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Housing strain, mortgage foreclosure and health in a diverse Internet sample

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Introduction

Following a dramatic increase in subprime lending beginning in 2003,[1] foreclosure rates increased rapidly through 2008, with 1.84% of all homes in the United States, a total of more than 2.3 million properties, in some stage of foreclosure during that year.[2] A recent

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forecast by Credit Suisse predicted that 8.1 million mortgages (16% of all mortgages) will be in foreclosure by 2012.[3]

Considerable evidence suggests that health and wealth are tightly connected, and that financial strain is associated with poor health, but few studies have examined mortgage default or foreclosure, especially in the context of the current U.S. housing crisis.[4-6] Economic stresses such as job loss are associated with health declines and increases in depressive symptoms.[7-10] Debt and self-reported financial strain are also associated with worse health,[11-13] and difficulty making mortgage payments is associated with lower general well-being.[14, 15] One recent study demonstrated high rates of uninsurance, major depression, and unfilled prescription medications in Philadelphia-area residents undergoing mortgage foreclosure.[4] In contrast, wealth is positively associated with health, and the largest source of wealth for American families is home equity.[16] Homeownership has been associated with greater life satisfaction, better psychological health, higher self-esteem and perceived control, and better self-rated health.[17] Thus, people undergoing mortgage foreclosure may be more likely to experience poor health.

We address the health implications of the current economic crisis by asking the question: What is the health status of Americans facing foreclosure? We expected that this group would exhibit the highest prevalence of poor health of any housing group studied. To date, few studies have demonstrated the interplay between the housing crisis and wellbeing in order to inform appropriate interventions.[18] In the discussion section, we examine how the results of this study may guide nursing, public health and community practice and inform policies to assist homeowners in default or foreclosure. These distressed homeowners may benefit from coordinated financial assistance and targeted social and health services. This article first presents empirical data on the health status of distressed homeowners and then explores potential community-based strategies for reaching out to this vulnerable population.

Methods

Study design and sample

This cross sectional study relied on two sources of data: 1) analysis of foreclosure internet discussion board posts to identify categories of distressed homeowners' perceived health and social concerns and inform survey development, and 2) collection of survey data from an online consumer panel to examine whether these health issues were differentially reported by distressed homeowners compared to secure homeowners and renters.

Analysis of discussion board posts and survey development

Between January 1 and April 30, 2008, we reviewed all online posts to a foreclosure-related internet discussion forum that enrolled several thousand individuals experiencing housing strain. From those posts in the general "Tell us your story" category, we extracted and evaluated every comment related to individual and family health or wellbeing. These posts were classified as follows: general health; mental health (anxiety, depression); foregone health care (medication, physician and dentist visits, eye care, dropped insurance) and health behavior (drinking, smoking, exercise, food/diet, weight loss/gain, sleep impairment). We also evaluated reasons participants cited for being in default or foreclosure, including the following: health-related expenses; divorce; job loss; death of a family member; interest rate of loan; predatory lending; excessive fees; and credit card or other debt. These categories then drove scale and item selection for the internet survey, which is described in detail below. Whenever possible, previously validated measures were included in the survey instrument.

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Internet-based survey

Participants were identified and enrolled via email invitation by e-Rewards, Inc., a survey research company that was engaged because of its extensive participant panel and broad reach across the United States. The company works with 2.5 million subscribers who volunteer to participate in surveys. Participants are compensated for their time by earning currency redeemable for a range of consumer goods and services. Eligible participants included adult e-Rewards members living in the four states with the highest foreclosure rates in July 2008: Arizona, California, Florida, and Nevada. These four states accounted for 51% of all foreclosure filings throughout 2008 in the United States.[2]

To understand how self-reported health status varies by housing status, we identified four comparison groups, defined by home ownership status, housing affordability, and payment history: 1) homeowners with no housing strain; 2) homeowners with moderate housing strain; 3) renters; and 4) homeowners experiencing default or foreclosure. Homeowners were considered to have no housing strain if they reported that they had no history of late payments in the last year and that their housing costs were less than the federal standard for housing affordability (30% of monthly income). Homeowners were considered to have moderate housing strain if they either, 1) had a history of at least one late or incomplete payment in the last year; or 2) paid 30% or more of their monthly income in housing costs, but were not currently in default or foreclosure. Renters were included as a single comparison group, regardless of housing cost-to-income ratio. Participants were included in the default or foreclosure group if they, 1) were more than 30 days behind on mortgage payments and/or had received a notice of default or foreclosure from a lender; or 2) had experienced loss of their home through foreclosure in the last 12 months.

