



Sociodemographic Determinants of Heirs' Property Education Participation and Estate Planning Behavior in Maryland

Raksha Khadka^{1, *}, Lila B. Karki^{1,2}, Prem Bhandari², and Nicole Cook²

¹Department of Agriculture, Food and Resource Sciences, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA

²University of Maryland Eastern Shore, Extension

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ABSTRACT

Heirs' property refers to land or structures inherited without a will or clear legal title and poses significant challenges to land security, access to agricultural programs, and the preservation of intergenerational wealth. Educational outreach programs aim to reduce these risks by improving awareness and estate-planning behavior, however, limited empirical evidence exists on how sociodemographic factors influence participation and related outcomes. This study hypothesized that sociodemographic characteristics significantly affect participation in heirs' property education, experiences with heirs' property issues, reported land loss, and willingness to create a will. The study objective was to examine the influence of age, gender, race/ethnicity, education, and occupation on these outcomes among participants in Heirs' Property Education (HPE) programs conducted by the University of Maryland Eastern Shore Extension. Post-event survey data from 69 participants were analyzed for descriptive statistics and bivariate and multivariable binary logistic regression models used to test the hypothesis. Results indicated that gender was a significant predictor of heirs' property experience, with women having higher odds than men for reporting such situations ($p < 0.01$). Age, education, and gender were associated with willingness to have or create a will, with younger respondents, women, and those with graduate or professional degrees showing lower odds of willingness ($p < 0.05$). No sociodemographic variables showed any association with prior participation in heirs' property education or with reported land loss. Study findings suggest that heirs' property vulnerability and estate-planning behavior vary across demographic groups, highlighting the need for targeted, inclusive educational strategies to strengthen land retention and legal preparedness.

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1. Introduction

Heirs' property refers to land or housing inherited without a will or formal probate and remains a persistent challenge to land security, agricultural productivity, and the preservation of intergenerational wealth in the United States. This form of ownership, in which multiple heirs hold undivided interests, creates legal ambiguity, limits decision-making authority, and increases vulnerability to forced partition sales (Bailey et al., 2019; Cook, 2021; Deaton, 2007). As a result, heirs' property owners often face limited access to credit, federal agricultural programs, disaster assistance, and conservation initiatives, thereby constraining investment, land stewardship, and economic stability (Carpenter & Waddell, 2021; Schelhas et al., 2021; U.S. Department of Agriculture, 2024).

The origins of heirs' property are deeply rooted in historical and structural inequities, particularly after the post-Civil War Reconstruction era. Formerly enslaved African Americans pursued landownership as a foundation for economic independence and social stability; however,

widespread illiteracy, racial violence, discriminatory legal systems, and exclusion from probate courts discouraged formal estate planning (Bailey et al., 2019; Craig-Taylor, 2000; Rivers, 2006). Families often relied on informal land transfers and oral agreements, leading to fragmented ownership structures that persist across generations (Copeland, 2014; Grabbatin & Stephens, 2011; Mitchell, 2001). These conditions facilitated the dispossession of land through partition sales, contributing to the dramatic decline in African American landownership from more than 15 million acres in the early twentieth century to fewer than 4.7 million acres today (Breland, 2021; Love, 2017; Presser, 2019b; Wright, 2022). Although heirs' property has been widely studied in the Southern United States, emerging evidence indicates that it is also a significant concern in other regions. In Maryland, recent national geospatial analysis identified approximately 5,599 heirs' property parcels statewide, highlighting the relevance of heirs' property challenges beyond the Deep South and within Mid-Atlantic contexts (Thomson et al., 2024). Maryland presents a unique setting that includes both rural agricultural communities and urban

* Corresponding author. E-mail address: rkhadka@umes.edu

populations, making it well-suited to examine sociodemographic differences in heirs' property education and estate-planning outcomes.

