiosity through three important pathways: modeling, directing, and relationality (McPhail 2019). For example, modeling involves introducing children to religion through encouraging religious habits such as prayer, bringing them to religious services, displaying religious objects in the home, etc. versus directing, which involves encouraging children to participate in religious groups and institutions. Relationality has to do with positive parent–child relations that may help to foster religious transmission (McPhail 2019). Together, these different processes suggest that parents have a direct role in religious transmission, but also that this can operate in a mediated way via other social actors (Storm and Voas 2012; Vaidyanathan 2011).

At the same time, the consistency of parental religious messaging is also important (Bader and Desmond 2006; Smith and Adamczyk 2021). When one parent is less religious than another or communicates messages about religion at odds with their partner or when one parent's behaviors are unhinged from their attitudes (Bader and Desmond 2006; Clements and Bullivant 2022), this lowers the costs for children of giving up their religious identity. An example of this could be one parent regularly attending religious services and the other sporadically or not at all, or one parent placing a high value on religion but then disregarding regular practice. As a result, children may be less likely to internalize its importance (Bader and Desmond 2006; Smith et al. 2014). Relatedly, when both parents share the same religious preference and commitment—"religious homophily"—this is more likely to bolster youth religiosity (Bader and Desmond 2006; Clements and Bullivant 2022; Storm and Voas 2012).

While parents are undoubtedly important in shaping youth religiosity and even more so when there is a consistency between them, they may not be equally so. Past research highlights the differential role of mothers versus fathers in religious transmission (Baker-Sperry 2001). As women have traditionally tended to carry a disproportionate share of child care responsibilities (Stolz et al. 2016), they have tended to play a more active role in socializing the next generation. This means that the messages mothers communicate about religion may be particularly important for their children's religiosity (Baker-Sperry 2001). Even so, the role of fathers should not be discounted (Baker-Sperry 2001; Smith and Adamczyk 2021). Past studies suggest that fathers may have stronger effects on formal religious behavior (e.g., attending religious services) than on how their offspring might apply religiosity in their everyday lives, where mothers tend to be more influential (Bader and Desmond 2006).

Regardless of these differences, research has been defending the idea that parents' religiosity positively influences childrens' religiosity (e.g., Smith et al. 2014).

Thus, we expect:

H1: Catholics who grew up with two Catholic parents should be more likely to exhibit strong religious commitment compared to Catholics who grew up with one Catholic parent.

H2: Catholics who grew up with at least one religiously devout parent should be more likely to exhibit strong religious commitment compared to Catholics who do not grow up with at least one religiously devout parent.

H3: Catholics should be impacted more by their mothers' religiosity compared to their fathers' religiosity.

Fourth, the parental religiosity transmission effect could be expected to vary between generations, with younger cohorts being less likely to be impacted by their parents' religiosity compared to older cohorts (Molteni and Biolcati 2023). Indeed, cohort replacement theory argues that as older generations are dying off and being succeeded by more secular younger cohorts, societies are slowly becoming less religious (Molteni and Biolcati 2023; Stolz et al. 2021). Thus, we expect:

H4: Catholics who belong to younger cohorts should be impacted less by parental religiosity compared to older cohorts.

Finally, one might expect the impact of parental religiosity on offspring religiosity to vary between countries, depending on their political history. For example, past research shows that an historical experience of communism helps explain varying religiosity/secularity levels in different countries (Need and Evans 2001; Pollack and Rosta 2017; Schwadel 2018). More specifically, former communist countries have experienced higher levels of state opposition to religion via the educational system and more broadly as well, leading to greater secularity among the general populace (Schwadel 2018). This means that parents in these contexts likely need to work harder to religiously socialize their offspring to partially offset the social world around them that devalues religion (Kelley and De Graaf 1997). Thus, we expect:

H5: Catholics who grew up in former communist countries should be impacted more by parental religiosity compared to Catholics who grew up in countries without a communist history.

DATA AND MEASURES

To answer our research questions, we relied on data from the religion-focused 2018 round of the ISSP (ISSP Research Group 2020). From this dataset we made two selections. First, we focused on European countries because most of the

countries in the ISSP dataset are European, and we would only have been able to investigate a very small number of countries from other world regional contexts if we opted to study non-European ones. Second, in order to be able to test whether age moderated the relationships between religiosity of the parents/during late childhood and the respondent's current religious beliefs and practices, we focused only on countries where the number of Catholics in each age group was sufficiently high ($n > 20$). These selections led to data from 12 countries (i.e., Austria, Croatia, Czech Republic, France, Germany, Hungary, Italy, Lithuania, Slovakia, Slovenia, Spain, and Switzerland[5]), which represent countries with varying religious trends and profiles, but all also have a Catholic tradition, either as a majority or as part of a mix of traditions.

