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Unlocking the door to mental wellness: exploring the impact of homeownership on mental health issues

Shams Rahman^{1*} and David R. Steeb¹

Abstract

Background Housing is an important social determinant of health. The objective of this study was to investigate the predictive role of homeownership in mental health outcomes.

Methods The Behavioral Risk Factor Surveillance System 2020 data ($N=401,958$) were analyzed. *Outcomes:* Self-reported prevalence of ever depressive disorders, difficulty concentrating or remembering, difficulty doing errands alone due to poor physical/mental health, number of days not having good mental health in past 30 days, and number of days poor physical/mental health affected daily activities in past 30 days *Exposure:* Homeownership (own/rent). *Adjusting factors:* Socio-demographic and lifestyle variables. Adjusted odds ratios (aOR) and 95% confidence intervals (95%CI) are reported. All estimates were weighted to account for the study design.

Results Of the participants, 33% resided in rental properties. The mean age for renters was 38 years, and homeowners 53. Homeownership was high among women, old age, employed, and White race. The prevalence of ever depressive disorders was 18.3%, with high estimates among women, age group (18–44 years), and American-Indians/Alaskan-Natives. The study revealed a significant association between homeownership and mental health. In the adjusted models, compared to homeowners, renters experienced higher prevalence of ever depressive disorders (aOR 1.29, 95%CI: 1.16–1.44), increased difficulty concentrating/remembering (aOR 1.38, 95%CI: 1.19–1.60), were more likely to report poor physical/mental health affecting daily activities (aOR 1.24, 95%CI: 1.05–1.45), reported more days of not having good mental health in the past 30 days (aOR 1.23, 95%CI: 1.12–1.34), and had increased likelihood of poor physical/mental health affecting their daily activities (aOR 1.17, 95%CI: 1.04–1.31). Age-stratified analysis demonstrates consistent associations across various age groups.

Conclusion This study provides robust evidence supporting the positive impact of homeownership on mental health. Promoting affordable homeownership opportunities has the potential to alleviate the mental health burden in the United States.

Keywords Homeownership, Mental health, Health outcomes, Social determinants of health, Housing and mental health

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Introduction

Housing is a critical social determinant of health (SDOH) that plays a pivotal role in our physical, behavioral, and mental health [1, 2]. Recent studies underscore the significant impact of stable and secure housing on mental well-being. Studies have consistently shown that access to affordable and stable housing can lead to reduced stress, improved mental health, and better overall quality of life [2–5].

The role of homeownership in housing stability and its potential impact on mental health and well-being can be attributed to several key factors. It reduces housing instability, minimizing the stress associated with frequent moves or forced relocations [6]. Homeownership facilitates economic security by allowing wealth accumulation through property appreciation [7, 8]. This in turn could protect against financial stressors that may harm mental health [9]. Moreover, Homeownership can foster a feeling of ownership and control over living spaces, leading to better mental well-being, increased self-esteem, and lower stress levels [10]. These factors collectively emphasize how homeownership plays a crucial role in improving housing stability and the overall well-being of communities.

Poor mental health outcomes constitute a significant public health concern in the United States, imposing a substantial burden on both individuals and society at large. In 2021, approximately 57.8 million or 22.8% of adults in the U.S. experienced some type of mental illnesses [11]. In the same year, major depressive disorders affected an estimated 21 million or 8.3% adults [11, 12]. The recent COVID-19 pandemic has further exacerbated mental health issues. Beyond the personal toll, these challenges also impose a considerable economic cost, with mental illnesses leading to over \$193 billion in lost earnings annually [13]. While evidence examining the effects of homeownership on mental health outcomes remains limited, recent findings suggest a positive association between homeownership and improved mental health, particularly during high-stress events such as the COVID-19 pandemic [14].

The relationship between housing and mental health holds profound public health significance. Homeownership emerges as a potent avenue for fostering economic stability, social mobility, familial security, intergenerational wealth transmission, and, crucially, improved mental health. While the link between housing and mental health is increasingly acknowledged, there remains a need for comprehensive research that examines the ownership aspects of this relationship [10]. Understanding the intrinsic link between homeownership and mental health provides valuable insights for shaping public policies and interventions that promote affordable homeownership and improved mental health outcomes. While

affordable homeownership is often associated with positive mental health outcomes, the relationship between homeownership and mental health may be influenced by various factors. Further research is needed to better understand how affordable homeownership impacts mental health over time. The objective of this study was to investigate the predictive role of homeownership in mental health outcomes.

