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Informal Volunteering and Immigrant assimilation in the U.S.

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Abstract

This paper examines informal volunteering—unpaid help outside formal organizations—among immigrants in the U.S., using American Time Use Survey data (2003–2023). We compare immigrants with native-born individuals, focusing on gender, language proficiency, cultural proximity, and years since migration. First-generation immigrants, especially women, are significantly less likely to engage in informal volunteering. Language barriers and low cultural or religious similarity further reduce participation. Although assimilation occurs over time, second-generation women still lag behind native-born peers. These findings challenge the idea that informal volunteering is universally accessible and underscore the need for targeted policies to reduce barriers and enhance civic inclusion.

Keywords: Informal volunteering, time-use, immigrant, U.S., assimilation

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Data availability statement: The data that support the findings of this study are publicly available upon registration at the following link.

1. Introduction

Informal volunteering—unpaid help and support provided to non-household members outside of formal organizations—plays a vital role in fostering social cohesion, mutual aid, and well-being. Despite its substantial socio-economic value, particularly in contexts where public services are limited or strained, informal volunteering remains understudied, especially in relation to immigrants. This gap is significant given the growing size and diversity of immigrant populations in many Western countries, including the United States, where immigrants make up over 13% of the population and the overall value of volunteering was estimated at approximately $167.2 billion in 2023.[1] While formal volunteering—organized through institutions—has been widely studied, much less is known about how immigrants engage in informal helping behaviors and what factors facilitate or hinder their participation. Informal volunteering may play a crucial role in the early stages of immigrant integration, offering a flexible and culturally accessible means of building social connections, practicing language skills, and engaging with the host society outside formal institutions.

This study addresses this gap by investigating patterns of informal volunteering among immigrants[2] in the United States, using data from the American Time Use Survey (ATUS). We ask: **(1)** To what extent do immigrants differ from native-born individuals in their informal volunteering behaviors? **(2)** What roles do gender, language proficiency, and cultural or religious proximity to the host country play? **(3)** How do these patterns evolve across immigrant generations and with years of residence at destination? These questions are especially relevant as informal

[1] https://www.newamericaneconomy.org/feature/national-volunteer-week-how-much-do-immigrants-volunteer/#_ftn1

[2] An immigrant is defined as an individual born abroad with both parents being foreign-born. This definition encompasses naturalized citizens, lawful permanent residents, long-term temporary visitors, and undocumented immigrants. Unfortunately, aside from naturalization status, the ATUS does not provide sufficient information to distinguish between different sub-groups of immigrants.

volunteering is often seen as a low-barrier, spontaneous form of civic engagement—yet may still be shaped by deeper structural and social inequalities.

Differences between immigrants and native-born individuals in informal volunteering may arise from several sources. Immigrants may have limited access to broad and diverse social networks, lower levels of host-country language proficiency, and cultural norms that emphasize family-based reciprocity over outward-facing civic participation. Gender further complicates this picture, as immigrant women in particular may face a "double disadvantage", stemming from both gendered expectations and immigrant-specific barriers such as gender norms or time-use constraints.

Our analysis reveals several key findings. First, first-generation immigrants participate significantly less in informal volunteering than native-born individuals, particularly immigrant women. Second, language proficiency and cultural or religious proximity to the U.S. are strong predictors of participation, with lower levels in both dimensions associated with lower volunteering rates—especially among women. Third, we observe partial assimilation over time: immigrants who have resided in the U.S. for over 20 years and second-generation immigrants show smaller gaps in participation. However, second-generation females continue to volunteer at lower rates than their native-born counterparts, suggesting that gendered barriers to informal engagement persist even across generations.

These findings highlight the need to rethink informal volunteering as a form of civic participation that, while seemingly spontaneous and inclusive, is shaped by intersectional inequalities. From a policy perspective, promoting informal volunteering among immigrants—especially recent arrivals and women—requires targeted efforts to reduce linguistic and cultural barriers and to expand access to diverse social networks. Given the substantial estimated contribution of informal

volunteering to the national economy increasing immigrant participation is not only a question of inclusion but also of broader societal benefit.

The paper is structured as follows. *Section 2* outlines the theoretical framework and formulates testable hypotheses derived from it. *Section 3* describes the data employed in the analysis, while *Section 4* details the empirical strategy. *Section 5* presents the main empirical findings. A discussion of the findings and the concluding remarks are presented in *Section 6*.

2. Conceptual framework and hypothesis

2.1 Immigrants' participation in informal volunteering: motivations and differences with natives

While the literature on formal volunteering is extensive, research specifically addressing informal volunteering—typically defined as unpaid, non-institutionalized help extended to individuals beyond one's household—remains relatively underdeveloped (Greenspan & Walk, 2024; Handy & Greenspan, 2009). Several key gaps persist, particularly in the consistent definition and measurement of informal volunteering through conventional survey instruments (Dean, 2022; Woolvin & Hardill, 2013), as well as in understanding the motivations and barriers that shape participation in such activities (Einolf et al., 2016; Greenspan & Walk, 2024). In addition, the influence of social and cultural norms on informal volunteering remains understudied (Jang et al., 2016; Wang & Handy, 2014).

