



Longitudinal study of the housing and mental health outcomes of tenants appearing in eviction court

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Abstract

Purpose Millions of people are evicted from rental properties in the U.S. annually, but little is known about them and their mental health. This study followed a cohort of eviction court participants over time and assessed their housing and mental health outcomes.

Methods One hundred and twenty-one tenants were recruited from an eviction court in New Haven, Connecticut, and their housing, mental health, and psychosocial status were assessed at baseline, 1, 3, 6, and 9 months following their encounter with the court. Inverse probability weighting was used for missing data.

Results At baseline, 42% of participants had appeared in eviction court before, 28% had experienced eviction, and 44% had been previously homeless. In addition, 39% screened positive for generalized anxiety disorder, 37% for posttraumatic stress disorder, 33% for major depressive disorder, and 17% reported suicidal ideation. At follow-up, participants experienced increased days of housing instability and homelessness over time with some persistent mental health symptoms. Less than one-quarter of participants received any mental health treatment during the 9-month follow-up period. About 54% of participants followed reported that they had to change their residence after their court appearance consistent with court records. Participants who had an eviction-related move experienced greater housing instability over time than participants who did not.

Conclusion Together, these findings suggest that there is a sizable subgroup of adults who present to eviction court with persistent housing and mental health issues who do not receive adequate assistance in addressing these issues.

Keywords Homelessness · Evictions · Mental health · Housing

Introduction

Each year in the United States, millions of people are evicted from rental properties due to non-payment of rent or some other lease violation. Evictions can have devastating effects on the lives of residents and their communities, and there are no clear solutions available for this problem [1]. As the cost of rents has risen, the availability of affordable housing

has shrunk particularly in metropolitan areas [2, 3], and the risk of eviction has increased. Evictions is often part of a cascade of negative personal events that ultimately lead to unemployment, homelessness, and long-term poverty [4, 5]. As a result, evictions have begun to be viewed as an important social and public health problem and potential point for intervention.

Two systematic reviews have been conducted on health and psychosocial characteristics associated with eviction [4, 6]. These reviews have found that eviction or risk of eviction is associated with distinct sociodemographic characteristics, financial hardship, substance abuse, and negative mental and physical mental health outcomes. The vast majority of studies were cross-sectional and there has been a lack of longitudinal follow-up among individuals facing eviction. Among the many unanswered questions are: what proportion of individuals who face eviction are forced to move to a new residence? What proportion continue to experience a

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threat of eviction? And what proportion struggle with mental health or substance abuse problems?

Mental health and psychosocial problems can be both causes and consequences of eviction. Individuals under threat of eviction commonly experience depression, anxiety, psychological distress, and hoarding disorder which contribute to eviction risk [6–8]. Conversely, one notable study that examined suicide deaths across 16 states found that evictions appeared to be a precipitating factor for suicide [9]. There is also evidence that people with severe mental illness are often evicted for reasons related to their disability, in violation of the Fair Housing Amendments Act of 1988 and the Americans with Disabilities Act [10]. The course and long-term outcomes of people who face eviction are unclear and so research is needed. Presumably, evictions can represent both an indicator and a social determinant of housing instability and social dysfunction. Further research is needed to examine the interrelationships between housing, health, and psychosocial status of individuals at the time which they are facing eviction and their outcomes afterwards over time beyond the initial eviction period.

In the current study, we conducted a longitudinal observational study of adult tenants who presented to eviction court in New Haven, Connecticut. We followed these adults and assessed their housing, mental health, and psychosocial status over a 9-month follow-up period after their initial assessment. We also compared baseline characteristics of adults who did and did not have to change their residence after an eviction court appearance. We hypothesized that adults who presented to eviction court currently face mental health and psychosocial problems, and that eviction-related moves are prospectively associated with worsening of mental health and psychosocial problems. These results can document risk factors for and consequences of evictions and may highlight the need for assistance for those facing this legitimate legal process.

Methods

Participants

A total of 121 participants were recruited from New Haven Eviction Court located at the New Haven Courthouse in Connecticut. Participants were recruited by a research assistant who attended the court on a weekly basis from March 2017 to October 2018. The New Haven Eviction Court saw about 10–30 residential cases weekly. Adult tenants who were facing eviction were introduced to the study and invited to participate. Inclusion criteria limited the sample to adults 18 years or older, who were English-speaking, were current tenants, and had a residential eviction case at the New Haven Eviction Court. Adults who were illiterate or had a

conservator were excluded. The sample was drawn from the population of tenants presenting to eviction court in New Haven County, because they had been issued a “notice to quit” due to non-payment of rent or violation of a lease which allowed landlords to start the eviction process.

