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Research paper

Cultural origins of preventive health care utilization☆

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ABSTRACT

We examine whether preventive health care uptake varies with cultural background related to patience and risk-taking. We combine individual-level survey data on preventive care use from 27 European countries with country-level preference measures from the Global Preferences Survey. To reduce confounding from institutional and economic correlates of culture, we focus on second-generation immigrants, who were born and currently reside in the same country – and thus face the same health care system and broad economic environment – but differ in inherited cultural background through their parents' countries of origin. We find that respondents from more patient cultural backgrounds are more likely to use preventive services, while those from more risk-tolerant backgrounds are less likely to do so. These patterns appear across multiple preventive care outcomes.

1. Introduction

Preventive care is a cornerstone of modern healthcare systems. Services such as vaccinations, routine check-ups, and screenings help reduce morbidity and mortality by enabling early detection and timely treatment (Maciosek et al., 2006; OECD, 2020).[1] Yet despite these well-documented benefits, uptake remains incomplete even in health care systems with universal coverage and no out-of-pocket costs (e.g., Carrieri and Bilger, 2013; Patel et al., 2020). Understanding why many individuals forgo preventive care is crucial for designing effective health policy and for reducing avoidable health burdens, but the underlying drivers are not yet fully understood.

This paper examines whether cultural heritage helps explain individual variation in preventive care uptake.[2] A large literature in economics shows that preferences are transmitted across generations and that such culturally transmitted preferences shape important economic behaviors, including educational investment, labor market choices, entrepreneurship, and financial risk-taking (e.g., Dohmen et al., 2012; Fernández and Fogli, 2009; Figlio et al., 2019; Hanushek et al., 2022; Hartinger et al., 2024; Bietenbeck

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[1] Preventive services do not necessarily save money; rather they can be viewed as a form of insurance that involves certain upfront costs in exchange for uncertain future payoffs (Newhouse, 2021).

[2] Culture can be defined as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation" (Guiso et al., 2006). In this paper, we use cultural heritage to refer broadly to inherited beliefs, values, norms, and preferences. For theoretical frameworks of cultural transmission, see Bisin and Verdier (2001, 2025).

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et al., 2026; Jonsson and Ouyang, 2023; Ek et al., 2025). We ask whether this pattern extends to preventive care use. In particular, we focus on cultural background related to patience and risk-taking, which is likely to be especially relevant in this context because preventive services often involve immediate inconvenience, discomfort, and time investment in exchange for probabilistic health gains that may materialize only in the future. This trade-off is central to standard models of health investment, where more patient individuals are more willing to bear short-term costs for long-term benefits, and more risk-averse individuals are more likely to adopt preventive behaviors to reduce uncertainty about future health outcomes (e.g., Grossman, 1972; Picone et al., 1998).

Assessing the role of preference-related cultural background in preventive care use is empirically challenging, as culture is correlated with institutional quality and economic conditions.[3] To address this challenge, we adopt the widely used epidemiological approach pioneered by Fernández and Fogli (2009), Fernández (2011). The core idea of this approach is that when people emigrate, they leave behind their original institutional and economic environment but retain elements of their native culture, which they then transmit to their children. Therefore, by focusing on second-generation immigrants who were born, raised, and currently reside in the same country, but whose parents come from culturally distinct backgrounds, we can separate variation in cultural heritage from the surrounding institutional and economic context. This approach holds fixed the broad economic environment and health care system in which preventive care decisions are made, although the resulting estimates may still reflect other country-of-origin factors correlated with patience and risk-taking, an issue that we return to below.

We implement the epidemiological approach using individual-level data from the Survey of Health, Ageing and Retirement in Europe (SHARE), which covers individuals aged 50 and above. This population is particularly well suited for studying preventive care uptake, as they are directly targeted by public health recommendations. We focus on four preventive services observed in the data: flu vaccination, eye examination, colon cancer screening, and mammography. These measures are especially relevant for older adults, as they target conditions that become increasingly common with age and that have substantial downstream effects on health, functioning, and independence. For example, influenza remains a leading cause of hospitalization and mortality in later life (Marchi et al., 2023), while vision impairment is linked to declines in physical and social functioning and to higher risks of falls and frailty (Christ et al., 2014; Ehrlich et al., 2021; Varadaraj et al., 2022). Consistent with this, most European countries recommend seasonal influenza vaccination for individuals aged 65 and older and routine breast and colorectal cancer screening starting at age 50 (Schreuders et al., 2015; Ebell et al., 2018; Mereckiene, 2018; Ren et al., 2022). The WHO also recommends regular eye examinations for adults aged 50 and above (World Health Organization, 2022).