A growing strand of literature has focused on the participation of disadvantaged groups in informal volunteering. It is commonly argued that the dominant form of voluntary activity among these populations involves direct, one-to-one assistance rather than engagement through organized groups or institutions (Williams, 2002, 2003). For instance, Williams (2002) emphasizes that such informal aid constitutes a principal strategy for lower-income individuals in the UK to improve

their material conditions. Similarly, Davies (2018) finds that objective barriers—such as spatial inequalities and lack of resources—tend to impede formal volunteering among youth in deprived areas, whereas informal volunteering remains more accessible. Gender differences also emerge in the literature: Egerton & Mullan (2008) find that, after controlling for time availability and age, women engage in more informal volunteering than men, potentially due to caregiving responsibilities (Taniguchi, 2012). More broadly, informal volunteering appears to play a particularly significant role in the lives of socially excluded or marginalized groups, including women, people with disabilities, racial and ethnic minorities, the unemployed, and those facing systemic disadvantage (Dean, 2022).

Within this context, immigrants and minorities have been shown to possess a rich tradition of mutual help and strong kinship-based support systems, making them more inclined toward informal volunteering (Carson, 1999; Wilson & Musick, 1997). However, the specific motivations and barriers to informal volunteering among immigrants as well as differences with natives in this respect remain insufficiently explored. Relying on a underdeveloped theoretical background and on a highly fragmented literature, a good starting point to investigate this issue is by leveraging the knowledge of structural constraints, vulnerabilities, and distinct needs that immigrants face at destination. These factors may shape both the opportunities and the motivations for engaging in informal forms of civic and community participation, often in ways that diverge significantly from native-born populations.

Upon arrival in a host country, immigrants must overcome a range of initial integration barriers—linguistic, cultural, legal, and economic—that are largely absent for the native-born population. The migration literature has long emphasized the critical role of migrant networks, including family, friends, and co-nationals, in supporting this transition. These networks offer practical

assistance such as housing, job information, and references (Hoxhaj, 2015; Massey et al., 1993; Munshi, 2020), forming a crucial part of informal support systems. Being part of these type of informal social networks means exchanging help and mutual support across members and therefore extensively engage in informal volunteering.

However, successful long-term integration often requires immigrants to build relationships beyond their ethnic or familial circles. In this context, both formal and informal volunteering can act as mechanisms for developing trust-based networks, cultural exchange, and reciprocal relationships with native-born individuals (Strokosch & Osborne, 2016). Volunteering fosters not only social capital and peer support (Ecklund, 2005; Putnam, 2000) but also equips immigrants with practical skills, such as how to navigate local bureaucracies and institutional systems.

Immigrants—particularly undocumented and refugees—often face limited access to government services and formal institutional support compared to native-born populations. This disadvantage frequently leads to greater reliance on solidarity-based relationships, both within their ethnic communities and, to some extent, with native-born individuals. In such contexts of social exclusion, informal volunteering emerges as a key form of mutual aid and community support (Forrest & Kearns, 2001; Williams, 2003).

Informal volunteering among immigrants can thus function as a mutual assurance mechanism, especially given the institutional, legal, and economic uncertainties they face in the host country (Dustmann, 1997). Within this framework, immigrants may engage in informal helping practices not only as acts of solidarity but also with a strategic expectation of reciprocity, particularly during times of hardship. Empirical research highlights reciprocity as a central motivational factor in immigrants' informal volunteering, particularly in communities where social cooperation is essential for cohesion and social inclusion (Manatschal, 2015). Therefore, such participation can

serve dual purposes: as a means of immediate mutual support and as a long-term strategy for social positioning and future assistance. However, beyond this higher motivation, immigrants have smaller social groups and connections than natives and this may end up in lower access to volunteering opportunities (Greenspan & Walk, 2024; Taniguchi, 2012). Moreover, strong social identification and affiliation of immigrants with their communities often restrict cooperation within their ethnic groups and hamper engagement in informal volunteering with more extended networks (Ruiz & Kanter, 2024).

Other factors may determine differences in informal volunteering between immigrants with natives. These could be structural factors as those related to lower access to welfare and higher discrimination faced by immigrants. For immigrants, lower access to welfare services may make informal support more necessary and frequent (Einolf et al., 2016). From an socioeconomic perspective, engagement in volunteering may serve as a signal of integration to employers and improve their labor market outcomes. This may motivate immigrants to engage more in informal volunteering activities. Baert & Vujić (2016) found that immigrants in Belgium who engaged in volunteering received the same number of job interview invitations as native applicants, whereas immigrants who did not volunteer were half as likely to be invited for interviews.