To increase the sample size, we opted to study countries varying in the numerical strength of Catholicism rather than focusing only on countries with a Catholic-majority. The selected countries thus have a Catholic-majority tradition or a mix of Christian traditions (Catholic/Protestant), with varying religious trends. The excluded countries were: Bulgaria, Chile, Denmark, Finland, Georgia, Great Britain, Iceland, Israel, Japan, Korea (South), New Zealand, Norway, Philippines, Russia, South Africa, Suriname, Sweden, Taiwan, Thailand, Turkey and the United States. As 12 is too few a number of countries to use multi-level models (Hox et al. 2012), we studied the impact of societal context by comparing the results for two groups of countries, namely Western/Southern European (i.e., Austria, France, Germany, Italy, Spain and Switzerland) countries versus Eastern European countries. (i.e., Croatia, Czech Republic, Hungary, Lithuania, Slovakia and Slovenia). More substantively, these two groups of countries differ in terms of their historical legacies: the latter with a history of communism and the former lacking this history, with this contextual factor having potentially variable secularizing impacts (Kelley and De Graaf 1997).

Dependent Variables

Recognizing the multiple expressions of religious identity (e.g., Glock and Stark 1965; Molteni 2021), in this study we distinguish between four dependent variables (i.e., religious self-perception, prayer, church attendance, and belief in God). First, we focused on *religious self-perception*. Respondents were asked to describe how religious they were (Q29: Would you describe yourself as. . .—1: extremely religious–7: extremely non-religious). We reverse-coded this variable so that higher scores reflected higher levels of religiosity. Second, we included *religious practices* and distinguish between private (i.e., *private prayer*; 1 variable—Q24: About how often do you pray?; *One item: (1) Never–(11) Several times a day*) and public (i.e., *church attendance; One item: (1) Never–(9) Several times a week*) practices. Finally, we focused on *religious beliefs* by studying belief in God (3 variables—Q13—Please indicate which statement below comes closest to expressing what you believe about God; Q16a/c: Do you agree or disagree with the following? There is a God who

[5] Although based on these criteria data for the United Kingdom could have been included, several variables that we used in the analysis were not included in the UK questionnaire.

concerns Himself with every human being personally/To me, life is meaningful only because God exists; Eigen Value 1st component = 2.091; 0.814 < factor loadings < 0.870). We used a principal components analysis and used the predicted factor scores as the dependent variable.

Predictors

A first set of predictors related to the identification with Catholicism among the parents and the respondents. Because we were interested in the intergenerational transmission of religiosity among the affiliated and the nonaffiliated, we selected respondents who had at least one parent who self-identified as Catholic. Regarding the Catholicism of the parents, we distinguished between three categories: both parents Catholic (85.7%), only mother Catholic (9.3%), and only father Catholic (5.0%). We entered this into the regression models via two dummy variables, with both parents Catholic as the reference category. Regarding the respondents, we entered Catholic self-identification as a dummy variable (0/1). Table A1 in the Appendix presents the relationship between the religious identification of the parents and the respondent. In general, when both parents were Catholics 78.5% of the respondents identified as Catholic. Identification as Catholic was considerably lower when only one parent identified as Catholic. Across all countries, the intergenerational transmission was stronger when only the mother identified as Catholic (35.9%), relative to the situation where only the father identified as Catholic (23.9%).

A second set of predictors in our analysis focused on the religious environment of the respondent during childhood and, more specifically, the church attendance of the mother, father and the child. Respondents were asked when you were a child, how often did your mother/father/you (age 11–12) attend religious services? Response categories ranged from (1) Never to (9) Several times a week. These three variables were correlated substantially. The correlation between church attendance of the mother and father equaled .691 ($p < .001$). Interestingly, the correlation between the church attendance of the mother and the child ($r = .692$; $p < .001$) was stronger when compared to the one between the father and child ($r = .566$; $p < .001$).

Control Variables

We also included a number of control variables which past research suggests may be related to dimensions of religiosity (e.g., Molteni 2021; Need and Evans 2001). *Gender* was recoded as a dummy variable (0: female; 1: male). *Age* was recoded into three age groups (15–34, 35–64, 65, and older, where the last is 0). *Education* was recoded into three categories (low: lower secondary or less; medium: secondary; high: tertiary education; the first is 0). We also included indicators that referred to whether the respondent had *paid work* at the time of the survey (variable recoded as dummy—0: no; 1: yes), *self-assessed subjective social status* (1: lowest—10: highest), and *subjective health* (variable was reverse coded, with 1 meaning poor

and 5 excellent). We chose to include self-assessed social status as this captures the respondents' personal level of (in)security, which is known to be associated with religiosity, though not in a simple or straightforward way (Molteni 2021; Norris and Inglehart 2004).

Descriptive statistics of all variables included in the analyses are presented in the Appendix (Table A2). All continuous variables were mean-centered and rescaled to a 0–1 continuum. After deleting cases which had missing values on one of the variables, our sample comprised 9,319 respondents. We used listwise deletion because one of the primary objectives of our analyses is to compare the results between outcomes *and* models in which we re-estimated the models for different age groups and groups of countries. Such cross-model comparisons are only possible when estimated on data from the same respondents.[6]

Analytical Strategy

As respondents were nested within countries and 12 countries is too few to perform multilevel models, we used fixed effect models whereby the countries were entered as dummies to control for the clustered nature of our data. Because we were interested in both general patterns as well as whether the results differed across age groups and countries, we organized the analysis into two parts.