This categorization strategy has several advantages. First, we can compare all groups to homeowners without housing strain, who are presumed to have the most secure housing and the best health. Second, we can determine whether there is a graded relationship between health and housing strain. Third, we can compare homeowners experiencing default or foreclosure to renters, a group shown in prior studies to have poorer health than homeowners.[19-21] Thus, renters offer a conservative comparison group for determining the excess health burden associated with foreclosure.

Eligible e-Rewards members were invited to participate in the survey in August and September of 2008; enrollment continued until 825 participants completed the survey, a target that was reached within several days of eligibility screening by the online survey administrator. Because of incomplete or out-of-range data, 27 participants were excluded from this analysis, yielding an analytic sample of 798 participants.

Approvals, consent, and survey procedures

This study was approved by the institutional review boards of the University of Pennsylvania and the University of Maryland. We report the following information on study procedures in accordance with the recommendations set forth in the Checklist for Reporting Results of Internet e-Surveys (CHERRIES).[22] Participation in the survey was considered implied consent. The invitation to participate explained: “This survey asks about basic needs, like housing and food, as well as how your family is getting by financially. We are interested in hearing from people who are both homeowners and renters, to learn more about how making ends meet affects American families. The survey also asks about your health. If you participate in this survey, you will be compensated for your time with points redeemable for goods and services through e-Rewards.com.” Participants also were informed that the research was being conducted by a team at the University of Pennsylvania and the University of Maryland and that responses would be anonymous. Personally identifying

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information was not recorded. Participants were informed that answers to the survey questions could not be linked by the researchers back to their name, computer, email, or home address. Assurance was made that participation in this project was voluntary, with no consequences to individuals who chose not to participate. A contact email for the study team was provided. Survey completion was expected to take less than 15 minutes; adaptive questioning was employed to limit respondent burden by directing questions only to relevant groups. For example, questions regarding the causes of default or foreclosure were only asked of participants undergoing default or foreclosure. Each page contained two to three questions and the entire survey was 20 pages long, although many of those pages would be automatically skipped if calculated to be irrelevant to the particular respondent. The online survey provider executed a standardized protocol to allow each participant to respond only once to the survey. The survey was also programmed to make completion of housing status questions and income questions mandatory, in order to classify respondents according to housing strain.

Health measures

Health measures captured indicators of general health status and psychological and physical responses to stress. We included two questions regarding self-rated health, a predictor of morbidity and mortality across age, sex, and racial groups.[23-25] Consistent with prior research, self-rated health was dichotomized, comparing participants who reported fair or poor self-rated health to those who reported good, very good, or excellent self-rated health. Participants were also asked to rate their health compared to 12 months ago. Two questions, which mirror those used in the National Health Interview Survey, assessed the number of days in the last 30 days that participants' physical or mental health was impaired.[26]

Psychological distress was assessed using the K6 scale; scores range from 0-24 and are highly predictive of serious mental illness.[27] Participants were considered to have serious psychological distress if they scored 13 points or higher on the K6 scale.[28] A modified version of the Physical Symptoms Inventory[29] was used to examine the prevalence of individual somatic symptoms, and a summary count of symptoms was created (0-12). These symptoms were selected to represent likely physical responses to stress.

Covariates

Participants self-reported their age, sex, race or ethnicity (Hispanic, Black, Asian, White, or other), marital status (married v. unmarried), education level (high school or less, some college, or college graduate), and annual income. Annual income was log-transformed in regression analysis.

Analysis

The chi-square test was used to estimate differences in the distributions of categorical variables across housing groups, and comparisons of continuous variables were performed using t-tests or Wilcoxon's rank-sum test. For analyses of categorical health measures, we used logistic regression, and for count measures (i.e., number of days physical health was not good), we used negative binomial regression. All analyses were performed using SAS Version 9.1.