Our outcomes are binary indicators for whether a respondent used each of the four preventive services. In addition, we construct a summary index of preventive care utilization. This index improves statistical power when effects are expected to move in the same direction and mitigates concerns about multiple hypothesis testing across the individual services. To measure cultural background related to patience and risk-taking, we draw on the Global Preferences Survey (GPS), which provides experimentally validated measures of patience and risk-taking for nationally representative samples in 76 countries. Using information in SHARE on both respondents' and their parents' countries of birth, we restrict the sample to second-generation immigrants and assign to each individual the average levels of patience and risk-taking in their parents' country of origin.

Our regressions relate preventive care use to patience and risk-taking measured in the parents' countries of origin, controlling flexibly for age and country-of-residence fixed effects. We find that respondents from more patient cultural backgrounds are more likely to use preventive care, whereas those from more risk-tolerant backgrounds are less likely to do so. These patterns appear across multiple outcomes.[4] For example, a one standard deviation (SD) increase in patience in the parental country of origin is associated with a 2.2 percentage point (pp) increase in influenza vaccination, while a one SD increase in risk-taking in the parental country of origin is associated with a 3.2 pp decrease. For the summary index, a one SD increase in patience is associated with a 0.081 SD increase, and a one SD increase in risk-taking with a 0.069 SD decrease.

In additional analysis, we examine heterogeneity by gender and probe the robustness of the results. The associations tend to be larger for women, especially for patience, although formal tests generally do not reject equality of the coefficients across women and men. The estimates remain similar when controlling for potential origin-country correlates of patience and risk-taking, including GDP per capita, trust, other cultural indices, and disease-specific health environments. Moreover, the estimates remain similar in sensitivity checks related to migrant selection, residential sorting, and unobserved individual heterogeneity, including checks that add individual- and family-background controls, account for migration-distance measures, and control flexibly for urbanicity within countries. Taken together, these results show that preventive care uptake varies systematically with cultural background related to patience and risk-taking.

This paper contributes to a large literature on the determinants of preventive care utilization. Descriptive studies commonly find that individuals with higher income and education are more likely to use preventive services (e.g., Cutler and Lleras-Muney, 2010; Walsh et al., 2012; Jain et al., 2017; Quintal and Antunes, 2022), although exceptions exist (e.g., Patel et al., 2020). Causal evidence shows that expanding insurance coverage (Baicker et al., 2013; Simon et al., 2017; Soni, 2020), mandating coverage of preventive services (Bitler and Carpenter, 2016), and interventions that increase awareness of their benefits (Kacker et al., 2022) can each raise uptake. To our knowledge, no previous study has examined whether preventive care use varies systematically with cultural heritage.

[3] By preference-related cultural background, we refer to dimensions of cultural background proxied by average patience and risk-taking in the parents' countries of origin.

[4] For mammography, the coefficient on patience is negative but not statistically significant. The association with risk-taking is consistent with the other outcomes.

Our paper also relates to a smaller literature studying cultural heritage and health-related behaviors and outcomes. Gentili et al. (2017) show that culture matters for long-term care arrangement decisions, while Casabianca and Kovacic (2024) document historical roots of loneliness and its consequences for second-generation immigrants' health. We complement this work by studying preventive care use and by focusing on patience and risk-taking as preference-related dimensions of cultural background that are theoretically relevant for preventive health behavior.

Our paper further contributes to research linking individual time and risk preferences to health behaviors. Most existing studies focus on risky or protective behaviors rather than preventive care. More patient individuals are consistently found to be less likely to smoke, consume alcohol, or be obese (e.g., Chen, 2013; Sutter et al., 2013; Golsteyn et al., 2014; Norrgren, 2022), while more risk-tolerant individuals are more likely to engage in these behaviors (e.g., Anderson and Mellor, 2008; Dohmen et al., 2011; Falk et al., 2018). A notable exception is Picone et al. (2004), who find that more patient individuals are more likely to undergo breast cancer screening in the United States. We extend this literature by examining multiple preventive services and by focusing on preference-related cultural background, rather than individually elicited preferences.