Beyond historical injustice, heirs' property continues to pose contemporary economic, legal, and environmental challenges. Clouded titles limit landowners' ability to use property as collateral, restricting participation in agricultural lending, disaster relief, and long-term conservation programs (Gaither et al., 2019; Hitchner et al., 2017; Schelhas et al., 2017). As a result, heirs' property is often described as "dead capital," representing valuable assets that cannot be leveraged to support economic mobility or land-based investment (De Soto, 2000; Richardson Jr & Miller, 2023). These constraints increase the likelihood of land abandonment, tax delinquency, and involuntary land loss, reinforcing cycles of rural poverty and disinvestment (Moodie et al., 2023; Rivers, 2006; Zabawa et al., 2023).

Policy responses such as the Uniform Partition of Heirs Property Act (UPHPA) and the Heirs' Property Relending Program (HPRP) have sought to protect heirs' property owners by reducing forced sales and expanding access to capital for title resolution (Carpenter & Waddell, 2021; Mitchell, 2016). However, adoption of these policies remains uneven across states, and awareness among landowners is limited (Bailey et al., 2019; Gaither et al., 2019; Presser, 2019a). Despite legal reforms such as the UPHPA, awareness among affected landowners often remains limited because legal protections alone do not automatically translate into practical action. Many landowners lack legal literacy, awareness of title-related risks, and trusted pathways to seek assistance, particularly in historically underserved communities. In addition, informal inheritance practices across generations, reliance on oral family agreements, and limited access to affordable legal services further reduce awareness and policy uptake. As prior studies have noted, educational outreach has been emphasized as a key strategy for increasing legal awareness and preventing further land loss (Bailey et al., 2019; Gaither et al., 2019; Mitchell, 2016). Consequently, community-based education and outreach, particularly through land-grant university extension programs, have emerged as critical tools for raising awareness, promoting estate planning, and preventing future land loss (Bailey et al., 2019; Gilbert et al., 2002; Hitchner et al., 2017).

Despite growing recognition of the role of education, few empirical studies have systematically examined who participates in heirs' property education programs and how sociodemographic characteristics influence participation, heirs' property experience, land loss, and estate planning behavior. Existing literature has largely emphasized legal frameworks, historical land loss, and policy mechanisms, with limited attention to behavioral and demographic factors that shape engagement and outcomes (Deaton et al., 2009; Gaither, 2016; Schelhas et al., 2017). This gap constrains the ability of extension programs and policymakers to design targeted, equitable interventions that effectively reach populations most vulnerable to heirs' property-related risks. Understanding these relationships is essential for designing targeted and effective educational interventions that address the needs of diverse populations and improve land tenure security. Therefore, this study was undertaken to address this gap by empirically examining the role of sociodemographic factors in shaping engagement and outcomes in heirs' property education programs. Guided by this rationale, the study hypothesized that sociodemographic characteristics, including age, gender, race/ethnicity, education, and occupation, significantly influence participation in heirs' property education programs, heirs' property experience, reported land loss, and willingness to create a will. Accordingly, the objective of this study was to

examine the relationships between sociodemographic factors and four heirs' property-related outcomes among participants in extension-based educational programs in Maryland: (1) participation in heirs' property education programs, (2) experience with heirs' property situations, (3) reported land loss, and (4) willingness to have or create a will. By addressing these objectives, the study seeks to inform more targeted and inclusive educational strategies to reduce heirs' property vulnerability and promote long-term land retention.

2. Theoretical Framework

This study draws on three complementary theoretical perspectives, including human capital theory, theory of planned behavior, and social capital theory, to explain how sociodemographic characteristics may shape participation in heirs' property education and related outcomes. Human capital theory posits that education enhances individuals' capacity to acquire knowledge and make informed legal and financial decisions (Becker, 1918). From this perspective, higher educational attainment may increase awareness of heirs' property risks and estate planning options, although it may also reduce reliance on community-based education if individuals prefer professional legal services.