In the first part, we estimated three models for each of the four outcomes based on the data from the sample as a whole. In Model 1 we entered all the sociodemographic variables and identification with Catholicism among parents. It provides our baseline model that describes the situation in which the respondent was "born." In model 2, we entered church attendance of the parents and the respondent during childhood (age 11–12). In substantive terms, this model reflects the religious environment in which the respondent was "raised." In Model 3, we added the identification with Catholicism among respondents "at the time of the survey." In this way, the models reflect a time dimension with variables entered in the first models (Model 1 and 2) showing the long-term consequences of religious practice during late childhood. This model set-up also enabled us to assess to what extent the influence of religious practices during childhood was explained by religious identification at the time of the survey.

One potential drawback of these models, is that we entered variables that were correlated rather strongly. Therefore, we also tested for possible problems of multicollinearity. Inspection of the variance inflation indexes, however, showed that there were no problems of multicollinearity. One likely reason for this is that due to the high number of respondents in our sample, our statistical models have a high level of statistical power. While this is the ideal situation to study and compare effect parameters of (strongly) correlated predictors, the drawback is that even small effect parameters become statistically significant. To avoid discussing *statistically*

[6] While preparing this article, we assessed whether the use of listwise deletion affected our substantive conclusions. To that end, we compared our results with those obtained when all available information and mean missing value imputation techniques were used. As the latter results led to the same substantive conclusions, we present the results based on the models that allow for a direct comparison of the regression coefficients.

significant effect parameters with *negligible effect size*, we focus on effect parameters whose standardized regression coefficient was at least $\beta = .100$, corresponding to an explained level of variance of at least 1%.

After having studied the results for the sample as a whole, we assessed whether the results varied across subgroups of respondents. Two comparisons were made. First, we re-estimated the final models for each age group. Although we cannot strictly separate age from cohort differences, these models provide a glimpse of whether the intergenerational transmission process varies across age groups. Second, we re-estimated the final models for two groups of countries.

To compare effect parameters, we used the procedure as described by Paternoster et al. (1998), which allows one to test whether two regression coefficients derived from two populations are statistically different from each other. This procedure calculates a z-score whereby $z = (b_1 - b_2)/\sqrt{(SE_1^2 + SE_2^2)}$, with b's being the unstandardized regression coefficients and SE their associated standard errors.

RESULTS

Control Variables

Table I reports the results for the general part of the analysis. We first discuss the results for the control variables (Model 1). The first variable is gender. We found for all outcomes a negative effect parameter indicating that men see themselves as less religious, pray less, go less to church, and believe less in God, a finding shared with more general work indicating higher levels of religiosity among women (e.g., Collett and Lizardo 2009; Trzebiatowska and Bruce 2014). In terms of the strength of the association, gender matters most for prayer and religious self-perception ($\beta = -.178$ and $-.142$, respectively) and substantially less when compared to church attendance ($\beta = -.119$). Regarding age, younger cohorts are considerably less religious when compared to their older counterparts. We found an almost linear pattern with each age group being less religious than its predecessor.

Education is often presented as an "enlightening force" and, as such, a driver of secularization (Molteni 2021). However, although we found some educational differences and they were all running in the expected direction (i.e., higher educated are less religious), the general strength of these relationships was weak (i.e., clearly below the $\beta = .10$ threshold that we specified earlier) and differences were often statistically nonsignificant.

People who face stressful life situations often find strength through religiosity (Molteni 2021; Norris and Inglehart 2004). For that reason, one could expect that indicators of social position and health situation are inversely correlated with religious outcomes. Such a pattern was most clear for employment status, whereby we found that people who have no paid work are more religious (in terms of religious self-perception, prayer, church attendance, and belief in God), but even then the size of the effect parameters was very small. For subjective social status, only very small effect parameters were found. For most outcomes these were negative. Only for church attendance did we find a significant positive effect parameter, suggesting that higher social status was associated with more church attendance. However, in the

Table I. Results Regression Analysis (Fixed Effects Models) on Four Different Indicators of Religiosity (12 Countries; $N = 9{,}313$)

	Religious self-perception						Prayer					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	β	p	β	p	β	p	β	p	β	p	β	p
Gender (0 = female)	−.142	***	−.126	***	−.098	***	−.178	***	−.161	***	−.142	***
Age (65 or older)												
Young (15–34)	−.180	***	−.074	***	−.066	***	−.224	***	−.114	***	−.109	***
Middle aged (35–64)	−.104	***	−.033	**	−.032	**	−.132	***	−.058	***	−.058	***
Education (0 = low)												
Middle educated	−.011		−.010		−.001		−.021	*	−.019		−.013	
Higher educated	−.049	***	−.047	***	−.015		−.018		−.017		.005	
Work (0 = no)	−.026	*	−.016		−.020	*	−.051	***	−.040	***	−.043	***
Subjective social position (0–1 continuum)	−.004		−.016		−.027	**	−.011		−.022	*	−.029	**
Subjective health (0–1 continuum)	−.040	***	−.033	***	−.028	**	−.059	***	−.051	***	−.048	***
Religion parents (0 = both Catholic)												
Only father Catholic	−.116	***	−.043	***	.034	***	−.083	***	−.006		.047	***
Only mother Catholic	−.161	***	−.070	***	.007		−.118	***	−.024	**	.028	**
Church attendance mother			.084	***	.063	***			.103	***	.088	***
Church attendance father			.128	***	.101	***			.129	***	.111	***
Church attendance child			.253	***	.163	***			.256	***	.192	***
Catholic (0 = not Catholic)					.418	***					.288	***
Adjusted R^2	.165		.297		.423		.169		.314		.374	