Finally, the preventive services we examine are relevant for older adults and have been linked to important downstream health outcomes. Influenza vaccination reduces influenza-related morbidity and mortality among older adults (Marchi et al., 2023; Ferdinands et al., 2024; Brilli et al., 2020). Evidence on population-based cancer screening is more mixed, with some studies documenting reductions in cancer-specific mortality but little effect on overall mortality (Nelson et al., 2016; Kowalski, 2021; Bretthauer et al., 2022). Routine eye examinations can facilitate early detection of vision changes associated with age-related macular degeneration, glaucoma, cataracts, and other common causes of visual decline in later life (Al-Namaeh, 2022; Mangione et al., 2022; Vitale et al., 2006).[5] While our analysis does not evaluate the health effects of these services, this evidence underscores the policy relevance of understanding why uptake remains incomplete.

2. Data and descriptive statistics

2.1. SHARE data

Our primary data source is SHARE (Börsch-Supan et al., 2013; SHARE-ERIC, 2024), a multidisciplinary longitudinal study that collects harmonized data on individuals aged 50 and older across European countries. We use data from wave 8, which uniquely includes detailed information on preventive health care use not available in earlier waves. Fieldwork was conducted in 27 countries between October 2019 and early March 2020, before being suspended due to COVID-19-related restrictions. This timing ensures that our measures of preventive care utilization are unaffected by pandemic-related disruptions.[6]

Our outcome variables measure utilization of four preventive services. Respondents were asked whether they had (i) received a flu vaccination in the past year, (ii) undergone an eye examination in the past two years, (iii) been screened for colon cancer in the past two years, and (iv) (for women) received a mammogram in the past two years. We first construct four binary indicators, coded one if the respondent reported using the respective service and zero otherwise. Based on these, we create a summary index of preventive care use combining the flu vaccination, eye exam, and colon cancer screening measures, excluding mammography since it only covers women.[7] The index mitigates concerns about multiple hypothesis testing and improves statistical power when effects are expected to move in the same direction. Following Kling et al. (2007), we construct the index by standardizing each component to have mean zero and standard deviation one, averaging the standardized values, and re-standardizing the result.

SHARE also provides rich demographic background information, including respondents' own country of birth as well as that of their mother and father. We identify second-generation immigrants as individuals who were born in their current country of residence but have at least one parent born abroad. In addition, we extract standard socio-demographic controls: age, sex, respondents' and their parents' educational attainment, marital status, and monthly net household income.

2.2. Country-level culture data

To measure patience and risk-taking in respondents' parents' countries of origin, we use data from the GPS (Falk et al., 2018), which provides harmonized measures of time and risk preferences collected in 2012 for nationally representative samples in 76 countries. These measures are based on survey items selected for their ability to predict incentivized behavior in laboratory experiments (see Falk et al., 2023). The patience score combines responses to a five-item staircase procedure involving hypothetical intertemporal trade-offs and a Likert-scale self-assessment of willingness to delay gratification. Risk-taking is measured analogously, combining responses to five binary lottery-versus-certain-payment choices and a self-reported general risk attitude. Higher patience scores indicate greater willingness to delay gratification, while higher risk-taking scores reflect greater risk tolerance. Both scores are standardized to have mean zero and standard deviation one in the full GPS data. Our main analysis uses country-level averages of these scores and assigns them to respondents based on their parents' countries of origin, as described below. As a robustness

[5] While evidence on the benefits of population-based vision screening is limited, effective treatments exist for conditions that can be detected through routine eye exams, such as vision correction or interventions that slow disease progression (Chou et al., 2022).

[6] Later in 2020, SHARE launched a shortened telephone-based "Corona Survey", followed by wave 9 in 2021–2022. As both were conducted under pandemic conditions likely to affect preventive care use, we exclude them from our analysis.

[7] Including mammography in a gender-specific version of the index yields similar results.

exercise, we also compute country-level averages using only GPS respondents aged 60 or older, which may better approximate the cohorts from which the parental generation in our SHARE sample originated.

We also include additional country-level cultural variables as controls in robustness checks. First, we use the GPS measure of trust, given its relevance to health care relationships (Arrow, 1963). Second, we incorporate two cultural indices from Hofstede (2001), Hofstede et al. (2010) that may relate to preventive care: long-term orientation (linked to patience) and uncertainty avoidance (linked to risk attitudes).[8] Lastly, we control for 1995 GDP per capita from the World Development Indicators to account for economic development, and age-standardized disease-specific prevalence, incidence and mortality rates from the Global Burden of Disease study 2019 (Global Burden of Disease Collaborative Network, 2022; Murray, 2024) to account for cross-country differences in exposure to health-related risks.