The theory of planned behavior emphasizes the influence of attitudes, social norms, and perceived behavioral control on individual decision-making (Ajzen, 1991). Applied to estate planning, this framework suggests that willingness to create a will may vary across age and gender groups. Older individuals may perceive estate planning as more urgent, whereas younger individuals may delay such decisions because they perceive them as irrelevant or because of limited asset ownership (Elder Jr., 1994). Gendered social roles may further influence engagement in property-related decision-making, with women often managing family land responsibilities while facing persistent barriers to formal ownership and legal authority (Deere & Doss, 2006; Mueller et al., 2018).

Social capital theory highlights the role of trust, social networks, and institutional relationships in facilitating participation in community programs (Putnam, 2015). Historical discrimination and exclusion from legal institutions have contributed to lower levels of institutional trust among African Americans, which may reduce engagement in heirs' property education despite strong community ties (Hensley Alford et al., 2011; Rivers, 2006). Together, these theoretical perspectives provide a framework for understanding how sociodemographic characteristics influence participation in educational programs, experiences with heirs' property, and estate planning behavior.

3. Methods

3.1. Study Design and Study Area

This study used a cross-sectional survey design to examine sociodemographic factors associated with participation in heirs' property education, heirs' property experience, reported land loss, and estate planning behavior. Data were collected as part of the University of Maryland Eastern Shore (UMES) Extension's Heirs' Property Education (HPE) initiative, which conducted educational workshops across Maryland between 2024 and 2025. Workshops were held in multiple counties (Washington, Montgomery, Baltimore, Prince George's, Kent, St. Mary's,

Wicomico, Somerset, and Baltimore city), with a particular emphasis on areas with higher concentrations of agricultural landowners and historically underserved populations (Fig. 1). The educational workshops focused on heirs' property risks, land tenure security, and estate planning practices relevant to farm and family land retention. The study sample comprised participants who voluntarily attended UMES Extension heirs' property education workshops and completed the post-event survey.

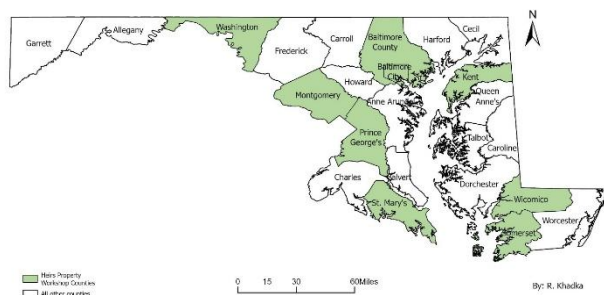


Figure 1. Geographic distribution of counties in Maryland, USA, where the University of Maryland Eastern Shore (UMES) Extension conducted heirs' property education workshops during 2024–2025.

3.2. Study Population and Sample Selection

The educational workshops were open to the public; however, the analytical focus of this study was limited to farmers, landowners, and individuals directly involved in family landownership or land management decisions. Although some attendees identified as students or professionals, they were retained in the dataset only if they reported direct involvement in heirs' property issues through family landownership or management, to ensure that the analytical sample reflected populations for whom heirs' property issues were most relevant and actionable. The analytical sample of 69 respondents comprised the subset of participants who provided complete responses for the binary logistic regression outcomes examined in this manuscript. These respondents were drawn from a broader UMES Extension workshop population that included 240 registered participants, 204 attendees, and 123 completed post-event surveys.

3.3. Data Collection and Measurement

The study protocol and survey procedures were reviewed and approved by the University of Maryland Eastern Shore Institutional Review Board (IRB): UMES Protocol #11-2025-003. Data were collected using structured post-event evaluation surveys administered in person at the conclusion of each workshop. The survey instrument captured information across four domains: (1) sociodemographic characteristics, (2) participation in heirs' property education programs, (3) experiences with heirs' property and land loss, and (4) estate planning behavior. Sociodemographic variables included age, gender, race/ethnicity, education level, and occupation. The survey also collected information on respondents' involvement in agricultural activities and family landownership to ensure relevance to heirs' property issues. Formal pretesting of the survey instrument was not conducted.