Overall, the literature presents theoretical ambiguity regarding whether immigrants differ from native-born individuals in their participation in informal volunteering. The limited number of empirical studies on this topic does not provide a sufficiently robust foundation to support a clear directional hypothesis. As such, the question remains primarily empirical in nature and warrants econometric investigation. Based on these insights, we formulate the following hypothesis:

H1: *The difference in informal volunteering rates between immigrants and native-born individuals is theoretically indeterminate, as various factors exert competing positive and negative influences on immigrants' participation in informal volunteering.*

In addition, also factors related to linguistic and cultural barriers may determine immigrant-native-born differences in informal volunteering. Research has shown that limited language skills is negatively associated with formal volunteering, but unrelated to informal volunteering, suggesting that formal engagement may depend more heavily on institutional communication and bureaucratic interaction using native language than informal, interpersonal exchanges Greenspan & Walk (2024). This finding mirrors that of Jang et al., (2016), who report a similar relationship between language proficiency and volunteering among Korean immigrants in the United States. Also the adaptation to the US culture could be a substantial cost to immigrants with different culture Hamermesh & Trejo (2013). Cultural traditions—particularly those rooted in civic voluntarism and shaped by religious and cultural norms and values—play an important role in influencing volunteering behavior Voicu (2014). This suggests that immigrants more culturally similar to the U.S. will behave more like U.S. native born in terms of informal volunteering. These relationships suggest the following hypothesis:

H2: *Lower host-country language proficiency among immigrants and lower cultural similarity with native-born is associated with a higher immigrant-native differences in informal volunteering participation.*

2.1 Do immigrants assimilate in informal volunteering?

According to assimilation theory, the barriers and constraints faced by immigrants tend to diminish over time spent in the host country, leading to increased convergence with native-born populations across various aspects of life and activity. As immigrants become more familiar with the social, linguistic, and cultural environment of the receiving society, their opportunities for building social networks, engaging in cooperation with the native-born, and participating in informal volunteering expand.

Assimilation and acculturation trajectories, however, vary significantly by generation. First-generation immigrants are typically socialized in their countries of origin and must adapt to the host society's norms and practices after migration (Alba & Nee, 2012; Osili & Xie, 2009). In contrast, second-generation immigrants are raised in multicultural environments that blend their parents' ethnic culture with the mainstream culture. As a result, their values, lifestyles, language use, and behaviors, including engagement in volunteering, tend to align more closely with those of the majority population.

Although the assimilation of immigrants into formal volunteering has received growing scholarly attention, fewer studies have explored how assimilation processes shape participation in informal volunteering (Greenspan & Walk, 2024; Jang et al., 2016). Greenspan and Walk (2024), for example, examine formal and informal volunteering among first, 1.5, and second-generation immigrants in Germany. They find that first-generation immigrants are 14.7 percentage points less likely to engage in informal volunteering compared to native-born individuals, whereas second-generation immigrants show no statistically significant difference—suggesting generational assimilation in informal civic participation. Interestingly, the length of time spent in Germany does not significantly predict informal volunteering, highlighting a potential divergence from traditional

assimilation expectations. Based on the predictions of the assimilation theory, we formulate the following hypothesis:

H3: *As the duration of residence in the host country increases, the informal volunteering participation of immigrants will converge to that of native-born populations. Second-generation immigrants are more similar to native-born individuals than first-generation immigrants in terms of informal volunteering participation.*

3. Data

This study utilizes data from the American Time Use Survey (ATUS)[3] covering the years 2003 to 2023. Respondents in the ATUS are randomly drawn from households that have previously participated in the Current Population Survey (CPS), ensuring that the sample is representative of the U.S. resident population. Time-use information is collected through a one-day diary, in which participants report the duration (in minutes) of all activities undertaken during the 24 hours preceding the interview. In addition to activity duration, the ATUS records information on co-participants, enabling us to distinguish between non-household members such as family members (parents, relatives) and acquaintances (friends, neighbors, housemates).

The time-diary method is considered particularly effective for capturing individuals' engagement in informal volunteering due to its methodological advantages. Notably, its short recall period and the requirement to document activities within a 24-hour episodic framework enhance data accuracy and enable internal consistency checks. These features mitigate recall bias, which is especially pertinent in the context of informal volunteering—an activity often embedded in everyday routines and therefore prone to underreporting in conventional survey instruments

[3] We used the American Time-use Survey Extract Builder to extract the data (Hofferth et al. (2017). The file with the commands script (STATA do-file) of the analysis is available from the author upon request.

(Einolf et al., 2016; Havens & Schervish, 2001). Moreover, Barrett and Hamermesh (2019) argue that this type of data also reduces errors related to the different importance given to activities by survey respondents (see (Bound et al., 2001). Conversely, these data present a limitation . related to the high day-to-day variability and due to the one-day observation. If interviewed on different days during the year, responses are likely to vary across days. One possible effect of the high variability is the reduction of the statistical power of the model. especially when estimations use a low number of observations. However, pooling the data from the 2003 through 2023 - and consequently increasing the number of observations - minimizes the noise from random day-to-day fluctuations in time allocation. Pooling also allows to capture time allocated to activities performed likely not at a daily basis such as volunteering and minimizes the effect of possible time trends in time allocation (Aguiar & Hurst, 2007).

The surveys incorporated into the analysis exhibit an overall average response rate of approximately 52%, which is relatively modest. While differential non-response could introduce bias if correlated with characteristics that systematically distinguish immigrants from native-born individuals, this concern is mitigated by the nature of non-response in this context. Specifically, refusals are predominantly attributed to respondent fatigue following participation in the CPS survey (U.S. Bureau of Labor Statistics 2022)[4], rather than to attributes specific to particular demographic groups. After excluding low-quality cases and entries with incomplete information [5]

[4] To mitigate non-response stemming from limited English proficiency, interviews were conducted in Spanish or other appropriate languages when respondents were not fluent in English. This approach helped reduce language-related barriers to participation. Nonetheless, if the subset of immigrants who do not complete the survey differs significantly from native-born respondents, the observed differences may be conservative estimates of the actual disparities (Hamermesh & Trejo, 2013). Although non-response can lead to overestimation of overall volunteer rates, it does not typically introduce systematic bias in identifying the characteristics of individuals who engage in volunteering (Abraham et al., 2009).