2.3. Sample construction and descriptive statistics

We define second-generation immigrants as individuals who are born in the country of interview but have at least one parent born abroad. We restrict the sample to second-generation immigrants in SHARE and assign to each individual the average patience and risk-taking scores of the foreign-born parent's country of birth, or the average across both foreign-born parents' countries of birth when both parents were born abroad. We further exclude individuals whose parents were born in countries not covered by the GPS, as well as those with missing data on flu shot, eye exam, or colon cancer screening.[9] The final sample comprises 3000 individuals residing in 27 countries, with parental origins from 45 different countries.

Table 1 presents summary statistics of key variables for this sample. Respondents are, on average, 68 years old. Reflecting this age profile, preventive care utilization is relatively common, though uptake is far from universal: 32 percent received a flu shot in the past year, 57 percent had an eye exam in the past two years, 30 percent were screened for colon cancer, and 50 percent of women underwent mammography in the same period. The average patience score is 0.16 (SD = 0.33), and the average risk-taking score is −0.12 (SD = 0.15). To facilitate interpretation, regression analyses use standardized versions of these scores, normalized to have mean zero and standard deviation one. Appendix Figure A.1 displays the distribution of average patience and risk-taking scores across countries of origin in our sample.

3. Empirical strategy

Our empirical strategy compares preventive care utilization among second-generation immigrants who were born in, and currently reside in, the same country. This comparison separates cultural variation linked to parental origin from the broad economic environment and national health care system in which preventive care decisions are made. Our main specification relates an individual's preventive care utilization to patience and risk-taking measured in the parents' countries of origin. We include both preference measures in the same regression to account for the fact that time and risk preferences are conceptually and empirically intertwined (Andreoni and Sprenger, 2012; Hanushek et al., 2022). We estimate regressions of the form:

$$Y_{ioc} = \beta_1 Patience_o + \beta_2 RiskTaking_o + \mathbf{AGE}_i'\gamma + \mathbf{X}_{ioc}'\delta + \lambda_c + \varepsilon_{ioc}, \quad (1)$$

where Y_{ioc} denotes a preventive care outcome for individual i, residing in country c, whose parents come from origin countries o. The variables $Patience_o$ and $RiskTaking_o$ refer to the average patience and risk-taking scores in the parents' countries of birth. $\mathbf{AGE}_i$ is a vector of single-year age dummies and $\mathbf{X}_{ioc}$ is a vector of additional controls. In the baseline specification, $\mathbf{X}_{ioc}$ includes interview-month-by-year fixed effects and, where applicable, a female dummy. The term λ_c denotes country-of-residence fixed effects, so that the coefficients on patience and risk-taking are estimated from differences between second-generation immigrants living in the same country.[10] We estimate regressions by OLS and cluster standard errors at the country-of-origin level.

A preference-based interpretation of the coefficients on patience and risk-taking requires two qualifications. First, origin-country preference measures may be correlated with other country-of-origin characteristics, such as other cultural traits, differences in economic development, or health environments in the parents' countries of origin. We examine the sensitivity of the results to this concern by controlling for several of the most direct origin-country correlates, including GDP per capita, trust, other cultural indices, and disease-specific health environments. Second, differences across origin groups may reflect individual- or family-level characteristics beyond cultural transmission. Migrants are selected from their origin populations, and selection may differ systematically across countries of origin (e.g., Knudsen, 2024; Bertoli et al., 2025). In addition, descendants of immigrants from different origins may sort into different neighborhoods or socioeconomic environments within the same country of residence. We

[8] Data on the indices come from https://geerthofstede.com/research-and-vsm/dimension-data-matrix/. While these indices may appear conceptually similar to the GPS measures, they are based on non-representative samples (primarily IBM employees) and include items only loosely related to preferences. For instance, long-term orientation includes agreement with the statement "I am proud to be a citizen of my country". By contrast, the GPS measures directly elicit preferences using experimentally validated questions in representative national samples (Falk et al., 2018).

[9] If both parents are foreign-born but only one parent's country of origin is covered by the GPS, we assign the preference scores of the covered parent's country of origin. More generally, when control variables are missing, we impute sample means and include missing-value indicators in the regressions to preserve sample size.

[10] This comparison is related to movers designs that use migration to separate place-based factors from individual or origin-specific factors. Whereas movers studies typically compare individuals from the same origin who move to different destinations to study the role of places (e.g., Finkelstein et al., 2016, 2021), our approach makes the complementary comparison: we compare individuals with different parental origins who live in the same country.

Table 1
Summary statistics.