Methods

In this study, we conducted analyses of the 2020 Behavioral Risk Factor Surveillance System (BRFSS) data, which encompassed a sample size of 401,958 participants. For detailed information about the BRFSS survey methodology, including sampling, data collection tools, procedures, and weighting, please refer to the CDC website (<https://www.cdc.gov/brfss/index.html>). In brief, the BRFSS stands as the largest telephone survey in the United States, collecting self-reported prevalence data on chronic conditions, risk behaviors, and preventive service utilization from a representative sample of individuals aged 18 years and older. The survey employs a stratified random sampling design and incorporates two types of weights to account for both survey design and population characteristics.

Our research was centered around five critical self-reported mental health outcomes, selected from the Core Section-II of the BRFSS questionnaire: 1) Ever depressive disorders, 2) Difficulty concentrating or remembering due to physical, mental, or emotional conditions, 3) Difficulty doing errands alone due to poor physical, mental, or emotional health, 4) Number of days not having good mental health (e.g., stress, depression, emotional problems) in the past 30 days, 5) Number of days poor physical or mental health affected daily activities in the past 30 days. The five key self-reported mental health outcomes used in our analysis were selected after a thorough review of the BRFSS questionnaire. These outcomes were chosen for their direct relevance in capturing various dimensions of respondents' mental health experiences. They effectively reflect mental health conditions and their impact. Other potential mental health-related variables in the BRFSS were either less pertinent to our study's focus or not available in the required format for our analysis. Our primary exposure variable of interest was homeownership (own or rent). Other living arrangements, including group homes and staying with friends or family, accounted for 5.1% of the total sample, while 0.87% did not report their residential status and were classified as missing during analysis. The third category, 'other living arrangements,' for the exposure variable (homeownership), was merged into the 'renting' category due to their similarities in reflecting temporary or non-ownership residential situations with comparable housing stability

and financial responsibility. Additionally, we assessed various demographic and socioeconomic predictors, including age, sex, race, marital status, education, smoking habits, alcohol consumption, employment status, income level, cohabitation with individuals experiencing depression, mental illness, or suicidal tendencies, cohabitation with individuals using illegal drugs or prescription medications, cohabitation with individuals with alcohol-related issues, and urban/rural residence status.

The Rao-Scott Chi-Square Test was used to account for the complex survey design, providing more reliable *p*-values than the standard chi-square test [15]. This test was applied to compare demographic characteristics and the prevalence of depressive disorders and other mental health-related factors by homeownership, ensuring that the results accurately reflect the population structure. In our study, logistic regression was chosen to analyze the relationship between homeownership and mental health outcomes, given its effectiveness in handling binary outcomes such as the presence or absence of depressive disorders. To ensure the representativeness of our estimates, we applied survey weights in accordance with CDC guidelines. We opted for odds ratios (ORs) for several reasons: they provide clear differentiation between levels of association and are particularly suited for binary outcomes. ORs also retain the property of reciprocity, which ensures consistent *p*-values whether the outcome is modeled as positive or negative. Moreover, SAS offers robust, readily available procedures specifically designed for analyzing survey data, enhancing the precision of our models. This methodological choice is consistent with other studies utilizing BRFSS data, which also employed ORs for their analysis. This approach integrates methodological rigor with practical tools, aligning with established epidemiological practices and supporting the validity of our study's findings. To examine the relationships between homeownership and mental health outcomes while adjusting for demographic variables, we calculated odds ratios (aOR) and their corresponding 95% confidence intervals (CIs). We ensured the representativeness of our estimates by applying survey weights that align with the national population. Our statistical analyses were conducted using SAS 9.4. We followed the BRFSS analysis manual to calculate weighted estimates, including population proportions and odds ratios, by specifying relevant strata, clusters, and weight information. For descriptive statistics, we utilized PROC SURVEYFREQ to generate population-level frequency tables and cross-tabulations. To calculate estimates for continuous variables, we employed PROC SURVEYMEANS. For constructing logistic regression models, we utilized PROC SURVEYLOGISTIC, which incorporates survey design elements. Our adjusted models were developed iteratively, initially beginning with two demographic