Results

Table 1 provides sample characteristics by housing status. Homeowners in the default or foreclosure group spent an average of 63.7% of their monthly income on housing costs. On average, participants in the default or foreclosure group were younger than other homeowners but older than renters. Homeowners in default or foreclosure were less likely to

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be married and had lower education and income relative to other homeowners. Hispanic and Black survey respondents were disproportionately represented in the renter and default or foreclosure groups. Across all homeowner groups, median income in the current study exceeded the 2007 national median of $50,233.[30]

Health characteristics by housing status are displayed in Table 2. Homeowners in default or foreclosure reported the poorest health status of any housing group on multiple metrics, differing most from homeowners with no housing strain. Owners with moderate strain and renters reported intermediate health outcomes. The prevalence of fair or poor self-rated health, a predictor of morbidity and mortality, was 22.9% among participants in default or foreclosure, compared to only 9.2% among homeowners with no housing strain ($p<.001$) and 14.4% among homeowners with moderate housing strain ($p=0.031$). Over the past year, 16.7% of respondents in the default or foreclosure group experienced a decline in self-rated health, compared to 8.8% of homeowners without strain ($p=0.016$). Participants in default or foreclosure reported higher numbers of both physically unhealthy days and mentally unhealthy days relative to both homeowners with no housing strain and those with moderate housing strain. On average, persons experiencing default or foreclosure reported that their physical health suffered on approximately four of the last 30 days, and that their mental health suffered on eight of the last 30 days. Participants in default or foreclosure had a higher prevalence of serious psychological distress (21.4%) than any other group ($p<.001$).

Each of the twelve physical symptoms included in this study was far more common among homeowners in default or foreclosure than among homeowners with no housing strain, and six of the twelve symptoms were significantly more common among homeowners in default or foreclosure than among renters. Accordingly, participants in default or foreclosure reported a significantly higher average number of symptoms relative to all other groups.

A clear gradient appears for most health indicators in regression analyses using homeowners without strain as the reference group and adjusting for age, sex, race-ethnicity, education, and log income (Table 3). Homeowners without strain reported the best health status, followed by owners with moderate strain, renters, and then the default or foreclosure group. This gradient was most pronounced for serious psychological distress. Serious psychological distress was 13 times more likely among the default or foreclosure group relative to homeowners without strain. Significant, though less pronounced, elevations in psychological distress were also observed among owners with moderate strain and renters.

Figure 1 illustrates that secure homeowners experienced the fewest days of physical health impairment, followed by homeowners with moderate strain, renters, and homeowners experiencing default or foreclosure. A similar, but more pronounced gradient was evident for days of mental health impairment, which was clearly most frequent in the default or foreclosure group. Similarly, Figure 2 demonstrates a pattern of greater numbers of physical symptoms among homeowners experiencing default or foreclosure.

Discussion

Key findings and implications

This study demonstrated an association between housing strain and poor health. Persons experiencing default or foreclosure reported a particularly high prevalence of mental and physical health impairments. For every measure examined, homeowners in default or foreclosure experienced poorer health relative to homeowners with no housing strain. These differences were observed for general health measures, indicators of days lost due to physical and mental health concerns, a scale of psychological distress, and reports of physical symptoms. More than one in five respondents in default or foreclosure (22.9%)

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reported that they were in fair or poor health, an important predictor of morbidity and mortality.[23-25] A similarly high proportion of participants reported symptoms consistent with serious psychological distress. Even after controlling for demographic and socioeconomic confounders, the health status of homeowners in default or foreclosure remained significantly worse than that of homeowners with no strain on nearly every measure studied. On many measures, homeowners in foreclosure had even poorer health than renters, who have previously been observed to be a disadvantaged group.[19, 20]

This is likely to be the first study to demonstrate a graded relationship between housing strain and health. While the socioeconomic gradient in health is widely accepted and well-supported by extensive epidemiological evidence, much of the literature on socioeconomic health disparities is based on associations between lower levels of income or education or other measures of status and poorer health. Relatively little empirical evidence is available to estimate the health effects of deficits in specific material resources, for example, housing or food. Furthermore, although an adverse association between housing strain and health was expected based on prior work regarding financial strain, the nature and magnitude of relationships between specific material resources or deficits have rarely been tested and are of critical public health importance. Analyses reported in this paper suggest that the relationship between housing strain and poorer health persists after controlling for income, indicating that housing strain and mortgage default or foreclosure may be adversely associated with health in ways that go beyond inadequate financial resources. For example, the social stressors of housing strain or home loss, including family and network disruption, may contribute to the pattern we report of the poorest health being observed among homeowners in default or foreclosure. Understanding how specific material resource deficits contribute to health is important to development of empirically driven policy solutions. This paper is a first step in understanding how the current housing crisis may relate to population health.