	Mean	SD
Socio-demographic characteristics		
Age	67.79	9.55
Female	0.58	0.49
Own education:		
At most primary	0.08	0.28
Secondary	0.61	0.49
College	0.30	0.46
Highest parental education:		
At most primary	0.33	0.47
Secondary	0.52	0.50
College	0.15	0.36
Married	0.66	0.47
Household net income (EUR/month)	3430.05	9041.45
Cultural heritage		
Patience (raw)	0.16	0.33
Patience (std.)	0.00	1.00
Risk-taking (raw)	−0.12	0.15
Risk-taking (std.)	0.00	1.00
Preventive care utilization		
Flu shot past year	0.32	0.47
Eye exam past 2 years	0.57	0.50
Colon cancer screening past 2 years	0.30	0.46
Mammogram past 2 years (women only)	0.50	0.50
Summary index	0.00	1.00
Sample information		
No. of individuals	3000	
No. of countries of origin	45	

Notes: The table shows means and standard deviations of key variables used in the empirical analysis.

examine the sensitivity of the results to these concerns through checks that add rich individual- and family-background controls, account for migration-distance measures and origin-group size, and control flexibly for urbanicity within countries.

Overall, while these robustness and sensitivity checks speak to several observable sources of potential confounding at both the country-of-origin and individual levels, they cannot rule out selection on unobservables or all alternative explanations. We therefore interpret our estimates as associations between preventive care use and patience and risk-taking measured in the parents' countries of origin, while recognizing that they may also capture other origin-linked cultural or individual-level factors correlated with these preferences. The empirical analysis therefore speaks to whether preventive care uptake varies systematically with preference-related cultural background, while remaining agnostic about the precise contribution of patience and risk-taking relative to correlated origin-linked factors.

4. Results

4.1. Main results

Table 2 presents the main results, beginning with the summary index of preventive care utilization and followed by the individual services. Panel A shows estimates from the baseline specification. For the index, a one SD increase in patience in the parental country of origin is associated with a statistically significant 0.081 SD increase. Consistent with this pattern, patience is positively, though modestly, related to three of the four underlying components of the index: a one SD increase in patience is associated with a 2.2 pp higher likelihood of receiving a flu shot, a 2 pp higher likelihood of having an eye exam, and a 3.2 pp higher likelihood of undergoing colon cancer screening. For mammography, by contrast, the estimate is slightly negative but not statistically significant. Risk-taking in the parental country of origin shows the opposite pattern. A one SD increase in risk-taking corresponds to a 0.069 SD decline in the summary index, and the coefficients on the individual services are all negative, although small in magnitude.

Panel B adds controls for respondent education, mother's education, father's education, marital status, and household income to the specifications from Panel A. These variables address concerns that the baseline associations reflect differences in socioeconomic status or family background, both of which are known to be associated with preventive health care utilization. Including these controls leaves the main coefficients largely unchanged: the patience coefficient on the summary index declines from 0.081 to 0.071, while the risk-taking coefficient changes from −0.069 to −0.065. However, previous research suggests that at least some of these variables are themselves shaped by cultural background (e.g., Hanushek et al., 2022), rendering them "bad controls". We therefore treat Panel B as a robustness check and revert to the baseline specification in subsequent analyses.

A natural question is whether the associations differ between women and men, given well-documented gender differences in health behaviors and interactions with the health care system. Appendix Table A.1 reports estimates separately by gender and

Table 2
Main results.

	Summary index (1)	Flu shot (2)	Eye exam (3)	Colon c. screening (4)	Mammo-gram (5)
Panel A: baseline specification					
Patience (std.)	0.081***	0.022*	0.020*	0.032**	−0.011
	(0.028)	(0.012)	(0.012)	(0.015)	(0.016)
Risk-taking (std.)	−0.069***	−0.032***	−0.021**	−0.011	−0.026
	(0.020)	(0.010)	(0.009)	(0.012)	(0.017)
Panel B: controlling for socio-demographic characteristics					
Patience (std.)	0.071**	0.022*	0.012	0.031**	−0.015
	(0.027)	(0.011)	(0.011)	(0.015)	(0.015)
Risk-taking (std.)	−0.065***	−0.032***	−0.017*	−0.011	−0.024
	(0.019)	(0.010)	(0.009)	(0.012)	(0.016)
Observations (both panels)	3000	3000	3000	3000	1728

Notes: The table reports estimates from regressions of preventive care utilization on patience and risk-taking measured in the parents' countries of origin. All specifications include country-of-residence fixed effects, single-year age fixed effects, interview-month-by-year fixed effects, and a female dummy, where applicable. Panel B additionally controls for respondent education, mother's education, father's education, marital status, and household income. Education is measured using three categories: at most primary, secondary, and tertiary. Standard errors (in parentheses) are clustered by country of origin (45 clusters).