Research design

A longitudinal observational study was conducted to examine the characteristics and outcomes of participants over time. After participants agreed verbally to participate in the study, a research assistant obtained written informed consent and conducted a baseline assessment that documented sociodemographic characteristics, housing and eviction history, physical and mental health status, employment and income, and quality of life. The New Haven Courthouse granted permission to recruit and assess participants for the study. The Courthouse provided office space for the research assistant to conduct baseline assessments at the Courthouse. For baseline assessments, participants completed questionnaires with the research assistant present to assist in answering any questions.

After the baseline assessment, participants were followed up 1, 3, 6 and 9 months later with similar assessments conducted by phone or in-person. Participants were offered \$15 for each assessment, with the potential to earn \$75 for completing all five assessments. To supplement self-report assessments, public court records of participants were reviewed after 9 months to determine the outcomes of their eviction cases. All procedures were approved by the Institutional Review Board at Yale University School of Medicine.

Measures

Sociodemographic characteristics (e.g., age, gender, marital status, personal income level, employment status, and veteran status) were based on participant self-report.

Recent housing history was assessed with a series of questions that asked participants how many nights in the past 90 days they spent in seven different housing settings which were collapse into three categories: own place (apartment, room, or house), unstably housed (someone else’s place, transitional housing, hospital, jail/prison, other), or homeless (shelters, outdoors, automobile). Participants were asked whether they had ever been homeless before in their lifetime and the age in which they were first homeless. Eviction history was assessed with several questions that asked participants whether they have been to eviction court before and whether they have ever been evicted before. Incarceration history was assessed with a question asking participants whether they had ever been in jail or prison before.

A comprehensive assessment of mental health was conducted which included a measure of general mental

functioning with the Short-Form 12-item Health Survey, version 2 (SF-12v2) [11]; diagnostic measures of posttraumatic stress disorder, and depression and anxiety using the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) [12] and the Patient Health Questionnaire-4 (PHQ-4), respectively; symptom measures of psychological distress with continuous subscales from the Brief Symptom Inventory (BSI) [13]; and receipt of any mental health treatment.

The SF-12v2 [11] was used to calculate normed mental health component summary scores, which range from 0 to 100 with a score of 50 representing the average level of functioning in the general population and each 10-point interval representing one standard deviation. The SF-12v2 has been found to be a reliable and valid measure in homeless populations [14].

The PCL-5 [12] is a 20-item scale that asks participants to report the extent to which they are bothered by each of the 20 DSM-5 PTSD symptoms in the past month from 0 (not at all) to 4 (extremely), and items are summed for a total score ranging from 0 to 80. In accordance with the recommended guidelines [12], total scores of 38 or greater were considered a positive screen for PTSD.

The PHQ-4 [15] is a commonly used 4-item self-report screening instrument for major depressive disorder (MDD) and generalized anxiety disorder (GAD). Participants were asked to report how often in the past 2 weeks they have been bothered by two core symptoms of depression and two core symptoms of generalized anxiety disorder on a scale from 0 (not at all) to 3 (nearly every day). Scores of 3 or greater on the depression or anxiety subscales indicate a positive screen for the respective condition. In this study, participants were further asked yes/no whether they have tried to kill themselves in the past 2 years.

The BSI [13] was used to assess the symptoms of psychological distress as reported on the Psychoticism, Depression, and Anxiety subscales (BSI). Participants were asked to rate 16 items from 0 (never experience symptom) to 4 (very often experience symptom) such as “nervousness or shakiness inside” and “the idea that someone else can control your thoughts.” The mean score of each of the subscales was calculated.

Receipt of any mental health or substance abuse treatment was assessed by questions asking participants whether they received any treatment for alcohol problems, drug problems, or mental health problems in the past 30 days.

Quality of life was assessed with the 14-item Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form (Q-LES-Q-SF) [16], which assesses satisfaction in the past week in various aspects of life, e.g., work, social and family relationships, and living situation. Participants were asked to rate their satisfaction in these areas from 1 (very poor) to 5 (very good). Responses were summed and transformed

into a percentage of the maximum possible score as a total scale score.