The demographic characteristics of respondents to this survey reflect differences between homeowners and renters observed in other studies.[31] During the recent boom in subprime lending, vulnerable populations, including minority and less-educated groups, were targeted with unfavorable and often unaffordable loans.[32] The health differences observed here are consistent with long-established evidence of a graded association between wealth and health. Not only did homeowners in default or foreclosure report poorer health than homeowners with no housing strain, but they also reported poorer health than homeowners with moderate housing strain and renters, which are more conservative comparison groups. The housing strain-health gradient was observed most strongly for measures of mental health and for physical symptoms, which may represent somatic manifestations of psychological distress or acute responses to stress. In these domains, a clear pattern emerged, in which homeowners with no strain reported the best health, followed by homeowners with moderate strain, renters, and homeowners in default or foreclosure.

The high prevalence of impaired mental health and stress-related symptoms observed here among participants in default or foreclosure is an important social and public health issue. Serious psychological distress identified by the K6 scale is closely associated with disorders including depression and anxiety,[27] which affect quality of life, physical health, and productivity.[33-35] The high prevalence of physical symptoms among homeowners in default or foreclosure is also a critical issue, as these symptoms suggest both excess current morbidity and risk for future poor health. For example, fatigue, reported by 81% of participants in default or foreclosure, is associated with excess mortality.[36] Back pain is associated with excess medical costs[37] and is among the most common reasons for lost productive time.[38]

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Limitations

Several study limitations warrant consideration. First, we sampled from the four U.S. states with the highest foreclosure rates; the association between foreclosure and health may be different in areas with a lower density of foreclosures. Additionally, because participants needed internet access to complete the survey, participants in this survey may be more socially and economically advantaged than is typical among persons undergoing default or foreclosure. Indeed, participants in this study have median incomes higher than the national median. Thus, we may underestimate the true prevalence of poor health among people experiencing foreclosure nationwide. Nonetheless, correlates of foreclosure in this study are consistent with findings from an earlier study that showed that non-whites and families with children were more likely to experience default or foreclosure.[31]

A second limitation is that this cross-sectional study cannot determine whether default or foreclosure caused poor health. A recent survey of homeowners going through foreclosure in California, Florida, Illinois, and New Jersey found that medical problems (e.g., illness, medical bills, health-related job loss, caring for sick family members) contributed to foreclosure risk.[39] However, in our sample, factors related to the current economy and housing market appeared more salient than individual health problems. Only three participants identified health care costs as their primary reason for foreclosure. The most common reasons participants reported being in default or foreclosure, accounting for 69% of foreclosures, included payments that were too high (20.1%), decreased pay/wages (17.0%), job loss (16.3%), and having an “upside down” mortgage in which the loan value was higher than the value of the home (15.7%).

Importance to nursing and health policy

Despite these limitations, this research has important implications for nursing, other health care and social service providers and policymakers seeking to mitigate the adverse effects of foreclosures. Regardless of whether foreclosure causes poor health or vice versa, this study offers evidence that homeowners who are experiencing default or foreclosure may be in poorer health than any other population segment studied.

Homeowners in default or foreclosure represent an identifiable high-risk group that may need and benefit from coordinated, affordable health services, including mental health services. For example, mental health screening and referral could be bundled with existing financial counseling services to assist homeowners at risk of default or foreclosure. In this survey, 20.3% of participants in default or foreclosure reported that they had no health insurance coverage, compared to 6.5% of homeowners with no strain, demonstrating the need for increased access to affordable health care services for families in foreclosure. Health reform may begin to alleviate this problem by expanding insurance coverage, but not in the short-term, and likely not in time to help the many families facing imminent foreclosure. In the near-term, triage and referral to appropriate health and social services could be coordinated on a large scale for the homeowners who access the Making Home Affordable mortgage relief program or other forthcoming federal governmental initiatives. However, critics have cited the insufficient reach and the lack of sustainability of the Making Home Affordable program.[40] As of February 2010, approximately 2.6 million households in the United States were undergoing foreclosure and an additional 6 million were delinquent 60 days or more on their mortgage payments. However, only 168,000 households had received loan modifications through the Home Affordable Modification Program (HAMP).[41]Critics have called the federal response to the housing crisis” faltering and timid.”[32]