variables, and progressively integrating additional covariates. This iterative process resulted in the final adjusted model, encompassing a comprehensive set of covariates. To assess the significance of variable additions on model fit, the likelihood ratio test was utilized, a conventional statistical technique for comparing nested models. In the adjusted models, certain categories of marital status, education, and employment were combined to simplify analyses while retaining relevant characteristics within each group. Furthermore, "the number of days not having good mental health" and "the number of day's poor physical or mental health affected daily activities in the past 30 days" outcomes were dichotomized into zero days vs. ≥ 1 days to facilitate logistic regression analyses. This cut-off was chosen to capture any occurrence of mental health disturbances, reflecting the clinical relevance of even a single day of poor mental health. This approach allows for a broad and inclusive assessment, ensuring that any instance of mental health difficulty is recognized in the analysis. Three final adjusted models were estimated to examine residential status. In Model 4, residential status was categorized into two groups: (1) Own and (2) Rental, with 'Other arrangements' combined with 'Rental.' In Model 4 A, 'Other arrangements' were excluded, leaving two groups: (1) Own and (2) Rental. Model 4B treated residential status as three separate categories: (1) Own, (2) Rental, and (3) Other arrangements. All models (Model 4, 4 A, and 4B) were adjusted for age, sex, race, marital status, education, income, smoking, alcohol consumption, living with a mentally ill person, living with a drug user, living with an alcoholic, and rural/urban residence status. Results for Model 4 are presented in the main results section (Table 3), whereas results for Model 4 A and Model 4B are detailed in Supplementary Table S4. In our reporting of findings, we present results from both descriptive and regression analyses, providing population proportions, population-level odds ratios (OR), and their corresponding 95% confidence intervals (CIs).

Results

The results, as shown in Table 1, provide an overview of how demographic and lifestyle factors are associated with housing status. There was a significant ($p < 0.0001$) association between age and housing status (owning or renting). Individuals aged 18 to 34 years were more likely to rent (ranging from 73.7 to 53.5%) while older individuals 35 and older were more likely to own their homes (ranging from 67.1 to 86.2%). There was no significant association between sex and housing status ($p = 0.0937$). There was a highly significant association between race and housing status, with $p < 0.0001$. White, Non-Hispanic individuals were more likely to own homes (76.0% own, 24.0% rent), while Hispanic individuals were more likely to rent (48.7% own, 51.3% rent). There was a significant