[5] Interviewers also assess a data quality indicator that flags whether a particular interview meets the criteria for inclusion. Observations deemed unusable—due to inaccurate responses or faulty recall of reported activities—are excluded from the analytical sample to ensure data reliability.

the resulting cross-sectional sample comprises roughly 230,000 individuals aged 15 and older, of whom around 34,000—or 15%—are identified as immigrants.

Finally, for each respondent, information on time-use can be matched with a wide array of demographic characteristics and labor market situation collected by the CPS. These include, gender, age, marital status, number of children, educational attainment, nationality, and other useful household characteristics such as income. Moreover, the CPS contains information on the years since migration of the foreign born that allowed us to calculate the years of residence in the U.S. Table 1 presents summary statistics on the demographic characteristics of the sample used in the estimations, for both first-generation immigrants and native-born individuals.

TABLE 1. Descriptive statistics of the main independent variables of the baseline specification.

Variables	First-generation Mean	Native-born Mean	Diff. mean First generation - Native born	First-generation S.D	Native-born S.D
Age	43	46	-3***	15	19
Female	0.5	0.52	-0.02***	0.48	0.5
Married	0.63	0.52	0.11***	0.46	0.5
No children	0.57	0.75	-0.18***	0.47	0.44
Child 0-2 years	0.12	0.07	0.05***	0.31	0.26
Child 3-5 years	0.13	0.07	0.06***	0.32	0.26
Child 6-12 years	0.25	0.13	0.12***	0.41	0.34
Child 13-17 years	0.17	0.1	0.07***	0.36	0.3
Less than secondary	0.12	0.02	0.1***	0.31	0.15
Secondary	0.55	0.67	-0.12***	0.47	0.47
Degree	0.17	0.2	-0.03***	0.36	0.4
Post graduate	0.13	0.11	0.02***	0.32	0.32
Holiday/weekend	0.3	0.3	0***	0.44	0.46
Employed	0.66	0.63	0.03***	0.45	0.49
Unemployed	0.05	0.05	0	0.21	0.21
Not in labor force	0.28	0.32	-0.04***	0.43	0.47

Notes. The demographic characteristics are weighted using sample weights. Test of differences between means, *** $p<0.01$, N.S $p>0.1$

First-generation immigrants in our sample are, on average, slightly younger than native-born individuals. They are more likely to be married and to have children across all age groups. While they generally have lower levels of educational attainment compared to native-born individuals, the share of those with postgraduate degrees is higher among immigrants. In terms of labor force

status, the two groups are relatively similar, although native-born individuals are slightly more likely to be out of the labor force.

4. Estimation strategy

4.1 Dependent variable

Informal volunteering is defined using the time allocated to caring and helping (unpaid) activities as classified in ATUS[6]. Taniguchi (2012) use a similar definition. More specifically, these macro categories of activities include: caring and helping non-household children, including activities related to education and health, and activities related to caring and helping non-household adults. Participation in informal volunteer activities is a dichotomous variable that equals 1 if the respondent allocated an amount of time higher than 0 to these activities, and 0 otherwise. We were able to distinguish between caring and helping family members (parents, relatives) not living in the household from acquaintances (friends, neighbors, housemates) not living in the household. In the latter category, we included other non-relatives living in the same household (such as housemate, roommate, roomer, boarder).

4.2 Explanatory variables

We use several variables capturing the immigration status, time sing migration and barriers to informal volunteering:

(i) a dummy *First generation* that equals 1 for foreign-born individuals, and 0 for natives;

(ii) a dummy *Second generation* that equals 1 for individuals born in the US with both parents foreign-born, and 0 for natives.

[6] The ATUS categories are 030000 and 040000. You can find more information by accessing this link

(iii) Three dummy variables capturing time since migration, which proxy the duration immigrants have had to acculturate in the U.S.: *YSM1* (10 years at most), *YSM2* (11–20 years), and *YSM3* (more than 20 years). Native-born individuals serve as the reference category."

(iv) two dummies capturing language proficiency, distinguishing between immigrants who completed the survey in English (*Survey in English*) and those who responded in Spanish (the overwhelming majority) or another language (*Survey not in English*). The comparison category is natives. These dummies better capture the effective language proficiency (especially for the less proficient group) compared to self-declared proficiency measured in other surveys.

(v) two dummies measuring religious similarity of immigrants to the US (*low religious similarity* and *high religious similarity*) following Disdier and Mayer (2007) definition (see Table A1 in Appendix for the definition). Religiosity is extensively used in the literature as a proxy for cultural capital (Katz-Gerro & Jaeger, 2012; Wilson & Musick, 1997).