Public court records were reviewed to determine the recorded outcomes of eviction cases of participants. Like most cities, New Haven maintains an online publicly accessible list of court cases and outcomes which was used in this study. Outcomes of eviction cases were recorded in one of the following five categories: Judgment for Plaintiff with Final Stay by Stipulation, Judgment for Plaintiff with Non-Final Stay by Stipulation, Summary Process Execution for Possession, and Dismissed in Favor of Tenant, or no/unknown outcome. Both Summary Process Execution for Possession and Judgment with Final Stay by Stipulation are considered evictions.

Data analysis

First, descriptive statistics were used to examine the sociodemographic characteristics, housing, mental health, and psychosocial status of participants at baseline and every follow-up period. Second, the eviction outcomes of participants at 1-month follow-up were examined and the amount of attrition that occurred at every follow-up period was described. Given the high rate of attrition over time, inverse probability weighting was employed. Inverse probability weights were computed separately for each follow-up period, using sociodemographic data collected at baseline (i.e., age, sex, race/ethnicity, education, marital status, employment status, and income, as well as prior history of eviction court, eviction, incarceration, and homelessness). These weights were applied for any analyses involving the longitudinal data.

Third, paired *t* tests and McNemar’s tests (using asymptotic *p* values) were conducted between baseline and every follow-up period separately to examine short-term and long-term changes as well as maximize the sample size in the analysis. Finally, participants who had to move after eviction court were compared to participants who did not have to move on changes in housing, mental health, and psychosocial status between baseline and every follow-up period using mixed analysis of variance (ANOVA) with time as the within-subject variable and moving as the between-subject variable. Given the large number of comparisons, a Bonferroni adjustment was applied to each follow-up period to adjust for inflated type I error.

Results

At the baseline eviction court assessment, participants were heterogeneous, but the largest group of participants were female, non-Hispanic black, aged 18–49, never married, with either a high school or some college education, and had an annual personal income less than \$15,000

Table 1 Background characteristics of eviction court participants ($n = 121$)

| | <i>N</i> | % |
|--------------------------|----------|------|
| Age | | |
| 18–29 | 30 | 25.4 |
| 30–39 | 22 | 18.6 |
| 40–49 | 30 | 25.4 |
| 50–59 | 23 | 19.5 |
| 60+ | 9 | 7.6 |
| Sex | | |
| Male | 31 | 26.3 |
| Female | 87 | 73.7 |
| Race/ethnicity | | |
| Non-Hispanic white | 25 | 21.2 |
| Non-Hispanic black | 69 | 58.5 |
| Hispanic | 15 | 12.7 |
| Other | 9 | 7.6 |
| Education | | |
| Less than high school | 10 | 8.5 |
| High school/GED | 51 | 43.2 |
| Some college | 39 | 33.1 |
| At least college degree | 18 | 15.3 |
| Marital status | | |
| Never married | 70 | 59.3 |
| Married/cohabiting | 26 | 22.0 |
| Previously married | 22 | 18.6 |
| Personal income | | |
| < 15 K | 65 | 55.1 |
| 15–30 K | 28 | 23.7 |
| 31–50 K | 16 | 13.6 |
| 51–70 K | 9 | 7.6 |
| Employment status | | |
| Part time | 26 | 22.0 |
| Full time | 30 | 25.4 |
| Unemployed | 33 | 28.0 |
| Disabled | 22 | 18.6 |
| Retired | 3 | 2.5 |
| Other | 4 | 3.4 |
| Military veteran | 5 | 4.2 |
| Ever in eviction court | 49 | 41.5 |
| Ever evicted | 33 | 28.0 |
| Ever incarcerated | 27 | 22.9 |
| Ever homeless | 52 | 44.1 |

Sample sizes for different background categories ranged from 114 to 121

(Table 1). Participants were about equally divided between those who worked full time/part time, and those who were unemployed/disabled. The majority of participants reported living with at least one other person at the time (mean = 1.9 persons, SD = 1.6). About 42% of participants

had appeared in eviction court before, and a little over one-quarter had been evicted before. A large proportion (44%) of participants had been homeless before, and they reported an average of 24.6 total months (SD = 29.4) of lifetime homelessness with the first episode of homelessness occurring at the mean age of 31.2 (SD = 13.4).