Table 1 Demographic characteristics of the study population by homeownership

Characteristic	Residential Status				p-value
	Own (171989906)	%	Rental* (85419454)	%	
Age, years					< 0.0001
18 to 24	8,068,378	26.3	22,563,307	73.7	
25 to 34	20,886,709	46.5	24,021,877	53.5	
35 to 44	28,319,785	67.1	13,907,971	32.9	
45 to 54	31,106,576	76.5	9,551,869	23.5	
55 to 64	34,869,764	82.1	7,566,007	17.8	
65 or older	48,738,695	86.2	7,808,424	13.8	
Sex					0.0937
Male	83,402,252	66.5	41,987,823	33.5	
Female	88,587,655	67.1	43,431,631	32.9	
Race					< 0.0001
White, Non-Hispanic	120,738,729	76.0	38,106,120	24.0	
Black, Non-Hispanic	15,393,571	50.8	14,910,720	49.2	
Asian, Non-Hispanic	8,871,825	61.6	5,530,020	38.4	
American Indian/Alaska Native, Non-Hispanic	1,518,894	59.2	1,047,905	40.8	
Hispanic	22,324,875	48.7	23,559,438	51.3	
Other Race, Non-Hispanic	3,142,012	58.1	2,265,250	41.9	
Marital Status					
Married	109,365,845	84.9	19,492,904	15.1	
Divorced	17,092,689	63.1	9,992,658	36.9	
Widowed	13,884,867	79.0	3,698,382	21.0	
Separated	2,715,514	42.5	3,676,648	57.5	
Never married	22,356,932	35.6	40,497,166	64.4	
A member of an unmarried couple	5,597,536	43.8	7,191,785	56.2	
Smoking					< 0.0001
Current	19,357,586	56.1	15,122,652	43.9	
Former	44,427,141	76.6	13,577,327	23.4	
Never	97,871,864	65.6	51,231,763	34.4	
Alcohol in the past 30 days					< 0.0001
0 days at least 1 drink	73,297,417	64.5	40,404,516	35.5	
1–10 days at least 1 drink	57,311,621	67.0	28,192,009	33.0	
11–20 days at least 1 drink	13,849,614	71.6	5,499,665	28.4	
21–30 days at least 1 drink	14,251,909	77.0	4,259,805	23.0	
Living with depressed, mentally ill, or Suicidal person					< 0.0001
Yes	6,851,043	57.9	4,982,733	42.1	
No	41,596,581	72.4	15,882,950	27.6	
Living with a person using illegal drugs or prescriptions					< 0.0001
Yes	4,614,597	56.9	3,499,600	43.1	
No	43,926,878	71.7	17,340,296	28.3	
Living with alcoholic					< 0.0001
Yes	10,408,385	65.0	5,612,729	35.0	
No	38,143,521	71.4	15,305,396	28.6	
Education					< 0.0001
Did not graduate high school	15,183,151	47.3	16,934,269	52.7	
Graduated high school	44,097,629	62.0	26,972,172	38.0	
Attended college or technical school	53,128,866	67.8	25,279,691	32.2	
Graduated from college or technical school	59,079,872	78.7	15,965,960	21.3	
Employment					< 0.0001
Employed for wages	78,634,346	66.4	39,711,458	33.6	
Self-employed	16,661,527	73.6	5,975,849	26.4	

Table 1 (continued)

Characteristic	Residential Status				p-value
	Own		Rental*		
	N (171989906)	%	N (85419454)	%	
Out of work for 1 year or more	2,782,098	47.0	3,142,289	53.0	
Out of work for less than 1 year	6,435,066	46.1	7,535,284	53.9	
A homemaker	9,388,654	71.7	3,712,769	28.3	
A student	3,733,466	29.1	9,117,938	70.9	
Retired	43,307,820	87.5	6,197,486	12.5	
Unable to work	8,203,387	50.6	8,021,663	49.4	
Income					
Less than \$15,000	7,004,443	35.9	12,522,654	64.1	<0.0001
\$15,000 to less than \$25,000	15,349,996	49.1	15,911,178	50.9	
\$25,000 to less than \$35,000	10,868,538	56.5	8,356,890	43.5	
\$35,000 to less than \$50,000	17,366,898	66.4	8,770,981	33.6	
\$50,000 or more	89,300,512	81.4	20,420,189	18.6	
Urban or Rural Counties					
Urban Counties	157,519,872	66.1	80,788,894	33.9	<0.0001
Rural Counties	12,549,336	77.1	3,721,449	22.9	

*n=20,507 (6.3%) who reported “other living arrangements” were included in the rental

P-value is from Rao-Scott Chi-Square Test comparing participant characteristics by homeownership

association between marital status and housing status overall, with $p < 0.0001$. Married individuals were more likely to own (84.9% own, 15.1% rent), and never-married individuals were more likely to rent (35.6% own, 64.4% rent). There was a highly significant association between smoking and housing status, with $p < 0.0001$. Current smokers were more likely to rent (56.1% own, 43.9% rent), while never smokers (65.6% own, 34.4% rent) were more likely to own. Individuals who reported consuming alcohol in the past 30 days were more likely to rent. Renters were significantly more likely ($p < 0.0001$) to live with a person suffering from mental illness, drug user or alcoholic. Higher education levels are associated with a higher likelihood of owning a home. Employed individuals were more likely to own and higher income levels were associated with a higher likelihood of owning a home.