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Nurses should advocate for mental health screening and referral to be incorporated into the "loan workout" process, whereby borrowers work with lenders to negotiate new and more favorable loan terms. Philadelphia has a model program that requires lenders to meet with distressed homeowners in court for mandated mediation prior to foreclosure. This program was originally called the Residential Mortgage Foreclosure Diversion Pilot Program and has now been extended as a standing program. It is an effort to craft sustainable loan terms or a "graceful exit" whereby homeowners can sell or leave their homes without going through the credit-damaging and contentious process of foreclosure. A key leader of Philadelphia's program, Judge Annette Rizzo, has described the program as an ideal portal for identifying the range of life challenges faced by distressed homeowners, including unmet needs for affordable housing as well as food and health care. Multiple states, including Florida, New Jersey, Maine, and Ohio, have implemented or are considering programs modeled after Philadelphia's foreclosure courts. These courtroom-based mediation sessions are an opportunity for housing counselors, legal aid workers, and other social service providers to identify and reach out to distressed homeowners, essentially providing triage to connect them with appropriate resources at a highly vulnerable moment in their families' lives. This is an area where nursing could be involved as well.

Internet sampling in a vulnerable population

This study demonstrated that distressed homeowners were responsive to internet-based inquiries about their health and financial status. Use of the internet to contact distressed homeowners for both research and service provision may be less intimidating than, and preferable to, telephone contact. The telephone is often a preferred mode of communication used by debt collectors and may not be a viable option for connecting with distressed homeowners. Internet survey methods appear to be a valid, economical option in many cases, and were useful in reaching this particular population.[22, 42, 43]

By reframing housing strain and default or foreclosure as a population health issue, we may be better prepared to design and launch services and policy initiatives that provide both financial and health relief, recognizing that these forces work hand-in-hand. This paper is a small but important step along the path to establishing the link between housing policy and health policy.

Conclusion

Because of the poor health status of homeowners in default or foreclosure, increasing foreclosure rates may have important population health implications. Homeowners in default or foreclosure represent an identifiable high-risk group that can be reached using a range of modalities, including foreclosure mediation courts and internet-based outreach. Distressed homeowners may benefit from coordinated, affordable health and social services, and nurses can lead the way in advocating for effective policies that address the needs of this vulnerable population.

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Policy implications

1. The unprecedented volume of mortgage defaults and foreclosures represents an important and under recognized population health issue.
2. Distressed homeowners are more likely than secure homeowners and renters to have impaired mental and physical health.
3. Health care access may be limited for distressed homeowners. In addition to financial counseling and social services, distressed homeowners may benefit from screening and referral to appropriate, affordable health services. Bundling of services at one site of intervention, like foreclosure courts or housing counseling agencies, may aid this vulnerable population.
4. Distressed homeowners whose health is impaired may face particular challenges as they attempt to improve their financial situations. Medical care and appropriate counseling may be necessary in order to enable distressed homeowners to seek, obtain, and sustain employment.
5. Nurses are well-suited to provide screening, counseling, care, and referrals for distressed homeowners whose health is impaired.
6. Nurses can serve as important advocates for health relevant policy responses to the housing crisis.

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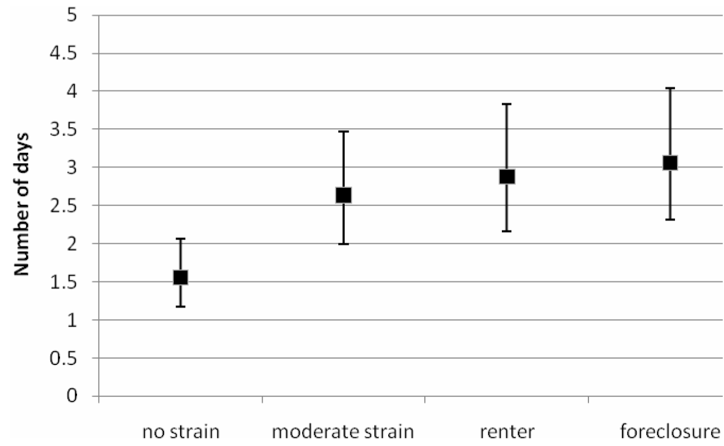