4.3 Empirical model

We use a Probit model to estimate differences in participation probability (extensive margin) between groups, conditioning in a wide array of covariates affecting informal volunteering. The specification of the baseline model is the following:

$$\Pr(min_n > 0) = \Phi\left(\alpha_0 + \beta_0 \boldsymbol{Explanatory}_n + \boldsymbol{\varphi}_0' \boldsymbol{X}_n + \boldsymbol{\theta}_{s(n),0} + \boldsymbol{\gamma}_{y(n),0}\right) \quad (1)$$

Where in Equation (1) $\Pr(min_n > 0)$ is the probability of respondent *n* to be involved in informal volunteering activity (devoting a positive number of minutes to it) and Φ is the cumulative of the

standard normal distribution. $\boldsymbol{Explanatory}_n$ is a dummy, or set of dummies that equal(s) unity if respondent *n* belongs to the specific category of explanatory variable listed above, and zero otherwise. In certain specifications of Equation (1), we interact the explanatory variables with a female indicator to examine whether the effects on informal volunteering differ by gender. This approach allows us to assess whether gender mediates the relationship between the covariates and informal volunteering behavior. This distinction is important, as prior research in migration studies has highlighted substantial gender differences in the integration experiences of immigrants. Female and male immigrants often differ in their access to social networks, educational opportunities, time-use patterns, and trajectories of assimilation (Muchomba & Kaushal, 2022; Vargas, 2016). This analysis is also pertinent in light of research on participation patterns among disadvantaged groups, as it enables us to test for a potential "double disadvantage" — stemming from both immigrant status and gender — in shaping informal volunteering behavior. The vector $\boldsymbol{X}_n$ includes the following independent variables, which are widely used in the literature as predictors of volunteering (Niebuur et al., 2018; Wilson & Musick, 1997): a dummy for gender (Women); age (in years) and its square, age^2; a dummy equal to one for married respondents; a set of dummies equal to one if the respondent has children in each of the following age groups: No children, children 0-2 years, children 3-5 years, children 6-12 years, children 13-17 years; educational attainment dummies (Less than secondary, Secondary, Degree, Postgraduate); a dummy weekend (which includes holidays); a set of dummies for employment status (Employed, Unemployed, Not in labor-force) and a set of 16 dummies, one for every range of family income. The vectors $\boldsymbol{\theta}_{s(n)}$ refer to state fixed effects ($s(n)$ being the state where respondent *n* is located) while vectors $\boldsymbol{\gamma}_{y(n)}$ refer to year fixed effects ($y(n)$ being the year of the interview of respondent *n*). Standard errors are clustered at the state level. Table A1 in the Appendix, contains more details on the variable's definitions and sources of the data.

5. Results

Table 2 presents the results testing Hypothesis H1. Specifications 1–4 use a binary dependent variable indicating participation in informal volunteering with individuals, regardless of their relationship to the respondent. Specification 5 focuses on informal volunteering directed toward acquaintances, while Specification 6 examines help provided to non-household family members. Specifications 1 and 2 begin with the most parsimonious models, controlling only for state and year fixed effects. Results indicate that first-generation immigrants in the U.S. are approximately 3 percentage points less likely to engage in informal volunteering than native-born individuals, a difference that is statistically significant at the 1% level. This result is in line with Greenspan and Walk (2024) and suggests that participation in smaller, often ethnically homogeneous social groups may limit individuals' access to broader social networks, thereby reducing opportunities for engagement in informal volunteering (Ruiz & Kanter, 2024).

While women generally participate more in informal volunteering, immigrant women volunteer less than their male counterparts. This pattern may stem from gendered norms: women tend to exhibit greater empathy and altruism and often take on caregiving responsibilities (Taniguchi, 2006). However, immigrant women are typically less integrated into social networks at destination and spend less time in public or non-family social settings (Muchomba & Kaushal, 2022), which may limit their engagement in informal volunteering compared to men. In contrast, Greenspan and Walk (2024) found that men are more likely to volunteer informally in Germany. Our findings contribute to a broader literature suggesting that gender effects on volunteering are context-dependent and vary across national and cultural settings (Niebuur et al., 2018).

In Specifications 3–6, we include the full set of independent variables to control for demographic differences between immigrants and native-born individuals. While the baseline findings remain statistically significant, the marginal effects are smaller in magnitude, suggesting that these

additional controls account for part of the observed differences. Notably, we also find that women are not significantly more likely than men to engage in informal volunteering directed toward acquaintances outside their family circle.

TABLE 2. Baseline estimations. The differences between first-generation and native-born in informal volunteering, and the effect of other individual characteristics.