The results, as shown in Table 2, reveal significant associations between home ownership and various mental health outcomes. Homeowners exhibited a lower prevalence of ever depressive disorders (15.7%) compared to renters (23.7%), with $p < 0.0001$. Homeowners reported a lower prevalence of difficulty concentrating or remembering (8.0%) compared to renters (16.3%), with a significant p-value (< 0.0001). Homeowners also had a lower prevalence (5.5%) of experiencing difficulty doing errands alone due to poor physical/mental health compared to renters (8.9%), ($p < 0.0001$). Homeowners reported fewer days (mean 3.5 days) of not having good mental health in the past 30 days compared to renters (mean 5.7 days) ($p < 0.0001$). Homeowners experienced fewer days where

poor physical/mental health affected their daily activities compared to renters ($p < 0.0001$).

The results, as shown in Table 3, display the associations between mental health outcomes and homeownership across four models, showing odds ratios (ORs) and adjusted odds ratios (aORs) with 95% confidence intervals (CIs). In Model 1, unadjusted associations revealed that homeownership was associated with increased odds of mental health issues, including ever having depressive disorders (OR=1.66, 95% CI: 1.60–1.73), difficulty concentrating or remembering (OR=2.24, 95% CI: 2.13–2.36), difficulty doing errands alone due to poor health (OR=1.66, 95% CI: 1.57–1.77), and more days with poor mental health and affected daily activities (ORs=1.73 and 1.51, respectively). Model 2, adjusted for age, sex, and race, showed that these associations remained significant, with slightly higher odds ratios. For instance, the aOR for ever depressive disorders was 1.76 (95% CI: 1.68–1.84), and for difficulty concentrating or remembering, 2.29 (95% CI: 2.14–2.44). Model 3, further adjusted for marital status, education, employment, smoking, and alcohol consumption, demonstrated a reduced magnitude of associations. The aOR for ever depressive disorders decreased to 1.39 (95% CI: 1.31–1.46), and for difficulty concentrating or remembering, 1.48 (95% CI: 1.37–1.59). In Model 4, which was fully adjusted for income and living with individuals with mental illness, drug use, or alcohol use, and urban/rural residence status in addition to the variables in Model 3, renters consistently showed higher adjusted odds for mental health issues compared to homeowners. Specifically, renters

Table 2 Prevalence of depressive disorders and other mental health related factors by homeownership

Outcome	Own		Rent		p-value
	n	%	n	%	
Ever depressive disorders	26,965,029	15.7	20,106,854	23.7	< 0.0001
Difficulty concentrating or remembering	13,137,993	8.0	13,178,246	16.3	< 0.0001
Difficulty doing errands alone due to poor physical/mental health	9,056,394	5.5	7,165,542	8.9	< 0.0001
Outcome	mean	95%CI	mean	95%CI	p-value
Number of days not having good mental health in past 30 days	3.5	(3.53–3.61)	5.7	(5.61–5.82)	< 0.0001
Number of days poor physical/mental health affected daily activities in past 30 days	4.7	(4.54–4.79)	5.64	(5.50–5.78)	< 0.0001
Age Group 1 (18–44 years)					
Outcome	Own		Rent		p-value
	n	%	n	%	
Ever depressive disorders	9,810,921	17.2	13,971,081	23.3	< 0.0001
Difficulty concentrating or remembering	4,569,263	8.4	8,676,392	15.1	< 0.0001
Difficulty doing errands alone due to poor physical/mental health	1,879,213	3.5	3,508,185	6.1	< 0.0001
Outcome	mean	95%CI	mean	95%CI	p-value
Number of days not having good mental health in past 30 days	4.45	(4.34–4.63)	5.90	(5.76–6.02)	< 0.0001
Number of days poor physical/mental health affected daily activities in past 30 days	3.37	(3.19–3.55)	4.64	(4.50–4.79)	< 0.0001
Age Group 2 (44–64 Years)					
Outcome	Own		Rent		p-value
	n	%	n	%	
Ever depressive disorders	10,752,573	16.4	4,538,026	26.7	< 0.0001
Difficulty concentrating or remembering	4,816,459	7.7	3,265,551	20.3	< 0.0001
Difficulty doing errands alone due to poor physical/mental health	3,392,727	5.4	2,260,801	14.1	< 0.0001
Outcome	mean	95%CI	mean	95%CI	p-value
Number of days not having good mental health in past 30 days	3.54	(3.43–3.65)	5.96	(5.70–6.21)	< 0.0001
Number of days poor physical/mental health affected daily activities in past 30 days	5.22	(5.00–5.43)	8.56	(8.18–8.93)	< 0.0001
Age Group 3 (65 years and older)					
Outcome	Own		Rent		p-value
	n	%	n	%	
Ever depressive disorders	6,401,536	13.2	1,597,748	20.6	< 0.0001
Difficulty concentrating or remembering	3,752,270	8.0	1,236,303	16.8	< 0.0001
Difficulty doing errands alone due to poor physical/mental health	3,784,454	8.1	1,396,556	19.0	< 0.0001
Outcome	mean	95%CI	mean	95%CI	p-value
Number of days not having good mental health in past 30 days	2.34	(2.30–2.50)	3.75	(3.50–4.01)	< 0.0001
Number of days poor physical/mental health affected daily activities in past 30 days	5.71	(5.45–5.96)	(7.47)	(6.96–7.98)	< 0.0001