Of the 91 participants who were assessed at 1-month follow-up, only 4 (4.4%) lost their case and were evicted; and only 3 (3.3%) won their case and did not have to move. The majority of participants ($n = 44$; 48.4%) went through some type of mediation/stipulation process and were required to move, while 38 participants (41.8%) also went through mediation/stipulation process, but did not have to move. Two participants (2.2%) reported that they moved before appearing at eviction court. Thus, 48 participants had to leave their residence after their eviction court appearance and 41 participants did not.

There was substantial attrition over time with 75% of participants retained at 1-month follow-up, 60% at 3-month follow-up, 49% at 6-month follow-up, and 36% at 9-month follow-up, so inverse probability weighting was incorporated in subsequent analyses involving longitudinal data.

Table 2 shows the housing, mental health, and psychosocial status of participants over time. Many participants reported mental health problems—17–40% screened positive for generalized anxiety disorder, 19–33% screened positive for depression, 15–36% screened positive for PTSD, and 5–17% reported suicidal ideation over the 9-month period.

Participants' average monthly rent was below \$800 throughout the 9-month study period with about 18–24% reporting continued problems paying their monthly rent. The majority of participants continued to live with an average of two other people in the household across the follow-up periods. There was wide variability in the housing stability of participants over time, and most participants reported that they were homeless or unstably housed at least some days after baseline. A minority of participants reported any mental health treatment (17–22%) or any substance abuse treatment (1–11%) over time.

Table 3 shows changes in housing, mental health, and psychosocial outcomes among participants over each time period. Participants experienced significantly fewer days housed in their own place and more days homeless or unstably housed over time, from baseline to 3, 6, and 9 months. The amount of monthly rent that participants reported paying also decreased at every time point after baseline.

There were a few significant and notable changes in mental health measures over time. Rates of positive screens for generalized anxiety disorder, PTSD, and suicidal ideation decreased from baseline to 6 months and 9 months. There were significant and consistent increases in quality of life and use of alcohol treatment over time. However, there was

Table 2 Housing, mental health, and psychosocial status of eviction court participants over time

| | Baseline (<i>n</i> = 121) | | 1 month (<i>n</i> = 116.6) | | 3 months (<i>n</i> = 119.8) | | 6-month (<i>n</i> = 116.8) | | 9-month (<i>n</i> = 115.0) | |
|----------------------------|----------------------------|-------|-----------------------------|-------|------------------------------|-------|-----------------------------|-------|-----------------------------|-------|
| | Mean/count | SD/% | Mean/count | SD/% | Mean/count | SD/% | Mean/count | SD/% | Mean/count | SD/% |
| Housing | | | | | | | | | | |
| Monthly rent | \$724 | \$400 | \$514 | \$544 | \$433 | \$527 | \$480 | \$574 | \$358 | \$593 |
| Days housed in own place | 82.1 | 20.9 | 21.9 | 12.2 | 41.6 | 34.3 | 63.2 | 52.0 | 49.6 | 70.2 |
| Days unstably housed | 3.8 | 12.7 | 6.1 | 10.4 | 13.5 | 28.6 | 13.0 | 33.9 | 18.3 | 54.0 |
| Days homeless | 0.5 | 3.8 | 1.7 | 6.7 | 5.8 | 22.9 | 8.3 | 34.8 | 7.9 | 41.1 |
| Problems paying rent | – | – | – | – | 24.3 | 20.3% | 20.8 | 17.8% | 25.7 | 22.4% |
| Number of others in house | 1.89 | 1.63 | 1.55 | 1.87 | 1.98 | 2.38 | 1.58 | 2.66 | 1.61 | 3.65 |
| Mental health | | | | | | | | | | |
| SF-12 MCS | 44.7 | 9.2 | 43.8 | 10.7 | 45.1 | 11.1 | 47.4 | 10.8 | 46.8 | 12.7 |
| PCL-5 | 27.8 | 21.2 | 27.4 | 21.7 | 23.8 | 23.1 | 22.9 | 24.1 | 19.6 | 27.9 |
| Positive PTSD screen | 44 | 36.4% | 42.3 | 36.3% | 33.1 | 27.7% | 20.1 | 17.2% | 17.0 | 14.8% |
| Positive GAD screen | 48 | 39.7% | 43.7 | 37.5% | 34.4 | 28.7% | 29.9 | 25.6% | 19.9 | 17.3% |
| Positive MDD screen | 40 | 33.1% | 40.3 | 34.5% | 33.7 | 28.1% | 26.5 | 22.7% | 21.6 | 18.8% |
| Suicidal ideation | 20 | 16.5% | 20.9 | 18.0% | 6.23 | 5.2% | 4.3 | 3.7% | 5.41 | 4.7% |
| BSI-hostility | 0.77 | 0.87 | 0.70 | 0.81 | 0.63 | 0.83 | 0.60 | 1.08 | 0.52 | 0.81 |
| BSI-paranoia | 1.03 | 1.08 | 1.17 | 1.07 | 0.98 | 1.23 | 0.92 | 1.23 | 1.18 | 1.56 |
| BSI-psychoticism | 0.61 | 0.86 | 0.60 | 0.76 | 0.46 | 0.67 | 0.40 | 0.70 | 0.43 | 1.05 |
| Psychosocial status | | | | | | | | | | |
| Q-LES-Q-SF | 0.54 | 0.22 | 0.56 | 0.23 | 0.59 | 0.24 | 0.59 | 0.29 | 0.63 | 0.33 |
| Any treatment | | | | | | | | | | |
| Alcohol treatment | 1 | 0.9% | 2.1 | 1.8% | 4.5 | 3.9% | 6.7 | 5.9% | 6.0 | 5.2% |
| Drug treatment | 10 | 8.4% | 8.9 | 7.7% | 5.5 | 4.7% | 12.0 | 10.5% | 9.3 | 8.1% |
| Mental health treatment | 23 | 19.5% | 23.8 | 20.6% | 25.1 | 21.7% | 20.3 | 17.9% | 19.6 | 17.1% |