VARIABLES	(1) All Informal vol.	(2) All Informal vol.	(3) All Informal vol.	(4) All Informal vol.	(5) Non Parents/relatives	(6) Family members
First generation	-0.0380***	-0.0285***	-0.0233***	-0.0159***	-0.00452**	-0.0130***
	(0.00245)	(0.00331)	(0.00196)	(0.00244)	(0.00229)	(0.00208)
Female	0.0200***	0.0219***	0.0185***	0.0199***	-0.000931	0.0203***
	(0.00115)	(0.00118)	(0.00107)	(0.00112)	(0.000783)	(0.000876)
First generation *Female		-0.0165***		-0.0129***	-0.00619**	-0.00468**
		(0.00331)		(0.00327)	(0.00298)	(0.00206)
Age			0.00228***	0.00229***	-0.00108***	0.00407***
			(0.000143)	(0.000143)	(0.000127)	(0.000149)
Age2			-2.46e-05***	-2.47e-05***	7.43e-06***	-3.76e-05***
			(1.47e-06)	(1.46e-06)	(1.31e-06)	(1.50e-06)
Married			-0.0310***	-0.0310***	-0.0270***	-0.00491***
			(0.00131)	(0.00130)	(0.000906)	(0.000923)
Child 0-2			-0.0502***	-0.0502***	-0.0192***	-0.0261***
			(0.00237)	(0.00237)	(0.00173)	(0.00237)
Child 3-5			-0.0308***	-0.0308***	-0.0102***	-0.0180***
			(0.00206)	(0.00206)	(0.00153)	(0.00166)
Child 6-12			-0.0419***	-0.0419***	-0.0110***	-0.0270***
			(0.00154)	(0.00154)	(0.00125)	(0.00130)
Child 13-17			-0.0245***	-0.0245***	-0.00527***	-0.0166***
			(0.00193)	(0.00194)	(0.00106)	(0.00152)
Secondary			0.0265***	0.0264***	0.0151***	0.0112***
			(0.00318)	(0.00317)	(0.00244)	(0.00243)
Degree			0.0171***	0.0170***	0.0145***	0.00467*
			(0.00324)	(0.00323)	(0.00228)	(0.00267)
Post graduate			0.0167***	0.0165***	0.0162***	0.00317
			(0.00353)	(0.00353)	(0.00253)	(0.00256)
Holiday/weekend			0.000638	0.000633	-0.000599	0.00124
			(0.00116)	(0.00116)	(0.000589)	(0.000867)
Unemployed			0.0212***	0.0214***	0.00683***	0.0135***
			(0.00216)	(0.00217)	(0.00151)	(0.00160)
Not in labour force			0.00583***	0.00604***	-0.00147*	0.00639***
			(0.00141)	(0.00141)	(0.000775)	(0.00105)
State fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Income fixed effects	NO	NO	YES	YES	YES	YES
Pseudo R^2	0.011	0.011	0.0408	0.0409	0.05	0.0527
Observations	230,582	230,582	217,790	217,790	217,790	217,790

The estimation method is probit. The reference category for the explanatory variables is native-born; for children classes is no children; for education is less than secondary; for employment status is employed. Clustered errors at the state level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Regarding the effect of the demographic characteristics, the results indicate that age is positively associated with the likelihood of participating in informal volunteering activities, but with a decreasing rate as showed by the result of the quadratic form. Interestingly, age presents the opposite effect when help and support is directed to non-family members and relatives. In contrast to expectations, married individuals and parents—particularly those with young children—are less likely to engage in informal volunteering. One possible explanation lies in the increased family responsibilities and time constraints associated with caregiving, which may reduce the availability of time and energy for volunteer activities. This finding stands in contrast to the positive association typically observed between parenthood and formal volunteering, as highlighted in (Niebuur et al., 2018). The anticipated positive effect of having children in the household is often attributed to increased social interaction and community engagement among parents, as they are more likely to establish contacts with other parents and participate in child-related community activities (Wilson & Musick, 1997).

Our analysis reveals a positive association between educational attainment and participation in informal volunteering. However, the strength of this relationship diminishes at higher levels of education, with the effect being strongest for those with secondary education and weaker among individuals with postgraduate degrees (relative to the reference group with primary education). This weakening effect is more evident for informal volunteering to family members (specification 6), with the coefficient diminishing and turning not statistically for post graduates. Overall, this finding contributes to the mixed body of literature on the link between education and informal social capital. Prior studies have reported both positive and negative associations between educational attainment and the frequency of social contacts with family members and acquaintances (Egerton & Mullan, 2008; Gesthuizen et al., 2008; Li et al., 2005).

An additional, previously underexplored aspect addressed in this study concerns the distribution of informal volunteering activities across the days of the week. Unlike formal volunteering—often tied to structured organizational schedules and thus more likely to occur during periods of discretionary time (Hoxhaj, 2025)—informal volunteering tends to be spontaneous and need-driven, typically emerging in response to immediate or unplanned demands for support. Our findings indicate that informal volunteering is evenly distributed throughout the week, with no significant variation between weekdays, weekends, or holidays. In contrast, formal volunteering shows a clear concentration during holidays and weekends, consistent with its more planned nature. These results support the hypothesis that informal volunteering is less dependent on time availability and more embedded in routine social interactions.

Finally, in line with the time constraints/resource framework (Taniguchi, 2012), our findings indicate that unemployed individuals and those outside the labor force are more likely to engage in informal volunteering. This is primarily attributed to their greater availability of discretionary time compared to those who are employed.

Table 3 examines the influence of language proficiency and religious/cultural background on informal volunteering, and whether these effects are mediated by gender (Specifications 1–4). Specifications 5–6 assess whether informal volunteering follows an assimilation trajectory based on time spent in the U.S. and immigration status.