Prevalence was estimated as the population proportion of the column total stratified by homeownership

P-value is from Rao-Scott Chi-Square Test comparing prevalence by homeownership

All estimates were weighted and represent population level estimates

had a 29% higher adjusted odds of reporting ever having depressive disorders (aOR=1.29, 95% CI: 1.16–1.44) and a 37% higher adjusted odds of difficulty concentrating or remembering (aOR=1.38, 95% CI: 1.19–1.60). They also faced a 23% increase in the adjusted odds of experiencing a greater number of days not having good mental health in the past 30 days (aOR=1.24, 95% CI: 1.05–1.45), a 23% higher adjusted odds for the number of days with poor mental health in the past 30 days (aOR=1.23, 95% CI: 1.12–1.34), and a 17% increase in the adjusted odds of poor physical or mental health affecting daily activities (aOR=1.17, 95% CI: 1.04–1.31). These findings suggest that renters experience more significant mental health challenges compared to homeowners, even after adjusting for a broad range of socio-economic and personal

factors. Although the strength of the associations weakens with additional covariates in fully adjusted models, homeownership remains significantly linked to various mental health outcomes in all models. Moreover, the likelihood ratio tests for all outcomes demonstrated significant improvements in model fit when moving from Model 3 to Model 4 (all p-values<0.001), indicating that the additional predictors in Model 4 substantially enhance the explanatory power of the models.

Supplementary Table S4 presents additional logistic regression analyses evaluating two categorizations of residential status. Model 4 A used two groups: (1) Own and (2) Rental, excluding ‘Other arrangements,’ while Model 4B included three groups: (1) Own, (2) Rental, and (3) Other arrangements as a separate category. The

Table 3 Association between mental health outcomes and homeownership

	Model 1	Model 2	Model 3	Model 4
Mental Health Outcomes	OR (95%CI)	aOR (95%CI)	aOR (95%CI)	aOR (95%CI)
Ever depressive disorders	1.66 (1.60–1.73)	1.76 (1.68–1.84)	1.39 (1.31–1.46)	1.29 (1.16–1.44)
Difficulty concentrating or remembering	2.24 (2.13–2.36)	2.29 (2.14–2.44)	1.48 (1.37–1.59)	1.38 (1.19–1.60)
Difficulty doing errands alone due to poor physical/mental health	1.66 (1.57–1.77)	2.50 (2.32–2.69)	1.42 (1.30–1.54)	1.24 (1.05–1.45)
Number of days not having good mental health in past 30 days	1.73 (1.67–1.78)	1.34 (1.29–1.39)	1.20 (1.15–1.26)	1.23 (1.12–1.34)
Number of days poor physical/mental health affected daily activities in past 30 days	1.51 (1.45–1.58)	1.53 (1.45–1.61)	1.27 (1.20–1.35)	1.17 (1.04–1.31)

OR=unadjusted odds ratios, aOR=adjusted odds ratios

The odds ratio assesses the relationship between homeownership (with the reference group being those who own a house) and the self-reported prevalence of the mental health outcome listed in the table

Model 1: unadjusted

Model 2: adjusted for age, sex, and race

Model 3: adjusted for age, sex, race, marital, education, employment, smoke, alcohol consumption

Model 4: adjusted for ages, sex, race, marital, education, income, smoke, alcohol consumption, living with a mentally ill person, living with drug user, and living with alcoholic and rural/urban residence status

results confirm that the inclusion or exclusion of the ‘Other arrangements’ category did not significantly affect the findings. The adjusted odds ratios (aORs) for mental health outcomes, including depressive disorders and difficulty concentrating, were consistent across all three models (Model 4, 4 A and 4B), affirming the robustness of our initial results. For further details, see Supplementary Table S4.