Table I. (Continued)

	Church attendance						Belief in God					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	β	p	β	p	β	p	β	p	β	p	β	p
Gender (0 = female)	−.119	***	−.106	***	−.086	***	−.134	***	−.121	***	−.096	***
Age (65 or older)												
Young (15–34)	−.211	***	−.097	***	−.091	***	−.175	***	−.074	***	−.069	***
Middle aged (35–64)	−.139	***	−.063	***	−.062	***	−.099	***	−.033	*	−.034	**
Education (0 = low)												
Middle educated	−.010		−.007		−.001		−.023	*	−.019		−.011	
Higher educated	−.010		−.009		.013		−.056	***	−.055	***	−.029	**
Work (0 = no)	−.040	***	−.029	**	−.033	***	−.039	***	−.027	*	−.030	**
Subjective social position (0–1 continuum)	.022	*	.010		.003		−.014		−.026	**	−.036	***
Subjective health (0–1 continuum)	.001		.007		.011		−.032	**	−.024	*	−.019	*
Religion parents (0 = both Catholic)												
Only father Catholic	−.081	***	.000		.054	***	−.087	***	−.016		.054	***
Only mother Catholic	−.144	***	−.047	***	.007		−.157	***	−.069	***	−.001	
Church attendance mother			.136	***	.121	***			.094	***	.073	***
Church attendance father			.159	***	.141	***			.135	***	.109	***
Church attendance child			.216	***	.153	***			.220	***	.138	***
Catholic (0 = not Catholic)					.292	***					.383	***
Adjusted R^2	.150		.307		.369		.170		.291		.397	

Significance levels: ***$p < .001$; **$p < .010$; *$p < .050$.

final model this effect parameter disappeared. People who had better health were less likely to describe themselves as strongly religious, pray less, and showed less belief in God. No relationship was found for church attendance. Overall, these results indicate that for the four outcomes studied here, there were only very small sociodemographic differences, with gender being the exception.

Predictor Variables

After having described the relationship between the sociodemographic and our outcomes, we focus on the relevance of the predictors. In terms of the religious identification of the parents (Model 1), it is clear that when both parents identified as Catholic, the religiosity of the respondent (defined here in terms of religious self-perception, frequency of prayer, church attendance and belief in God) was highest. When only one parent was Catholic, religiosity was consistently lowest (i.e., the difference with the reference group [both parents were Catholic] was negative). Religiosity was lowest when it was only the mother who identified as Catholic. In later models (Model 2 and 3), however, this pattern disappeared and even reversed. Indeed, in Model 3 we found that after taking into account all other variables, respondents for which only the father was Catholic were more likely to describe themselves as strongly religious, pray more, attend church more and more strongly believe in God when compared to families where both parents were Catholic. The differences were, however, small.

In the second model, we added church attendance of the father, mother and child during childhood (age 11–12). A few observations can be made. First, for all actors we found a significant effect parameter indicating that *every* actor counts. For all actors, secondly, the relationship between church attendance and the indicator of religiosity ran in the same direction. The higher the level of church attendance of the father, mother or child during late childhood, the higher the religiosity of the respondent regardless of the specific outcome one focuses on. Indeed, the strength of the relationships did not differ much across the different outcomes. Third, it is clear that although all actors matter, some matter more than others. Not surprisingly, we found that church attendance of the child was the strongest predictor (all β's $> .200$) when compared to church attendance of the father and mother. Regarding the latter, for every outcome, church attendance of the father had a stronger effect parameter when compared to the church attendance of the mother. This observation corroborates the findings for religious identification observed in Model 1.

In the final model (Model 3) we added whether the respondent was Catholic or not at the time of the survey to the regression model. For all outcomes, this was the single best predictor in the model but the strength of the relationships clearly varied across the different outcomes. It was strongest for religious self-perception ($\beta = .418$), slightly weaker for belief in God ($\beta = .383$) and weakest for the two outcomes that referred to concrete religious practices (Prayer, $\beta = .288$; Church attendance, $\beta = .292$). Entering Catholic identification into the regression model decreased the strength of all other predictors. This makes sense as it is self-evident that part of the relationship between church attendance of the father, mother, and

child and the outcomes runs via Catholic identification. But rather than completely explaining these relationships, entering Catholic identification only partially explains the initial relationships. Indeed, one of the most interesting observations that can be derived from a comparison between Model 2 and 3 is that the church attendance of the father, mother, and child during childhood remains an important predictor of religiosity *independently of* respondents' Catholic self-identification. This hints at the existence of prolonged socialization effects.

In the first part of the analysis we focused on the general results. There are, however, good reasons to expect that some of these general relationships might vary between specific age groups and countries. Thus, the second part of the analysis involved focusing on differences across these categories. First, we look at age differences and assess whether the relations found among young people differ from older age groups. As mentioned, the cohort replacement perspective argues that more religious older cohorts are gradually being succeeded by less religious young cohorts (Stolz et al. 2021). In this article we are less interested in variation in the *levels* of religiosity between age groups than in assessing whether *the predictors* of our four outcomes varied between age groups/cohorts.