In Specifications 1–2, immigrants from countries with lower religious similarity to the U.S. exhibit a significantly more negative marginal effect on informal volunteering participation ($p < 0.01$), with the magnitude nearly twice as large as for those from countries with higher religious similarity. Contrary to expectations, gender does not significantly moderate the effect of religious similarity; the marginal effects for both low and high religious similarity are nearly identical across genders. The results for English proficiency follow a similar pattern, although the moderating role

of gender is more pronounced. Females with lower English proficiency are almost twice as likely to participate less in informal volunteering compared to their male counterparts (−1.76% vs. −0.95%). Overall, these findings provide support for Hypothesis 2 (H2).

TABLE 3. The effect of religious similarity, language proficiency and time since migration on informal volunteering, by gender.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Female	0 .0183***	0.0193***	0 .0179***	0.0193***	0.0179***	0.0201***
	(0 .0011)	(0.00117)	(0 .00112)	(0.00122)	(0.0011)	(0.00112)
Low religious similarity	-0.0298***	-0.0241***				
	(0.00280)	(0.00382)				
High religious similarity	-0.0181***	-0.0120***				
	(0.00237)	(0.00338)				
Low religious similarity*Female		-0.00989**				
		(0.00462)				
High religious similarity*Female		-0.0107***				
		(0.00403)				
Survey not in English			-0.0290***	-0.0188***		
			(0.00289)	(0.00323)		
Survey in English			-0.0204***	-0.0149***		
			(0.00314)	(0.00347)		
Survey not in English*Female				-0.0176***		
				(0.00410)		
Survey in English*Female				-0.00949**		
				(0.00462)		
YSM1					-0.0357***	-0.0206***
					(0.00412)	(0.00600)
YSM2					-0.0261***	-0.0107**
					(0.00341)	(0.00439)
YSM3					-0.0154***	-0.0160***
					(0.00225)	(0.00282)
Second generation					-0.00648***	0.00272
					(0.00199)	(0.00302)
YSM1*Female						-0.0281***
						(0.00731)
YSM2*Female						-0.0284***
						(0.00636)
YSM3*Female						0.000833
						(0.00336)
Second generation*Female						-0.0167***
						(0.00523)
State fixed effects	YES	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES	YES
Income fixed effects	YES	YES	YES	YES	YES	YES
Pseudo R^2	0.0403	0.0404	0.0387	0.0388	0.0403	0.0406
Observations	223,551	223,551	186,175	186,175	227,056	227,056

The estimation method is probit. The dependent variable is informal volunteering dummy. All independent variable are included in the analysis. Clustered errors at the state level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Results from Specification 5 reveal a clear decline in informal volunteering participation with increased duration of residence in the U.S. Differences in participation rates between immigrants and native-born individuals are statistically significant and diminish by 50% for immigrants who have resided in the U.S. for over 20 years (marginal effect of YSM3), compared to recently arrived immigrants (marginal effect of YSM1). Although second-generation immigrants continue to exhibit lower participation rates than native-born individuals, the gap is considerably smaller (−0.6%) and approximately half that of long-term first-generation immigrants (−1.54%). These findings support Hypothesis 3 (H3), suggesting that second-generation immigrants more closely resemble native-born individuals than first-generation immigrants in terms of informal volunteering, although a residual gap remains.

Specification 6 introduces interaction terms between time-since-migration categories and gender. The results indicate that female immigrants who have resided in the U.S. for over 20 years exhibit similar levels of informal volunteering as their male immigrant counterparts. Notably, the interaction between second-generation status and gender reveals that second-generation females participate significantly less in informal volunteering than native-born females (−1.67%), whereas second-generation males show no significant difference from native-born males (i.e., the marginal effect for the second-generation dummy is not statistically significant). These findings suggest that while second-generation males appear to fully assimilate with respect to informal volunteering, the gender gap persists for second-generation females, indicating incomplete assimilation.

6. Discussion and conclusions

This study contributes to the growing literature on immigrant participation in informal helping behaviors by focusing on informal volunteering— a domain that remains underexplored relative to formal or institutionalized forms of volunteering engagement. Using nationally representative

U.S. data, we provide new insights into how immigrants engage in informal activities of help and support, how their behaviors differ from those of native-born individuals, and how factors such as gender, cultural proximity, time spent in the host country and immigration generation shape these patterns.

Our results suggest that immigrants, particularly first-generation immigrants, are less likely to engage in informal volunteering than native-born individuals. This finding aligns with earlier studies (e.g., Greenspan & Walk, 2024) and may reflect structural and social constraints that limit immigrants' participation in informal civic life. These include limited access to broader social networks and a greater reliance on close-knit ethnic or familial ties, which, while offering important support, may restrict engagement in more diverse or outward-facing volunteering activities (Ruiz & Kanter, 2024). Importantly, we find that gender moderates these patterns in nuanced ways. While women overall are more likely to participate in informal volunteering—potentially due to caregiving roles and greater empathy (Taniguchi, 2006)—immigrant women participate significantly less than immigrant men. This supports the "double disadvantage" hypothesis, whereby gender and immigrant status jointly constrain informal engagement. These patterns likely stem from lower labor market participation, weaker social integration, and greater time-use restrictions among immigrant women (Muchomba & Kaushal, 2022). Interestingly, no significant gender difference emerges when focusing on informal volunteering directed toward acquaintances rather than family members, highlighting the complexity of gendered volunteering behavior across social contexts.