3.4. Outcome Variables

Four binary outcome variables were derived from survey responses. Participation in heirs' property education indicated whether a respondent had attended any heirs' property education program before the current workshop (1 = yes, 0 = no). Heirs' property experience indicated whether the respondent reported unclear ownership, co-tenancy disputes, or other heirs' property-related issues affecting family land (1 = yes, 0 = no). Reported land loss indicated whether the respondent had experienced loss of land or property due to heirs' property conditions (1 = yes, 0 = no). Willingness to have or create a will was measured using the post-event survey item asking respondents whether they currently had a will or intended to create one after participating in the heirs' property education program. Responses were coded as a binary outcome, with 1 = willing / has or intends to create a will and 0 = not willing / no intention reported. This variable served as the estate-planning behavioral outcome in the binary logistic regression analysis.

3.5. Independent Variables

The independent variables included age, gender, race/ethnicity, educational attainment, and occupation. For regression analysis, variables were coded as binary indicators to ensure sufficient cell sizes and stable model estimation. Age was categorized as 1 = 18–64 years and 0 = 65 years and above (reference group). Gender was coded as 1 = female and 0 = male. Race/ethnicity was coded as 1 = Black or African American and 0 = all other racial/ethnic groups, including Asian, White, Hispanic, and others. Educational attainment was coded as 1 = graduate/professional degree and 0 = undergraduate degree or below. Occupation was coded as 1 = farmer/agricultural occupation and 0 = non-farmer/other occupation. In all regression models, the category coded as 0 served as the reference group for odds ratio interpretation. Due to the modest sample size, several sociodemographic variables, particularly race/ethnicity and educational attainment, were collapsed into binary categories to maintain adequate cell counts and ensure stable estimation of the logistic regression models.

3.6. Statistical Analysis

Data analysis proceeded in two stages: descriptive analysis and regression modeling. Descriptive statistics were used to summarize the sociodemographic characteristics of the study sample, and frequencies and percentages were reported for all categorical variables. To examine relationships between sociodemographic factors and each heir's property-related outcome, both bivariate and multivariable binary logistic regression models were estimated. Bivariate logistic regression models were first used to assess unadjusted associations between each sociodemographic characteristic and the outcome variables, allowing identification of crude relationships and facilitating comparison across predictors. Multivariable logistic regression models were then estimated to examine the independent effects of each sociodemographic factor while simultaneously controlling other covariates. The combined use of bivariate and multivariable models was intended to distinguish between isolated associations and adjusted relationships relevant to heirs' property education and estate planning behavior. The logistic regression model is specified as:

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 \text{Female} + \beta_2 \text{Age (18 - 64)} + \beta_3 \text{African American} + \beta_4 \text{Graduate/Professional Degree} + \beta_5 \text{Farmers}$$

where p represents the probability of the outcome occurring and β_0 is the intercept, and $\beta_1, \beta_2, \beta_3, \dots, \beta_5$ are the regression coefficients associated with sociodemographic predictors. In the logistic regression models, coefficients were interpreted through their corresponding odds ratios (OR), which were obtained by exponentiating the estimated regression coefficients. An odds ratio greater than 1 ($OR > 1$) indicated higher odds of the outcome relative to the reference group, whereas an odds ratio less than 1 ($OR < 1$) indicated lower odds; an odds ratio equal to 1 ($OR = 1$) indicated no association between the predictor and the outcome. Accordingly, model estimates were interpreted as terms of differences in odds rather than direct changes in probability, and the findings were presented as associations rather than causal relationships. Statistical significance was assessed at 95% confidence. In the land loss outcome, complete separation was detected due to sparse event counts across some predictor categories. To address this issue and obtain finite, unbiased estimates, penalized logistic regression with Firth’s correction was applied. All analyses were conducted using R software (version 4.5.1).