Discussion

In this study we explored the link between homeownership and mental health outcomes. We found that homeowners had lower rates of depressive disorders, fewer cognitive difficulties, and better mental health over the past 30 days. Homeownership also reduced the impact of poor physical/mental health on daily activities. These effects persisted even after adjusting for demographic and lifestyle factors.

Our findings align with the idea that owning a home provides stability and control, which may alleviate stress and enhance mental well-being, overall health, and longevity [16–18]. The benefits of homeownership were consistent across different age groups, indicating that homeownership positively influences mental health throughout life. The observed association between homeownership and mental health outcomes in our study aligns with the findings from prior research studies that examined the role of stable and secure housing and health. Studies assessing housing programs for homeless, and others found that providing stable housing can lead to significant reductions in psychiatric symptoms and overall improvements in mental health and quality of life [19–23]. Our findings can be partly explained by several contributing factors. Research has shown that

homelessness and housing instability are associated with higher rates of psychological distress, highlighting the importance of housing stability for mental well-being [24, 25]. Homeownership plays a pivotal role in housing stability, security, and permanence [26, 27]. Homeowners also tended to report higher self-esteem and greater life satisfaction compared to renters [28] that may contribute to better mental health outcomes. Homeownership can also lead to a sense of control over one’s living environment and improved housing quality [29], which may contribute to improved well-being. Given that homeowners possess the ability to undertake structural enhancements to their residences, homeownership holds the potential to elevate housing standards, thereby positively impacting health [30]. Accumulating wealth through homeownership can act as a protective factor against financial stressors, which are known to have detrimental effects on mental health [31]. Homeownership can provide a sense of financial security [32], which may lead to reduced anxiety and financial insecurity.

Although our findings suggest that homeownership may positively impact mental health, further research is needed to determine whether this effect is due to homeownership itself or the broader sense of stability and security it provides. Kearns et al. (2000) found that the psychosocial benefits of housing tenure diminish when considering neighborhood and home conditions, suggesting that local context may be more critical for mental health than ownership status [33]. Similarly, Rolfe et al. (2020) emphasized the importance of neighborhood quality and social support for well-being, regardless of housing tenure [34]. Acolin (2019) reported that while homeowners across 25 European countries generally enjoy better outcomes, these differences are less

pronounced in countries with greater residential stability for renters [35]. These findings may not fully apply to the U.S. context. In the U.S., homeownership could improve life satisfaction and participation in neighborhood activities [36] and could enhance stability, higher-quality living spaces [6], and child health and education outcomes [37] and social and economic benefits [26, 38]. Thus, homeownership may influence mental health by providing improved living conditions and long-term stability.

One potential pathway through which homeownership may impact health is by mediating financial stress. For instance, renters often face stress due to potential rent increases, eviction threats, and poor maintenance, which can significantly affect both mental and physical health. The threat of eviction can lead to severe outcomes such as depression, anxiety, increased suicide rates, and poor self-reported health, often exacerbated by social inequities related to gender, age, and ethnicity [39]. This stress is largely due to housing instability and a lack of control over one's living situation. Conversely, the mental health benefits of homeownership may diminish if it is financially unsustainable. For example, homeowners who experience foreclosure or mortgage distress may suffer from increased anxiety and depression [40]. Thus, while homeownership is often linked to better mental well-being, this advantage can be offset by financial strain. These findings underscore the importance of housing stability and affordability for maintaining mental health. Policies should not only promote homeownership but also ensure it remains financially accessible, as unaffordable homeownership may undermine the stability and well-being typically associated with owning a home.