We also find that immigrants with lower cultural or religious similarity to the U.S. are significantly less likely to engage in informal volunteering. This suggests that cultural proximity and shared norms play an important role in shaping everyday helping behaviors. Similarly, limited English

proficiency is associated with reduced participation, particularly among women. These findings highlight how language and cultural familiarity facilitate participation in informal social support, while distance on these dimensions can constrain engagement—especially in less structured, interpersonal forms of volunteering. Notably, this pattern diverges from previous research by Greenspan and Walk (2024) on Germany and Jang et al. (2016) on Korean immigrants in the U.S., both of which found that language and cultural factors were strongly associated with formal volunteering but not with informal volunteering.

The results indicate a clear pattern of assimilation in informal volunteering over time. Immigrants who have lived in the U.S. for more than 20 years show significantly smaller gaps in participation compared to native-born individuals, and second-generation immigrants display near convergence. However, this overall trend masks important gender differences. While second-generation males participate in informal volunteering at rates comparable to their native-born counterparts, second-generation females continue to volunteer at lower levels than native-born females. This persistent gender gap may reflect enduring barriers specific to women, such as restrictive cultural expectations within some immigrant communities or limited access to diverse social networks and opportunities for informal engagement.

These results highlight the importance of disaggregating informal volunteering behavior by both generation and gender. They contribute to the theoretical understanding of civic integration by showing that assimilation trajectories are not uniform and that gender continues to shape the outcomes of second-generation immigrants. The findings support the argument that informal volunteering is not simply a spontaneous, low-barrier form of civic engagement, but one that is socially patterned and constrained by broader structural inequalities.

From a policy perspective, the findings suggest that reducing language and cultural barriers—particularly for women and recent immigrants—could significantly enhance informal volunteering within and beyond immigrant communities. This is especially relevant given the substantial socio-economic value of volunteering. In the U.K., Egerton and Mullan (2008) estimate that informal volunteering contributes three times more than formal volunteering, with a combined value of £20 billion annually. In the U.S., formal volunteering alone was valued at $167 billion in 2023. Assuming a similar ratio, the total contribution could approach $500 billion, with immigrants—who comprise 13% of the U.S. population—likely responsible for a considerable share.

This study has several limitations. First, the use of cross-sectional data restricts causal inference. Longitudinal designs—particularly those based on time-use surveys, which are best suited to capturing informal volunteering—would be essential to track assimilation patterns over time. Second, while our measure of informal volunteering is broader than formal definitions, it may still overlook culturally specific forms of mutual aid that fall outside standard survey categories. Third, despite leveraging rich data from the ATUS, we are unable to control for certain unobserved individual traits—such as intrinsic motivation, altruism, or social orientation—which could bias our estimates if these factors differ systematically between immigrants and native-born individuals. Lastly, the conclusions of this study may not be generalizable to other countries with different immigrant nationalities, cultural compositions, and institutional structures that influence barriers and constraints.

In conclusion, this study demonstrates that informal volunteering among immigrants is shaped by complex interactions between cultural, linguistic, generational, and gendered factors. While assimilation trends are evident, full convergence—particularly for immigrant women—remains

elusive. Recognizing and addressing these layered forms of disadvantage is essential for fostering inclusive civic engagement and stronger community cohesion.

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APPENDIX

Table A1. Definition of the variables

VARIABLES	DEFINITION	SOURCE
	Explanatory variables	
First generation	Respondent is born abroad from foreign-born parents.	ATUS
YSM1	<= 10 years in the U.S.	-//-
YSM2	Between 11 and 20 years in the U.S.	-//-
YSM 3	> 20 years in U.S.	-//-
Second generation	Individual born in U.S. with parent foreign-born	-//-
Survey in English,	Respondent asked the survey questions in English	-//-
Survey not in English	Respondent asked the survey questions in another language (mostly in Spanish)	-//-
Low Religious similarity *High religious similarity*	Religious similarity varies between 0 and 1 and increases when the country pair shares a common religion practiced by a large share of the population. Low (high) similarity is when is below (above) the median.	Disdier and Mayer (2007)
	Independent variables	
Age	Age in years	ATUS
Age squared	The square of age.	-//-
Married	Dummy equal to 1 if the respondent is married, 0 otherwise.	-//-
Female	Dummy equal to 1 for female, 0 otherwise.	
No children, children 0-2 years, children 3-5 years, children 6-12 years, children 13-17 years	5 dummy variables equal to 1 if the respondent has a child in these age groups, 0 otherwise.	-//-
Less than secondary *Secondary, Degree, Post graduate*	4 dummy variables for each of the educational level specified.	-//-
Holiday/weekend	Dummy equal to 1 if the diary day is (Saturday, Sunday, New Year's Day, Easter, Memorial Day, 4th of July or Christmas), 0 otherwise.	-//-
Employed	In the reference week, worked at least 1 h as a paid employee or self-employed.	-//-
Unemployed	Individual available for work at the reference week and those making an effort to find a job in the 3 weeks preceding the reference week.	-//-
Not in labor force	Individual that had not actively looked for a job in the 3 weeks preceding the reference week.	-//-
Income ranges	Family income categorized in 16 ranges	-//-