4. Results

4.1. Sample Characteristics

Table 1. Sociodemographic characteristics of respondents participated in heirs’ property education workshops conducted by the University of Maryland Eastern Shore (UMES) Extension, 2024-2025, Maryland, USA.

Characteristics	Category	Respondents (%)
Age (Years)	18 to 64	80
	65+	20
Gender	Female	52
	Male	48
Race	African American	50
	Others	50
Occupation	Farmers	13
	Others	87
Education	Graduate	39
	Others	61

Table 2. Association of sociodemographic factors of respondents with their participation in heirs’ property education programs conducted by the University of Maryland Eastern Shore Extension, 2024–2025, Maryland, USA.

Predictor	Bivariate		Multivariable	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Age (18-64 yrs = 1); Ref.: ≥ 65 yrs	0.90	2.46	0.24	1.28
Education (graduate and professional = 1); Ref.: undergraduate or below	-1.30	0.27	-1.34	0.26
Gender (Female = 1); Ref.: Male	-0.42	0.66	-0.44	0.64
Occupation (Farmers = 1); Ref.: all other occupations	-0.89	0.41	-0.85	0.43
Race (African American = 1); Ref.: all other races	-0.97	0.38	-1.11	0.33

The sample consisted predominantly of respondents in the working-age category, with a smaller proportion representing older adults. The gender distribution was relatively balanced, with a slight predominance of female respondents (52%). The racial composition of the sample was evenly divided between African American respondents (50%) and those identifying with other racial groups (50%). Respondents reflected a range of educational backgrounds, including individuals with graduate or professional degrees as well as those with lower levels of formal education. In terms of occupation, only a small proportion identified as farmers (13%), while the majority reported involvement in non-farming roles related to landownership or family land management. Detailed sociodemographic characteristics of the study sample are presented in Table 1.

4.2. Logistic Regression Analysis

To examine relationships between sociodemographic factors and each heir’s property-related outcome, both bivariate and multivariable binary logistic regression models were estimated. Bivariate logistic regression models provided unadjusted estimates, examining the association between each independent variable and the outcome separately without controlling for other factors. Multivariable logistic regression models provided adjusted estimates, assessing the independent effect of each sociodemographic variable while controlling for the influence of other covariates. This approach allows for comparison between crude (unadjusted) and adjusted associations.

4.2.1. Sociodemographic Characteristics and Participation in Heirs’ Property Education (HPE)

None of the predictors were statistically significant in either the bivariate or multivariable models. However, education and race consistently showed negative associations with participation across both models. Respondents with graduate or professional degrees had lower odds of participation than those with undergraduate education or less, and African American respondents also had lower odds of participation than other racial groups. Age, gender, and occupation showed no associations with participation in educational events in either model. Full regression estimates are provided in Table 2.

4.2.2. Sociodemographic Characteristics and Experience of Heirs' Property Situations

Gender was the only sociodemographic factor significantly associated with reported heirs' property experience in this study. In both bivariate and multivariable models, female respondents were more likely than male

respondents to report experiencing heirs' property situations ($p < 0.01$). No significant associations were observed for age, education, or occupation. Although race was not significant, African American respondents showed a higher likelihood of reporting heirs' property experience in both models. Complete regression results for heirs' property experience are reported in Table 3.

Table 3. Bivariate and multivariable binary logistic regression estimates of sociodemographic factors associated with heirs' property experience among the respondents who participated in heirs' property education workshops conducted by the University of Maryland Eastern Shore (UMES) Extension, 2024-2025, Maryland, USA.