Second, whereas age groups refer to intra-country differences we also want to explore inter-country differences. Given the relatively small number of countries in the analysis, we chose to distinguish between Eastern European and non-Eastern European countries, countries which are differentiated by whether or not they have experienced communism.

Age Differences

Table II reports the results whereby we re-estimated Model 3 (Table I) for each age group. We added two columns that reflect the pairwise comparisons (i.e., young vs. middle aged–middle aged vs. older) of the difference between the regression coefficients using the formula proposed by Paternoster et al. (1998). It should be stressed, however, that given the high statistical power of these data even relatively small differences can become statistically significant. Therefore, as explained earlier when discussing the results, one must take into account both the statistical significance *and* the differences in effect strength and patterns across different outcomes.

Two observations stand out. First, among the younger age groups, church attendance during childhood is much more important when compared to the oldest age group. We found this for every outcome. When interpreting this result some caution is warranted as two mechanisms might be responsible for this pattern which we cannot disentangle with our data. From a cohort perspective, this finding aligns with the individualization of religion perspective, which suggests that religiosity is becoming more individualized, that is, a matter of deliberate personal choice (Pollack and Pickel 2007; Stolz et al. 2016). Such a pattern can explain why among younger age groups one's personal church attendance during childhood is more important for predicting aspects of religiosity when compared to older age groups. However, in that case one would also expect that self-identification as Catholic would be a stronger predictor among the younger age group and such a pattern is not observed (for

Table II. Results Regression Analysis (Fixed Effect Models) on Religiosity for Three Age Groups

	Religious self–perception								Prayer							
	Young		Middle aged		Older		Test ΔY − MA	Test ΔMA − O	Young		Middle aged		Older		Test ΔY − MA	Test ΔMA − O
	β	*p*	*β*	*p*	*β*	*p*			*β*	*p*	*β*	*p*	*β*	*p*		
Gender (0 = female)	−.066	***	−.087	***	−.147	***		**	−.081	***	−.124	***	−.204	***	**	***
Education (0 = low)																
Middle educated	.057	**	−.006		−.067	***	**	**	.047	*	−.010		−.059	**	*	*
Higher educated	.008		−.030	*	−.039	*			.052	*	.000		−.009		*	
Work (0 = no)	−.023		−.039	**	.001				−.064	**	−.058	***	−.003			
Subjective social position (0–1 continuum)	−.043	*	−.005		−.034				−.013		−.012		−.031			
Subjective health (0–1 continuum)	.010		−.011		−.057	**		*	−.043	*	−.033	*	−.068	***		
Religion parents (0 = both Catholic)																
Only father Catholic	.031		.043	***	.004				.053	**	.052	***	.010			
Only mother Catholic	−.001		.002		.009				.032		.032	*	.006			
Church attendance mother	.060	*	.081	***	.038				.091	**	.102	***	.050	*		
Church attendance father	.075	**	.072	***	.181	***		***	.098	***	.087	***	.179	***		***
Church attendance child	.200	***	.169	***	.090	***		*	.236	***	.217	***	.123	***		*
Catholic (0 = not Catholic)	.448	***	.408	***	.439	***		**	.288	***	.269	***	.340	***		***
Adjusted R^2	.450		.395		.458				.390		.329		.407			

Table II. (Continued)

	Church attendance								Belief in God							
	Young		Middle aged		Older		Test ΔY − MA	Test ΔMA − O	Young		Middle aged		Older		Test ΔY − MA	Test ΔMA − O
	β	*p*	*β*	*p*	*β*	*p*			*β*	*p*	*β*	*p*	*β*	*p*		
Gender (0 = female)	−.031		−.079	***	−.141	***	**	***	−.082	***	−.070	***	−.144	***		***
Education (0 = low)																
Middle educated	.036		.009		−.038			*	.031		−.009		−.059	**		*
Higher educated	.011		.021		.022				−.002		−.035	*	−.048	**		
Work (0 = no)	−.056	**	−.045	***	.015			*	−.024		−.044	***	.002			
Subjective social position (0–1 continuum)	.027		.000		−.001				−.051	**	−.016		−.029			
Subjective health (0–1 continuum)	.019		.018		.019				−.002		−.007		−.047	**		
Religion parents (0 = both Catholic)																
Only father Catholic	.080	***	.053	***	.015				.058	**	.059	***	.031			
Only mother Catholic	−.012		.011		−.005				−.015		.007		−.020			
Church attendance mother	.136	***	.136	***	.102	***			.045		.093	***	.047			
Church attendance father	.122	***	.120	***	.166	***		*	.118	***	.071	***	.157	***		*
Church attendance child	.200	***	.165	***	.100	***			.185	***	.147	***	.084	***		
Catholic (0 = not Catholic)	.282	***	.284	***	.331	***	*	***	.374	***	.372	***	.422	***		***
Adjusted R^2	.393		.363		.362				.425		.354		.435			

Significance levels: ***$p < .001$; **$p < .010$; *$p < .050$.
Note: Test ΔY − MA = Test difference in regression coefficient for young people versus middle aged people.
$N_{\text{Young (15–34)}} = 1{,}937$; $N_{\text{Middle Aged (35–64)}} = 5{,}049$; $N_{\text{Older (65 or older)}} = 2{,}333$.