* $p<0.10$.

** $p<0.05$.

*** $p<0.01$.

formally tests equality of the coefficients across subsamples. The general pattern – that patience is positively related to preventive care use and risk-taking is negatively related – appears for both women and men. The point estimates tend to be larger for women, especially for patience. For example, patience is associated with a 0.114 SD increase in the summary index among women, compared with a 0.043 SD increase among men. However, formal tests generally do not reject equality of the coefficients across women and men, preventing us from drawing firm conclusions about whether the associations differ by gender.

The results are consistent with previous evidence showing that cultural heritage is associated with economic behavior (e.g. Fernández and Fogli, 2009; Hanushek et al., 2022; Bietenbeck et al., 2026) and with standard models of health investment (e.g. Grossman, 1972; Picone et al., 1998), which highlight how health care decisions reflect trade-offs between immediate costs and uncertain future benefits. They also align with evidence that time and risk preferences are transmitted across generations; for example, Dohmen et al. (2012) show strong parent–child correlations in both general and health-related risk attitudes. By documenting systematic associations between patience and risk-taking in the parental country of origin and multiple preventive care outcomes, our study extends evidence on the behavioral relevance of cultural background to preventive health care use.

4.2. Robustness checks

We conduct several robustness checks to assess the sensitivity of our findings to alternative specifications, sample restrictions, and potential sources of confounding. We first examine sensitivity to other country-of-origin characteristics correlated with patience and risk-taking. Fig. 1 augments the baseline specification with additional origin-country controls, including GDP per capita, trust, long-term orientation, and uncertainty avoidance. The point estimates for both patience and risk-taking remain stable when these covariates are added, although confidence intervals widen somewhat, likely due to multicollinearity between country-level preferences and other origin-country characteristics. As a further check, Appendix Table A.2 controls for disease-specific prevalence, incidence, and mortality rates in the countries of origin. This exercise speaks to the concern that origin-country disease environments may be correlated with both our preference measures and preventive care uptake. The estimates remain similar when these disease-burden controls are added.

We next examine sensitivity to migrant selection and residential sorting within countries. Table 3 reports these checks. Panel A adds continent-of-origin fixed effects, thereby absorbing broad differences across major origin regions, including migration histories and selection patterns. Panel B controls for geographic distance between the country of origin and the country of residence, a standard proxy for migration costs and migrant selection in epidemiological designs.[11] Panel C controls flexibly for place of residence by interacting country-of-residence fixed effects with a five-level measure of urbanicity. This check speaks to the possibility that descendants of immigrants from different origins sort into different types of local environments within the same country, including urban or rural areas with different networks, socioeconomic composition, or access to care. Across these checks, the estimates remain similar to the baseline and, in several cases, become larger and more precisely estimated. However, these exercises rely on observable proxies and therefore cannot rule out migrant selection or residential sorting on unobserved dimensions.

[11] Appendix Table A.3 shows that the results are also robust to controlling for linguistic distance between the country of origin and the country of residence, an alternative proxy for migration and integration costs.