Predictor	Bivariate		Multivariable	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Age (18-64 yrs = 1); Ref.: ≥ 65 yrs	-0.47	0.63	-0.09	0.91
Education (graduate and professional = 1); Ref.: undergraduate or below	0.04	1.04	-0.02	0.98
Gender (Female = 1); Ref.: Male	2.17	8.76**	2.23	9.25**
Occupation (Farmers = 1); Ref.: all other occupations	-0.09	0.91	-0.07	0.93
Race (African American = 1); Ref.: all other races	1.23	3.44	1.32	3.73

** $p < 0.01$

Table 4. Bivariate and multivariable (Firth-penalized) logistic regression estimates of sociodemographic factors associated with reported land loss among the respondents who participated in heirs' property education workshops conducted by the University of Maryland Eastern Shore (UMES) Extension, 2024-2025, Maryland, USA.

Predictor	Bivariate		Multivariable	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Age (18-64 yrs = 1); Ref.: ≥ 65 yrs	-0.23	0.80	0.33	1.40
Education (graduate and professional = 1); Ref.: undergraduate or below	-0.09	0.91	-0.19	0.82
Gender (Female = 1); Ref.: Male	1.04	2.83	0.94	2.57
Occupation (Farmers = 1); Ref.: all other occupations	0.92	2.52	1.06	2.89
Race (African American = 1); Ref.: all other races	-1.16	0.31	-1.01	0.36

Table 5. Bivariate and multivariable binary logistic regression estimates of sociodemographic factors associated with willingness to have or create a will among the respondents who participated in heirs' property education workshops conducted by the University of Maryland Eastern Shore (UMES) Extension, 2024-2025, Maryland, USA.

Predictor	Bivariate		Multivariable	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Age (18-64 yrs = 1); Ref.: ≥ 65 yrs	-2.08	0.12	-3.02	0.05*
Education (graduate and professional = 1); Ref.: undergraduate or below	-1.40	0.25*	-2.00	0.13**
Gender (Female = 1); Ref.: Male	-0.98	0.38	-1.49	0.23*
Occupation (Farmers = 1); Ref.: all other occupations	0.03	1.03	-0.45	0.64
Race (African American = 1); Ref.: all other races	0.86	2.36	1.00	2.73

* $p < 0.05$; ** $p < 0.01$

4.2.3. Reported Land Loss

No sociodemographic variables were associated with reported land loss, as all predictors were non-significant in both bivariate and multivariable analyses ($p > 0.05$). Although some differences were observed across groups, these patterns were not strong enough to be considered meaningful. For example, female respondents and farmers appeared more likely to report experiencing land loss compared to male respondents and non-

farmer landowners. In contrast, respondents with higher education levels and those identifying as African American appeared less likely to report land loss. Age was also not a significant predictor, reinforcing the absence of any statistically reliable relationship between sociodemographic characteristics and reported land loss. Regression estimates for land loss, including penalized logistic regression results, are presented in Table 4.

4.2.4. Willingness to Have a Will

Several sociodemographic characteristics were associated with the odds of having or creating a will. Age showed a strong negative association, with respondents aged 18–64 having lower odds of expressing willingness than those aged 65 and older ($p < 0.05$). Education was also negatively associated with willingness, as respondents with graduate or professional degrees had lower odds of reporting willingness than those with lower educational attainment ($p < 0.01$). Gender was significant in the multivariable model, with female respondents having lower odds than male respondents to express a willingness to have a will ($p < 0.05$). Occupation, race, and prior participation in heirs' property education were not significant predictors. Detailed regression results are reported in Table 5.

5. Discussion

Overall, the findings provide partial support for the study hypothesis. While sociodemographic characteristics did not significantly predict participation in heirs' property education programs or reported land loss, they were strongly associated with heirs' property experience and estate planning behavior. These results suggest that demographic factors play a more substantial role in shaping exposure to heirs' property challenges and legal preparedness than in determining initial engagement with educational programs.