Housing assessed days spent in various settings since last follow-up

SF-12 MCS Short-Form Health Survey Mental Health Component Summary, *PCL-5* Posttraumatic Stress Disorder Checklist for Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, *GAD* generalized anxiety disorder, *MDD* major depressive disorder, *BSI-* Brief Symptom Inventory, *Q-LES-Q-SF* Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form

no significant change in use of any drug or mental health treatment from baseline to any of the follow-up periods.

Finally, as shown in Table 4, participants who had to leave their residence after eviction court (*n* = 48) were compared to those who did not (*n* = 41). Examination of group-by-time interaction effects revealed that compared to participants who did not have to move, participants who did have to move experienced significantly greater increases in days unstably housed from baseline to 1 and 3 months, and decrease in number of days they spent in their own place during those time periods. There were no significant changes in mental health symptoms or utilization of mental health or substance abuse treatment services between groups over time.

Examination of public court records found that of the total sample at baseline (*n* = 121), 65 (53.7%) had a summary process execution for possession, 16 (13.2%) had a final stay, 14 (11.6%) had a non-final stay, 3 (2.5%) were dismissed in favor of the tenant, and 23 (19.0%) had no/unknown outcome for their case within the 9-month observation period.

Discussion

This longitudinal study of eviction court participants showed that a substantiable proportion face repeated housing and eviction problems with substantial adverse effects. In our convenience sample, we found that at baseline, 42% of participants had appeared in eviction court before, 44% had been homeless, and 28% had been evicted before. These findings suggest that there is a sizable subgroup of adults with continuous housing problems that are not resolved by eviction courts. Eviction courts represent a legal mechanism for resolution of tenant-landlord disputes [17] and do not necessarily exist to assist individuals with housing problems. However, the results of this study suggest that eviction courts may be an important site for intervention on behalf of a severely disadvantaged segment of the population. Many groups offer information to assist tenants facing eviction and some resources are available to help them [18], but perhaps more concerted comprehensive outreach efforts at the time of eviction court appearances or mediation

Table 3 Tests of difference in housing, mental health, and psychosocial status of eviction court participants over different time periods