three outcomes we observed the opposite pattern: Catholic identification is more important among the oldest age group). From a life-course perspective (e.g., Voas 2015), one could argue that church attendance during childhood is more important among the youngest age group because the time-lag with the studied outcomes is considerably smaller relative to the older age groups. There is, however, no reason to assume that such a difference in time-lag would impact the relevance of church attendance of the three actors (child, mother, father) in a different way. In other words, if a life course perspective would be the *only* explanation for the observed difference in the predictive power of church attendance during childhood, one has to observe the same for church attendance of the father and mother. The latter is not the case. So, while our data do not enable us to disentangle both mechanisms, we can conclude that it is highly unlikely that one of them totally explains the observed pattern.

Second, for older age groups, the church attendance of the father is considerably more important when compared to younger age groups. For the church attendance of the mother, we found the opposite pattern (more important for younger age groups, less important for older age groups) but the pattern is less strong.

Country Differences

Table III reports the result of the country comparisons. The procedure is identical to the one followed for the comparison between age groups. A number of observations are worth highlighting. To begin with, the general level of explained variance for *all* outcomes studied is clearly higher in Eastern European countries. Except for self-described religiosity, for all outcomes the difference is substantial and varies between 8 and 12 percentage points.

Second, it is clear that church attendance during the childhood of the respondent is much more predictive (the regression coefficients are twice as high) for our outcomes in Eastern European countries when compared to Western and Southern European countries. In line with previous research (e.g., Kelley and De Graaf 1997), this finding suggests that the national context is impactful for family socializing effects, the relevant distinction here being the presence or absence of a communist past. When religiosity in the wider social world is weakly supported or even suppressed, a higher burden falls on parents to secure their offspring's religious upbringing (Kelley and De Graaf 1997). Interestingly, however, self-identifying as Catholic at the time of the survey is more strongly related to all outcome variables in Western European countries.

Regarding the religiosity of the parents, church attendance of the mother is consistently more important in Eastern European countries when compared to Western and Southern European countries.

Finally, there are some notable age differences for specific outcomes. Age (or cohort) differences are much larger in non-Eastern European countries relative to Eastern European countries, but only for prayer and church attendance (and to a lesser extent for belief in God).

Table III. Results Regression Analyses (Fixed Effects Models) on Four Aspects of Religiosity in Former Communist versus Non-former Communist European Countries

	Religious self-perception					Prayer				
	West/South-EU		East-EU		Test ΔWest/South versus East EU	West/South-EU		East-EU		Test ΔWest/South versus East EU
	β	p	β	p		β	p	β	p	
Gender (0 = female)	−.092	***	−.119	***		−.141	***	−.137	***	
Age (0 = 65 or older)										
Young (15–34)	−.071	***	−.062	***		−.135	***	−.070	***	**
Middle aged (35–64)	−.048	**	.005		*	−.079	***	−.006		**
Education (0 = low)										
Middle educated	−.009		−.003			−.020		−.013		
Higher educated	−.041	**	.020		***	−.021		.048	***	
Work (0 = no)	−.016		−.036	*		−.039	**	−.062	***	***
Subjective social position (0–1 continuum)	−.024	*	−.033	*		−.023		−.023		
Subjective health (0–1 continuum)	−.026	*	−.023			−.041	**	−.066	***	
Religion parents (0 = both Catholic)										
Only father Catholic	.047	***	.015			.040	**	.051	***	
Only mother Catholic	.018		−.017		*	.029	*	.022		
Church attendance mother	.060	***	.079	***		.057	**	.128	***	**
Church attendance father	.101	***	.109	***		.111	***	.130	***	
Church attendance child	.114	***	.242	***	***	.134	***	.271	***	***
Catholic (0 = not Catholic)	.480	***	.326	***	***	.310	***	.234	***	**
Adjusted R^2	.401		.434			.331		.458		

Table III. (Continued)

	Church attendance					Belief in God				
	West/South-EU		East-EU		Test ΔWest/South versus East EU	West/South-EU		East-EU		Test ΔWest/South versus East EU
	β	p	β	p		β	p	β	p	
Gender (0 = female)	−.082	***	−.100	***		−.098	***	−.091	***	
Age (0 = 65 or older)										
Young (15–34)	−.123	***	−.063	***	*	−.097	***	−.042	*	*
Middle aged (35–64)	−.110	***	.001		***	−.066	***	−.001		**
Education (0 = low)										
Middle educated	−.013		.011			−.022		−.009		
Higher educated	.002		.030	*		−.056	***	.009		***
Work (0 = no)	−.035	*	−.037	*		−.034	*	−.025		
Subjective social position (0–1 continuum)	.006		−.002			−.028	*	−.036	**	
Subjective health (0–1 continuum)	.006		.031	*		−.012		−.035	*	
Religion parents (0: both Catholic)										
Only father Catholic	.053	***	.053	***		.064	***	.043	***	
Only mother Catholic	.010		.001			.017		−.029	*	**
Church attendance mother	.105	***	.152	***	*	.065	***	.084	***	
Church attendance father	.135	***	.144	***		.100	***	.124	***	
Church attendance child	.096	***	.224	***	***	.096	***	.198	***	***
Catholic (0 = not Catholic)	.311	***	.262	***		.419	***	.321	***	***
Adjusted R^2	.329		.428			.364		.435		

Significance levels: ***$p < .001$; **$p < .010$; *$p < .050$.
Note: $N_{\text{Former communist countries}} = 4{,}214$; $N_{\text{Non-former communist countries}} = 5{,}105$.
Former communist countries: Croatia, Czech Republic, Hungary, Lithuania, Slovakia, Slovenia.
Non-former communist countries: Austria, France, Germany, Italy, Spain, Switzerland.