Gender differences in reported experiences with heirs' property suggest that women may be more directly engaged in family land matters or more aware of ownership challenges within households. This pattern may reflect gender roles in managing family property, caregiving responsibilities, or involvement in intergenerational decision-making, which can increase exposure to heirs' property issues. This pattern aligns with previous research documenting women's central role in managing family land, inheritance matters, and intergenerational responsibilities despite persistent legal and structural disadvantages (Deere & León, 2001; Deere & Doss, 2006; Mueller et al., 2018). Women often serve as informal stewards of family property and mediators in inheritance disputes, which may increase their awareness of heirs' property issues even when they lack formal ownership or legal authority. This finding is consistent with studies showing that gendered norms in land and inheritance systems expose women to greater tenure insecurity while positioning them as key actors in land retention efforts (Gaddis et al., 2022; Mueller et al., 2018).

Contrary to expectations, sociodemographic characteristics were not significant predictors of participation in heirs' property education programs. Although higher education levels and African American identity were associated with lower participation, these relationships were not significant. One potential explanation is that participation in extension-based education may be shaped more by contextual factors, such as awareness of programs, scheduling constraints, or trust in institutions, than by individual characteristics alone. Prior research has shown that historical discrimination and exclusion from legal and governmental systems have contributed to persistent mistrust among African American communities, which may discourage participation in formal educational initiatives even when such programs are designed to address community-specific challenges (Bailey et al., 2019; Hensley Alford et al., 2011; Rivers, 2006). Additionally, individuals with higher education may rely on private legal services rather than community-based education, reducing their likelihood of attending extension programs despite their potential relevance (Becker, 1918; Putnam, 2015).

Reported land loss was not associated with any sociodemographic variables, suggesting that land loss related to heirs' property may be driven by complex structural and legal processes rather than individual characteristics alone. Partition sales, tax delinquency, and title fragmentation often develop over extended periods and across generations, making it difficult to attribute land loss to current demographic traits (Deaton et al., 2009; Gaither et al., 2019; Mitchell, 2016). Although farmers and women had higher odds of reporting land loss, these patterns were not significant, possibly reflecting limited statistical power or the influence of unobserved factors such as property size, legal costs, or access to legal assistance (Schelhas et al., 2017; Zabawa et al., 2023). While the present study focuses on the sociodemographic correlates of participation in heirs' property education programs, including heirs' property experience, reported land loss, and willingness to create a will, these individual factors operate within broader historical and institutional contexts. Existing literature has documented how discriminatory lending practices, delayed or denied USDA loan access, inequitable probate systems, and legal mechanisms such as partition sales have disproportionately affected African American landowners and contributed to intergenerational land loss. Therefore, the observed sociodemographic associations should be interpreted alongside these structural policy constraints that shape land tenure insecurity and estate-planning behavior.

In contrast, differences in estate-planning behavior across age groups may reflect life-course dynamics, in which individuals become more attentive to long-term responsibilities and future planning as they progress through later stages of life (Elder Jr., 1994). As individuals age, concerns about asset distribution, family security, and legacy often become more salient, potentially increasing engagement in estate-planning activities such as preparing a will. This pattern highlights how decision-making related to estate planning is shaped not only by access to information but also by changing priorities and perceived responsibilities over life course. This finding suggests that perceptions of responsibility, risk, and future planning evolve with age and social roles. Older adults are more likely than younger adults to have accumulated property, family responsibilities, and intergenerational wealth concerns, making estate planning more immediately relevant. In contrast, younger individuals may perceive wills and succession planning as distant concerns due to limited asset ownership, competing financial priorities, or the assumption that such decisions can be postponed to later stages of life (Elder Jr., 1994; Ajzen, 1991). Education showed an unexpected negative association with willingness to make a will, a finding that contrasts with the assumption that higher education uniformly promotes legal preparedness. One possible explanation is that individuals with graduate or professional degrees may delay will preparation while relying on alternative estate instruments, informal planning, or future professional legal services (Becker, 1918; Richardson Jr & Miller, 2023). Gender differences in willingness to have a will further reflect persistent inequalities in property ownership and decision-making authority, with women potentially facing greater barriers to formal legal engagement despite high involvement in family land matters (Deere & Doss, 2006; Gaddis et al., 2022).