Our findings highlight that while homeownership generally benefits mental health, the effects are more complex than initially apparent. For instance, Table 3 shows that the strength of the relationship between homeownership and mental health varies depending on socio-demographic and economic factors. This variability underscores the need to view homeownership's impact within a broader socio-economic framework. Although homeowners often report better mental health outcomes, these benefits can be offset by financial pressures such as mortgage payments, property taxes, and maintenance costs, especially for those with lower incomes. Additionally, the current economic climate, characterized by rising house prices and interest rates, further complicates these benefits by increasing financial strain and reducing the perceived security and mental health advantages of homeownership. The high cost of renting also adds pressure for renters, worsening mental health outcomes. Understanding these economic dynamics is crucial for developing policies that enhance housing affordability and support mental well-being. In light of this, it is important to distinguish between "housing"

and "homeownership." Housing includes various living arrangements, such as rental properties and temporary shelters, while homeownership specifically refers to owning one's residence through property purchase. Housing provides immediate relief and health benefits, but homeownership offers long-term stability and permanence, which are vital for building social capital and strengthening community bonds [41, 42]. This deeper community integration can alleviate stress and improve mental well-being. Thus, recognizing this distinction is essential for prioritizing initiatives that go beyond merely providing access to housing and focus on creating pathways to affordable homeownership, ultimately fostering greater mental health benefits [43, 44].

The link between homeownership and improved mental health has important policy implications. Policies aimed at promoting affordable homeownership opportunities could have cascading effects on mental health outcomes, potentially alleviating the burden of mental illnesses in the United States. Initiatives that address housing affordability, offer financial assistance to first-time homebuyers, or support housing stability can be instrumental in achieving health for all. Policy reform that supports affordable homeownership and considers zoning efforts is a significant area of focus. Specifically, acknowledging the influence of the COVID-19 pandemic on the housing market. Notably, while home prices have surged, the accelerating rental expenses have outpaced the cost of home ownership, for example, between late 2021 and 2022, rent prices in the U.S. increased by 11.5%, with some areas in the Midwest experiencing rises of up to 17.4% [45], underscoring the necessity for policy shifts promoting property ownership and equitable housing opportunities. Considering the long-term perspective, it is essential to recognize that homeowners in the United States typically benefit from a fixed mortgage rate for 15 to 30 years, which provides financial stability over an extended period [46], offering stability. In contrast, rent, subject to annual adjustments and often resulting in increases, amplifies the need for policies that encourage sustainable homeownership in the face of a dynamic real estate landscape.

It is important to acknowledge the limitations of this study. The data used in this analysis were cross-sectional, which limited our ability to establish causality [47]. A noticeable degree of collinearity was observed between socio-demographic factors and income, which could have resulted in an overadjustment of regression models. Nevertheless, it is more probable that the estimates leaned toward null findings, as evidenced by the decrease in the odds ratios. Additionally, due to the unavailability of continuous income data, we were unable to assess the residual effect of income. Longitudinal studies are needed to explore the dynamic relationship between

homeownership and mental health over time. Additionally, this study relies on self-reported data, which may be subject to recall bias. Future research could benefit from objective measures of housing stability and mental health outcomes.

In conclusion, homeownership appears to be a protective factor against mental health challenges. These findings underscore the importance of housing as a critical social determinant of health and highlight the potential for affordable homeownership policies to positively impact mental well-being. As the United States continues to grapple with a mental health crisis, understanding the potential benefits of affordable homeownership on mental health is important for public health and housing policy. Nonetheless, it is crucial to interpret these findings with caution due to the limitations of cross-sectional data. More comprehensive longitudinal research is necessary to provide a clearer picture of how affordable homeownership influences mental health and to guide future policy decisions.

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12889-024-20842-w>.

Supplementary Material 1

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Author contributions

SR contributed to conception, design, data acquisition, analysis, and interpretation of data and writing manuscript. DS contributed to interpretation, revision, and final approval. Both authors approved the submitted version and agreed to be personally accountable for their contributions.

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Data availability

All data relevant to this study are accessible on the CDC website: <https://www.cdc.gov/brfss/index.html>.

Declarations

Ethics approval and consent to participate

No ethical approval or consent to participate was required as this study utilized a public dataset.

Consent for publication

All authors provide their consent for the publication of this manuscript.

Competing interests

The authors declare no competing interests.

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