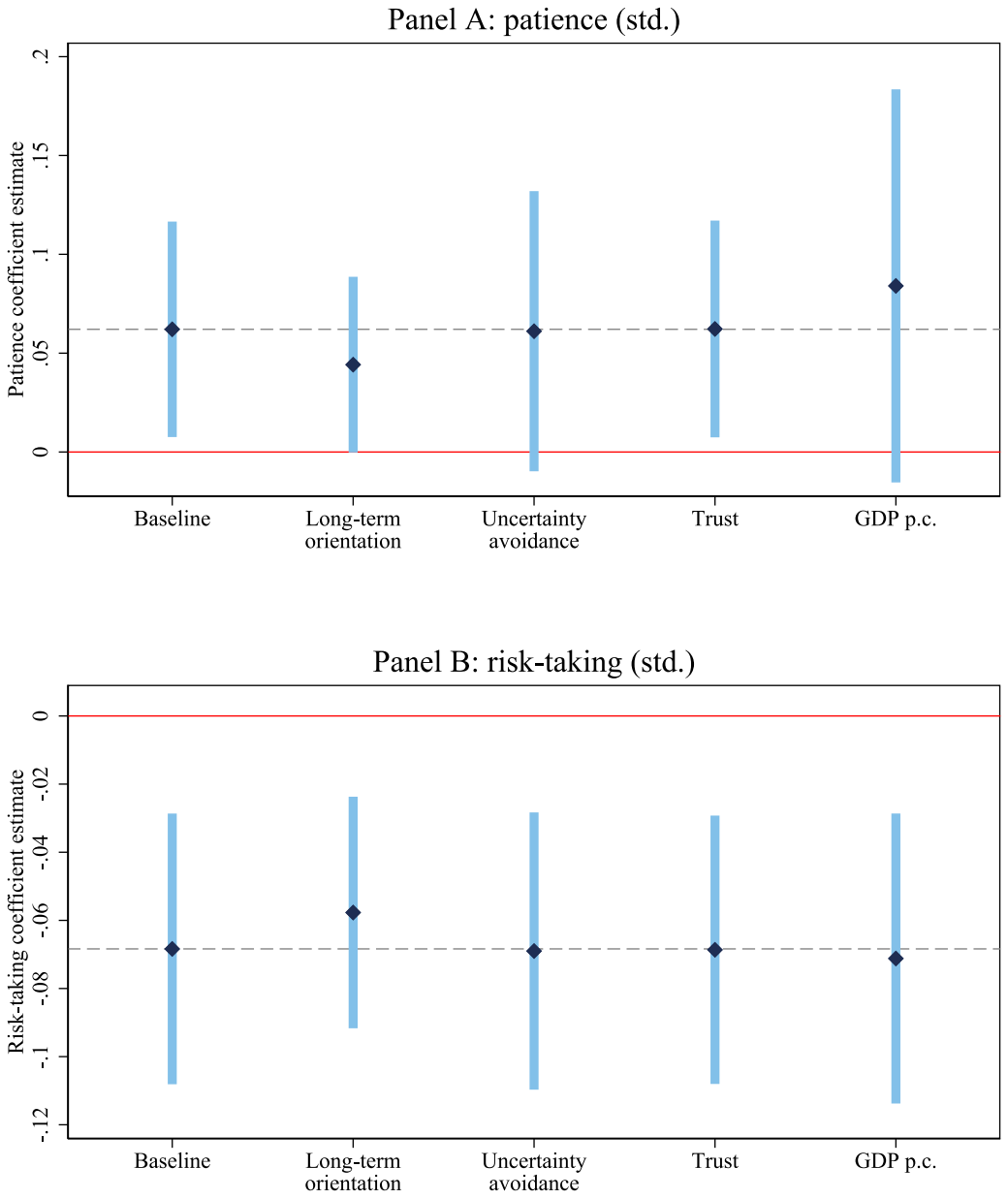

Fig. 1. Controlling for other country-of-origin variables.
Notes: The figure displays point estimates and 95 percent confidence intervals from regressions of the summary index of preventive care utilization on patience measured in the parents' countries of origin (Panel A) and risk-taking measured in the parents' countries of origin (Panel B). In each panel, the leftmost coefficient and dashed line reproduce the main estimate from column 1 of Panel A in Table 2. The remaining coefficients are from regressions that include the country-of-origin variable indicated on the horizontal axis as an additional control.

We also examine whether the results are sensitive to origin-group size and the timing of preference measurement. Panel D excludes country-of-residence-by-country-of-origin cells with fewer than ten observations. This addresses the concern that estimates may be disproportionately influenced by small origin groups, whose characteristics may be more sensitive to idiosyncratic composition. Panel E addresses the temporal alignment of the preference measures. Although cultural traits tend to be highly persistent (e.g., Voigtländer and Voth, 2012; Fernández and Fogli, 2009; Giuliano, 2007), the GPS data were collected in 2012, whereas the parents of our respondents typically emigrated decades earlier. We therefore recompute origin-country patience and

Table 3
Robustness checks.