DISCUSSION AND CONCLUSION

This study analyzed the transmission of religiosity in Catholic populations in Europe, testing five hypotheses. Our first hypothesis tested the impact of parental religious homophily on the religiosity of their offspring. Data from model 1 confirms this hypothesis that respondents with two Catholic parents are more religious. Where there was only one Catholic parent, having a Catholic mother mattered more for religious transmission than having a Catholic father. Theoretically, this finding makes sense as lack of similarity among parents regarding self-identification is likely to make successful religious transmission more difficult (Bader and Desmond 2006; Voas and Storm 2012). At the same time, caution is warranted because in the final model this pattern disappeared (or even reversed).

While in Hypothesis 1 we tested the impact of religious homophily, in Hypothesis 2 we tested parental religious devoutness. Our results show stronger socializing effects in the case of devout parents compared to nondevout ones (confirming Hypothesis 2). This affirms the relevance of Credibility-Enhancing Displays highlighted in previous research (e.g., Clements and Bullivant 2022; Turpin 2022), whereby the socializing effects of parental religiosity are bolstered by behaviors matching intentions. In other words, when parents accompany their pro-religious messaging with pro-religious actions this is more likely to matter for their offsprings' socialization, as compared to a situation where there is a mismatch between parental pleadings and their concrete practices.

At the same time, childhood religiosity has strong effects independent of parental religiosity, one of the most innovative findings of this study. As mentioned, this brings out the significance of early family socialization in explaining positive religious transmission, a finding corroborated by previous research on Catholic transmission (e.g., Clements and Bullivant 2022). We also found that childhood and parental religiosity have strong effect parameters independent of Catholic self-identification, highlighting the stickiness of religious socialization.

Regarding our third hypothesis about the independent predictive power of mother/father's practices on respondents' religiosity, Model 2 showed that the church attendance of the father had a stronger relationship with the offsprings' religiosity relative to the church attendance of the mother. This confirms the different socialization impacts of mothers versus fathers reported in other studies (e.g., Bader and Desmond 2006), but not in the expected way. Even so, it is a finding shared with some Catholic-specific studies of religious transmission (e.g., Baker-Sperry 2001). This result revealing the strong socializing effects of the father (disconfirming Hypothesis 3) was one of the most surprising findings of the study. Perhaps this reflects the impact of fathers on their offsprings' formal religious behaviors as distinct from its effect on whether or not religion suffuses their day-to-day lives (Bader and Desmond 2006). Another explanation could be related to shifts in gender dynamics. As fathers carry more of a family caregiving role than before, this may help to foster closer father-child relations and, in turn, stronger socializing effects (Baker-Sperry 2001). Relatedly, it could also reflect increasing labor force participation rates among women, to varying degrees, in European countries (Matysiak and Steinmetz 2008; Guetto, Luijkx and Scherer 2015), which may result in mothers

having less involvement in their offspring's religious socialization as the competing demands of earning a living and developing a career become more dominant in their lives than previously. Regardless of the reasons for this result, it challenges the conventional wisdom that mothers have stronger socializing effects on offspring religiosity than fathers.

Hypothesis 4 tested the impact of parental religiosity on different cohorts. On the one hand, we found that younger generations are less religious than older generations, consistent with declining socialization across cohorts found some in some research (e.g., Stolz et al. 2021), but not in line with some country-specific studies of Catholics (e.g., Clements and Bullivant 2022). On the other hand, we found that childhood religiosity has stronger effects for younger cohorts compared to older cohorts. So, Hypothesis 4 is partially supported. The separate effect for childhood attendance from parent attendance may be due to differences of perception since youth still live mostly with their parents. In other words, probably youth could remember better if their parents attended religious services when they were children than the other cohorts. This likely results from the lingering influence of parental socialization in the former case.

Our fifth hypothesis tested the impact of parental religiosity on offspring religiosity across different countries. We found that childhood attendance has stronger effects in former communist countries in Eastern Europe relative to Western Europeans ones (confirming Hypothesis 5). This supports a well-established contrast between religiosity in Eastern and Western European countries (e.g., Pollack and Rosta 2017), but brings additional evidence for this from the specifically Catholic case. It suggests that in contexts where religion's role in the broader society is eroded, the imprint of parental socialization on the offspring will likely be greater (Kelley and De Graaf 1997).

Overall, this study confirms past research showing that parental religiosity impacts adults' religiosity and the relevance of religious transmission studies (e.g., Storm and Voas 2012) for understanding the determinants of high religiosity at the micro-level in modern societies nowadays. Put differently, individuals whose parents were religious when they were children are more likely to be religious as adults compared to individuals who grow up with nonreligious parents.