These findings have important implications for researchers, extension practitioners, and the broader public. For researchers, the results highlight the need to integrate sociodemographic and behavioral perspectives into heirs' property research, which has traditionally emphasized legal frameworks and historical land loss. For extension programs and policymakers, the findings highlight the need for targeted, differentiated

outreach strategies that recognize gender roles, life-stage differences, and varying levels of institutional trust. Programs that engage women as key land stewards, address the concerns of younger landowners, and tailor messaging for highly educated audiences may improve estate planning outcomes and reduce future heirs' property vulnerability (Bailey et al., 2019; Schelhas et al., 2021).

For the public, increasing awareness of heirs' property risks and normalizing estate planning as a proactive, accessible practice can contribute to long-term land retention and intergenerational wealth preservation. Furthermore, although race/ethnicity was analyzed as a broader binary category in the present study due to sample size constraints, existing literature indicates that heirs' property challenges are not experienced uniformly across racial and ethnic groups. African American families have historically faced structural barriers, including discriminatory lending practices, limited access to legal services, probate exclusion, and higher exposure to partition-sale risks (Mitchell, 2001; Bailey et al., 2019; Gilbert et al., 2002). These barriers may require culturally responsive legal outreach, community-based trust-building strategies, and targeted estate-planning education. Similarly, other racial and ethnic groups may face distinct barriers related to legal awareness, language accessibility, family decision-making norms, and institutional trust. Future research with larger disaggregated samples is needed to examine subgroup-specific needs more precisely (Mitchell, 2001; Bailey et al., 2019; Gaither et al., 2019).

The observed differences in estate planning behavior across age, education, and gender, along with the lack of association between sociodemographic characteristics and participation in educational programs, underscore the need for policy interventions beyond educational outreach alone. Strengthening the implementation of the Uniform Partition of Heirs Property Act (UPHPA), improving equitable access to USDA lending and disaster assistance programs, and expanding legal aid services for title clarification and estate planning are essential to addressing the underlying drivers of heirs' property vulnerability. Educational programs should therefore be integrated with legal and policy support systems to promote long-term land retention and intergenerational wealth preservation.

This study has several limitations. The modest sample size reduced the precision of the estimates, particularly for less frequent outcomes such as land loss. As a result, findings reflect associations within the study sample rather than population-level estimates for all Maryland landowners. A larger sample would improve precision, allow detection of smaller effects, and enable more detailed subgroup analysis. The sample consisted of voluntary participants in UMES Extension workshops, which may limit generalizability, as attendees may differ from non-attendees in awareness or engagement. Thus, findings are most applicable to workshop participants. The cross-sectional design limits causal interpretation, and self-reported data may introduce recall bias or social desirability bias. Dichotomizing variables support model stability but may mask subgroup differences. Finally, the survey did not capture underlying motivations or contextual factors influencing behavior. Future research using larger, more diverse samples and mixed-methods approaches would help validate and deepen these findings.

6. Conclusions

This study shows that while participation in heirs' property education programs was broadly similar across sociodemographic groups, meaningful differences emerged in heirs' property experience and willingness to

engage in estate planning. Gender, age, and education were associated with estate-planning behavior, while no sociodemographic differences were observed in program participation. These findings suggest that educational outreach alone may not be sufficient to address heirs' property challenges, as differences in awareness, exposure to risk, and readiness to act persist across groups. The results highlight the need for more targeted extension strategies that account for life stage, gender roles, and varying levels of legal preparedness. Strengthening estate planning practices and improving access to legal and institutional support may help reduce land loss risks and support long-term land retention and intergenerational wealth preservation. Future research using larger and more diverse samples is needed to validate these findings and further examine how sociodemographic and structural factors jointly influence heirs' property outcomes.

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