	Summary index (1)	Flu shot (2)	Eye exam (3)	Colon c. screening (4)	Mammo-gram (5)
Panel A: controlling for continent-of-origin fixed effects					
Patience (std.)	0.065*	0.013	0.022	0.024	–0.035**
	(0.033)	(0.016)	(0.013)	(0.016)	(0.015)
Risk-taking (std.)	–0.056*	–0.025*	–0.023*	–0.004	0.008
	(0.030)	(0.014)	(0.013)	(0.015)	(0.016)
Panel B: controlling for geographic distance					
Patience (std.)	0.079***	0.021*	0.020*	0.031**	–0.014
	(0.027)	(0.012)	(0.011)	(0.014)	(0.016)
Risk-taking (std.)	–0.068***	–0.031***	–0.021**	–0.011	–0.026
	(0.020)	(0.010)	(0.008)	(0.012)	(0.018)
Panel C: controlling for country × urbanicity fixed effects					
Patience (std.)	0.090***	0.024*	0.027**	0.031*	–0.010
	(0.030)	(0.013)	(0.011)	(0.016)	(0.016)
Risk-taking (std.)	–0.081***	–0.034***	–0.026***	–0.014	–0.030
	(0.023)	(0.011)	(0.008)	(0.013)	(0.018)
Panel D: dropping small residence × origin cells					
Patience (std.)	0.107***	0.037**	0.031**	0.030	0.009
	(0.029)	(0.017)	(0.014)	(0.019)	(0.017)
Risk-taking (std.)	–0.068**	–0.028*	–0.030***	–0.005	–0.046**
	(0.030)	(0.015)	(0.009)	(0.017)	(0.017)
Panel E: patience and risk-taking of population aged ≥ 60 in country of origin					
Patience (pop. aged ≥ 60, std.)	0.074**	0.016	0.022	0.031*	–0.015
	(0.036)	(0.018)	(0.016)	(0.017)	(0.017)
Risk-taking (pop. aged ≥ 60, std.)	–0.095**	–0.042***	–0.025**	–0.020	–0.053***
	(0.037)	(0.015)	(0.012)	(0.020)	(0.018)
Observations (Panels A–C and E)	3000	3000	3000	3000	1728
Observations (Panel D)	2444	2444	2444	2444	1424

Notes: The table reports estimates from regressions of preventive care utilization on patience and risk-taking measured in the parents' countries of origin. All specifications build on the baseline model from Panel A of Table 2 and include country-of-residence fixed effects, single-year age fixed effects, interview-month-by-year fixed effects, and, where applicable, a female dummy. Panel A additionally includes continent-of-origin fixed effects. Panel B controls for geographic distance between the country of origin and the country of residence. Panel C interacts country-of-residence fixed effects with a five-level measure of urbanicity. Panel D excludes country-of-residence-by-country-of-origin cells with fewer than 10 observations. Panel E uses average patience and risk-taking scores among GPS respondents aged 60 and above in the country of origin. Standard errors (in parentheses) are clustered by country of origin.

* $p<0.10$.

** $p<0.05$.

*** $p<0.01$.

risk-taking scores using only GPS respondents aged 60 years or older. Across both checks, the estimates remain similar to the baseline.[12]

5. Conclusion

Many European countries recommend preventive services such as flu vaccinations and cancer screenings for older adults and offer them free of charge. Still, uptake remains far from complete. Understanding why some people forgo these services is essential for improving population health and designing effective policy.

This paper provides new evidence that preventive care utilization varies systematically with cultural background related to patience and risk-taking. Using an epidemiological approach, we compare second-generation immigrants who were born in, and currently reside in, the same country but differ in parental countries of origin. We find that respondents from more patient cultural backgrounds are more likely to use preventive services, whereas those from more risk-tolerant backgrounds are less likely to do so. These patterns appear across multiple preventive care outcomes and remain similar across a range of robustness and sensitivity checks. The magnitudes are modest; for example, a one standard deviation higher patience in the parental country of origin is associated with roughly a 2–3 percentage point higher likelihood of using specific preventive services. This is perhaps unsurprising given that our sample consists of older second-generation immigrants, a group likely to have experienced cultural assimilation over the life course, and that intergenerational transmission of cultural traits is typically only partial (Chowdhury et al., 2022; Berggren et al., 2020). The patterns also align with standard models of health investment (e.g., Grossman, 1972; Picone et al., 1998), which emphasize that health care decisions require weighing short-term inconveniences against uncertain future benefits.

[12] In a further check in Appendix Table A.3, we show that results are robust when we restrict the sample to respondents with two foreign-born parents.

Our results should be interpreted as associations between preventive care use and preference-related cultural background, not as isolating the role of patience and risk-taking alone. Other origin-linked cultural or individual-level factors correlated with these preferences may also contribute to the observed patterns. With this qualification in mind, the findings suggest that cultural background is one factor associated with persistent differences in preventive health behavior. Recognizing such differences may help inform behaviorally informed prevention strategies that account for heterogeneity in attitudes toward risk, patience, and health investment.

Declaration of competing interest

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Appendix A. Supplementary data

Supplementary material related to this article can be found online at https://doi.org/10.1016/j.jebo.2026.107679.

Data availability

The authors do not have permission to share data.

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