At the same time, our study adds novelty to the literature in two important respects. First, to the best of our knowledge, this research represents the first study to investigate the factors associated with religious transmission in Europe within the world's largest Christian religious group (Allen 2014). More specifically, we examine the socializing effects of multiple predictors including (1) childhood attendance, (2) mother's attendance, (3) father's attendance, and (4) parental religious self-identification on four different religious outcomes. As such, it makes an important empirical contribution to extant research by considering the Catholic subgroup beyond the dominant US one, which itself has a Protestant-heavy emphasis (Smith et al. 2014). Additionally, by comparing countries with and without an historical experience of communism we show that socializing effects differ across these contexts, highlighting an important situational conditioning factor for religious transmission. Second, although we show that general factors associated with religious transmission also apply within this specific confessional tradition (e.g., religious

homophily), it is also the case that there seem to be some Catholic-specific transmission influences. This suggests that the religious socialization perspective should be understood more in religious tradition-specific terms. More specifically, we show that both dimensions of prior religiosity (own religiosity as a child and parental religiosity) have independent explanatory effects. In other words, religiosity as a child helps predict adults' religiosity separate from the impact of parental religiosity. Additionally, we show that the religiosity of the father has a greater impact on offspring religiosity than the religiosity of the mother and provide support for this interesting finding beyond the US-specific context of past research on Catholic fathers' socializing effects (e.g., Baker-Sperry 2001). Having both Catholic parents also increases the chances of positive religious transmission relative to having only one Catholic parent.

Even so, the study also has some shortcomings that invite further research. First, although the ISSP data provides several transmission-specific measures not available in other datasets, our data are cross-sectional and thus we are unable to tease out the possibility of reverse causal effects. Additionally, the study relies on retrospective data, which may suffer from recall issues (Smith et al. 2014). Second, while this study reveals that transmission factors within Catholicism are potentially similar to and different from other religious traditions, future work could investigate this further by comparing the Catholic case with other religious groups. Third, future research could pay more attention to better understanding changing family dynamics that might contribute to increasing the socializing effects of fathers on their offsprings' religiosity than before.

ACKNOWLEDGMENT

Open access funding provided by IReL.

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APPENDIX

This appendix accompanies the article "Individual-Level Determinants of Religious Intergenerational Transmission: Evidence from Catholic Europe." It presents additional analysis concerning the religious identification of the parents and the descriptives of the variables used in the analyses.

All data regarding sampling procedures, field work and response rates can be found in the *ISSP 2018 Study Monitoring Report* (see https://www.gesis.org/en/issp/modules/issp-modules-by-topic/religion/2018).

Table A1 presents the relationship between the religious identification of the parents and the self-identification with Catholicism (0/1) of the respondent.

In general, if both parents identified as Catholic, a respondent has a 78.5% chance of self-identifying as Catholic. There are, however, interesting country differences to this pattern. In Croatia, for example, nearly all respondents whose both parents identified as Catholics, identify themselves as Catholic, compared to only 55.5% in France. In most countries, if only one parents was Catholic, the chance that the respondent identified as Catholic is higher when the mother rather than the father is/was Catholic. Croatia and Slovenia are exceptions to this pattern.

Table A1. Relationship Between Respondent's Identification as Catholic and the Religious Identification of the Parents

	% Catholic for three conditions		
Country	Both parents are Catholic	Mother Catholic	Father Catholic
France	55.5	34.8	28.6
Czech Republic	61.0	21.3	10.0
Switzerland	68.5	21.8	8.9
Austria	72.5	28.1	26.9
Spain	74.6	41.8	20.7
Slovenia	76.8	29.3	37.9
Slovak Republic	81.4	37.5	27.3
Germany	83.3	39.8	23.7
Italy	84.8	43.2	42.9
Hungary	88.4	51.6	27.8
Lithuania	92.9	62.2	20.0
Croatia	95.8	60.0	70.4
Total sample (N = 9,319)	78.5	35.9	23.9

Table A2. Descriptive Statistics for the Variables Included in the Analysis (N = 9,319)

Categorical variables	%		%
Gender		Education	
Female	53.9	Lower secondary or less	61.0
Male	46.1	Secondary	14.0
Age		Tertiary	25.0
15–34	20.8	Work status	
35–64	54.2	Does not work	44.3
65 or older	25.0	Works	55.7
Religious identification			
Both parents Catholic	85.7		
Only mother Catholic	9.3		
Only father Catholic	5.0		

Continuous variables[a]	Min.	Max.	Mean	SD
Subjective health	1	5	2.691	1.016
Subjective social status	1	10	5.506	1.621
Religious self-perception[b]	1	7	3.990	1.583
Prayer	1	11	4.800	3.553
Church attendance now	1	9	3.396	2.383
Church attendance during late childhood	1	9	5.526	2.458
Church attendance mother	1	9	5.318	2.485
Church attendance father	1	9	4.501	2.625
Factor scales (based on PCA)				
Belief in God (three items)	−1.582	1.915	0	1

[a]All continuous variables were mean-centered and rescaled to a 0–1 continuum.
[b]For the analysis, we reverse coded this variable so that higher values reflect higher levels of religiosity.
Abbreviation: PCA, principal component analysis.