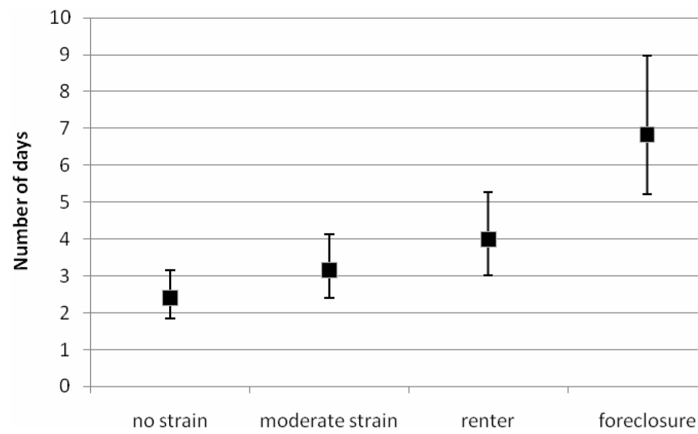

Figure 1.
Expected number of days poor physical (A) and mental (B) health in last 30 days by housing status†
Legend
†Adjusted for age, sex, race/ethnicity, education, marital status, and log income; error bars indicate 95% confidence intervals

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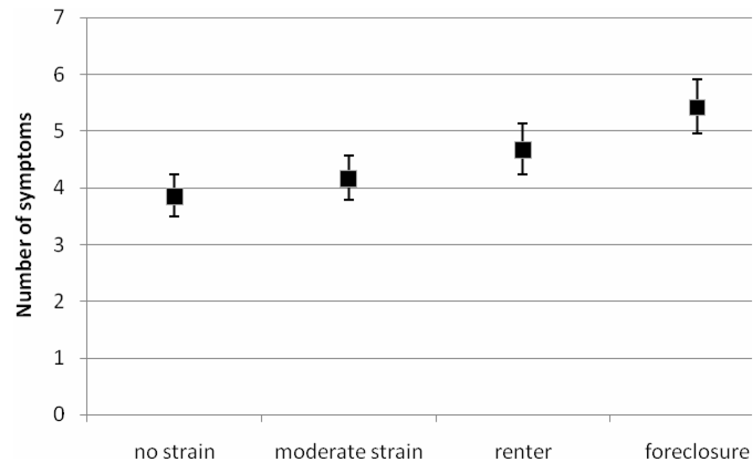

Figure 2.

Expected number of symptoms by housing status†

Legend

†Adjusted for age, sex, race/ethnicity, education, marital status, and log income; error bars indicate 95% confidence intervals

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Table 1

Respondent demographic and socioeconomic characteristics by housing status

Category	Owners: no strain	Owners: moderate strain	Renters	Default/ Foreclosure
N	217	195	194	192
% monthly income spent on housing (mean, SD)[a,b,c]	21.6 (11.4)	54.6 (40.6)	41.2 (39.7)	63.7 (95.1)
Demographic characteristics				
Age(mean, SD) [a,b,c]	48.7 (11.6)	43.7 (11.7)	36.2 (10.6)	40.0 (10.1)
Female(%)	70.5	72.8	70.1	72.4
Race/ethnicity(%)[a,b]				
Hispanic	2.8	7.7	10.8	15.6
Black	1.4	2.6	5.7	4.2
Asian	8.3	6.2	10.8	6.8
White	86.2	83.1	69.1	68.2
Other	1.4	0.5	3.6	5.2
Marital status(%)[a,b,c]				
Married	78.8	79.5	51.0	66.7
Widowed	2.3	2.1	1.0	2.1
Divorced/ Separated	8.8	9.2	15.0	19.8
Never married	10.1	9.2	33.0	11.5
Socioeconomic characteristics				
Education level [a,b,c]				
High school or less	6.9	6.2	5.7	11.5
Some college	34.1	42.1	41.2	54.2
College graduate	59.0	51.9	53.1	34.4
Annual household income ($, median)[a,b,c]	85,000	80,000	50,000	56,500

[a]Significant difference between owners with no strain and default/foreclosure at the 5 percent level.

[b]Significant difference between owners with moderate strain and default/foreclosure at the 5 percent level.

[c]Significant difference between renters and default/foreclosure at the 5 percent level.

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Table 2

Health status by housing status

	Owners: no strain	Owners: moderate strain	Renters	Default/ foreclosure
N	217	195	194	192
General health status				
Fair/poor self-rated health (%)[a,b]	9.2	14.4	16.5	22.9
Health worse in last year (%)[a]	8.8	12.8	13.4	16.7
Number of days in last 30 physical health not good (mean, SD) [a,b]	1.5 (4.0)	3.0 (6.7)	2.9 (5.6)	3.8 (6.7)
Mental health				
Number of days in last 30 mental health not good (mean, SD) [a,b,c]	2.3 (4.9)	3.5 (6.8)	4.7 (7.5)	7.9 (9.7)
Serious psychological distress (%)[a,b,c]	1.4	7.2	8.8	21.4
Symptoms				
Fatigue [a,b,c]	57.1	62.6	70.1	81.3
Headache [a,b,c]	60.4	65.6	68.0	77.6
Trouble sleeping [a,b]	59.0	60.0	71.7	76.6
Backache [a,b]	47.5	51.8	57.7	67.2
Nausea [a,b]	33.6	43.1	56.7	56.8
Heart burn [a,b,c]	35.0	34.9	37.1	50.0
Diarrhea [a]	23.0	34.4	35.6	43.8
Stomach cramps [a,b,c]	11.5	22.1	25.8	37.0
Heart pounding [a,b,c]	11.5	12.3	16.5	28.1
No appetite [a,b,c]	9.2	8.7	15.0	24.5
Shortness of breath [a,b]	12.0	14.4	21.1	22.9
Chest pain [a,b]	5.1	8.2	15.5	17.2
Number of physical symptoms (mean, SD) [a,b,c]	3.7 (2.7)	4.3 (3.0)	5.0 (3.1)	6.0 (3.3)

[a]Significant difference between owners with no strain and default/foreclosure at the 5 percent level.

[b]Significant difference between owners with moderate strain and default/foreclosure at the 5 percent level.

[c]Significant difference between renters and default/foreclosure at the 5 percent level.

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Table 3

Excess odds of poor health indicator by housing status, relative to homeowners with no housing strain: Odds Ratio (95% CI)[†]

	Owners: moderate strain	**Renters**	**Default/ foreclosure**
General health status			
Fair/poor self-rated health	1.62 (0.87-3.04)	2.02 (1.02-4.00)	2.49 (1.32-4.69)
Health worse in last year	1.54 (0.81-2.93)	1.86 (0.92-3.80)	2.14 (1.10-4.18)
Mental health			
Serious psychological distress	4.82 (1.35-17.29)	5.05 (1.36-18.78)	13.62 (3.95-46.97)
Symptoms			
Fatigue	1.18 (0.78-1.78)	1.50 (0.93-2.41)	2.71 (1.65-4.46)
Headache	1.03 (0.68-1.58)	0.92 (0.57-1.49)	1.61 (0.99-2.61)
Trouble sleeping	0.95 (0.63-1.43)	1.60 (0.99-2.59)	1.86 (1.15-2.99)
Backache	1.12 (0.75-1.67)	1.50 (0.95-2.35)	1.98 (1.27-3.09)
Nausea	1.27 (0.84-1.93)	1.91 (1.20-3.05)	1.91 (1.22-2.99)
Heart burn	1.01 (0.66-1.54)	1.27 (0.80-2.04)	1.87 (1.19-2.91)
Diarrhea	1.63 (1.05-2.55)	1.71 (1.05-2.79)	2.50 (1.56-3.99)
Stomach cramps	1.88 (1.08-3.27)	2.06 (1.13-3.75)	3.42 (1.95-6.01)
Heart pounding	0.96 (0.52-1.77)	1.21 (0.64-2.31)	2.37 (1.33-4.24)
No appetite	0.80 (0.40-1.60)	1.03 (0.52-2.06)	2.10 (1.12-3.93)
Shortness of breath	1.04 (0.58-1.88)	1.40 (0.76-2.59)	1.45 (0.80-2.61)
Chest pain	1.56 (0.69-3.50)	2.96 (1.31-6.67)	3.03 (1.39-6.61)

[†]All regressions control for age, sex, race/ethnicity, education, marital status, and log income