| | Baseline to 1 months (<i>n</i> = 116.6) | Baseline to 3 months (<i>n</i> = 119.8) | Baseline to 6 months (<i>n</i> = 116.8) | Baseline to 9 months (<i>n</i> = 115.0) |
|----------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Housing | | | | |
| Monthly rent | <i>t</i> = -4.61*** | -4.53*** | -3.34** | -5.31*** |
| Days housed in own place | -28.38*** | -8.93*** | -3.55*** | -4.27*** |
| Days unstably housed | 1.81 | 3.15** | 3.19** | 2.98** |
| Days homeless | 2.06* | 2.63* | 2.55* | 2.06* |
| Mental health | | | | |
| SF-12 MCS | -0.25 | 1.01 | 1.69 | 1.16 |
| Positive PTSD screen | 0.08 | 3.55 | 17.49*** | 31.33*** |
| Positive GAD screen | 0.78 | 5.66* | 4.95* | 18.55*** |
| Positive MDD screen | 1.09 | 2.34 | 1.99 | 3.85* |
| Suicidal ideation | 0.08 | 3.55 | 17.49*** | 31.33*** |
| BSI-hostility | -0.77 | -1.20 | -0.39 | -1.52 |
| BSI-paranoia | 1.80 | 0.14 | 0.22 | 1.37 |
| BSI-psychoticism | 0.12 | -0.98 | -1.31 | -0.80 |
| Psychosocial status | | | | |
| Q-LES-Q-SF | 1.43 | 3.31** | 2.42* | 3.39** |
| Any treatment | | | | |
| Alcohol treatment | 1.01 | 4.51* | 6.70* | 5.97* |
| Drug treatment | 0.28 | 3.77 | 5.34* | 0.11 |
| Mental health treatment | 1.53 | 4.54* | 1.05 | 0.96 |

Housing assessed days spent in various settings since last follow-up. Values shown are paired *t* test and McNemar's test statistics

SF-12 MCS Short-Form Health Survey Mental Health Component Summary, *PTSD* Posttraumatic Stress Disorder, *GAD* generalized anxiety disorder, *MDD* major depressive disorder, *BSI*- Brief Symptom Inventory, *Q-LES-Q-SF* Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form

p* < 0.05, *p* < 0.01, ****p* < 0.001

proceedings could help individuals end a cycle of eviction-related problems.

After eviction court, many participants experienced increased homelessness and housing instability over time. In fact, participants reported that they were either homeless or unstably housed over one-fifth of the time after eviction court (i.e., over 20 days in past 90 days at every follow-up period after 3 months) and about 18–24% of participants also reported continued problems paying their rent over time. A majority (54%) of participants reported that they had an eviction-related move and these participants experienced significantly greater housing instability over time than those who did not have to move, underscoring the influence of the housing eviction process on housing stability for at least 9 months afterwards for those who had to move. However, contrary to our hypothesis, eviction-related moves were not associated with increased mental health problems over time, suggesting that participants are already very distressed with high rates of mental health problems during presentation to eviction court that any eviction-related move does not necessarily impact mental health, although, materially, it does affect housing stability.

Examination of court records also showed that 66.9% of participants ended up having an eviction recorded in their public record (as a final stay by stipulation or a summary process execution for possession). Similar to the way, a criminal record can negatively affect one's prospects on the job market, an eviction record is public and can negatively affect future applications for rental housing as many landlords are reluctant to rent to applicants with eviction records [19]. Of participants who did not have a public record of eviction, some may have been informally evicted through other means [1] and further research and intervention is needed to prevent unlawful methods of imposing tenant moves (e.g., lockouts, utility shutoffs, and removal of personal property) [1, 17].

High rates of probable mental disorders were found among eviction court participants, as reported in the previous studies, as well [6–8, 20]. In this study, one-third of participants screened positive for major depressive disorder and over one-third screened positive for PTSD and/or generalized anxiety disorder at baseline; while these rates did decrease over time, many participants continued to report problems (15–19% screened positive for at least one of these disorders at 9 months). At presentation to

Table 4 Two-way mixed ANOVA comparing participants who had to move ($n=48$) and participants who did not have to move ($n=41$) after eviction court

| | Baseline to 1 month ($n=116.6$) | | Baseline to 3 months ($n=119.8$) | | Baseline to 6 months ($n=116.8$) | | Baseline to 9 months ($n=115.0$) | |
|----------------------------|--------------------------------------|----------------------------------------|---------------------------------------|----------------------------------------|---------------------------------------|----------------------------------------|---------------------------------------|----------------------------------------|
| | Group effect | Group \times time interaction effect | Group effect | Group \times time interaction effect | Group effect | Group \times time interaction effect | Group effect | Group \times time interaction effect |
| Housing | | | | | | | | |
| Monthly rent | 3.71 | 13.84** | 0.19 | 11.46* | 1.75 | 8.42 | 0.98 | 0.28 |
| Days housed in own place | 10.03* | 17.32** | 18.86*** | 28.25*** | 9.43 | 8.64 | 1.19 | 7.56 |
| Days unstably housed | 10.58* | 11.39* | 15.13** | 15.33** | 1.33 | 0.04 | 0.20 | 0.80 |
| Days homeless | 6.83 | 5.37 | 7.11 | 6.26 | 5.94 | 5.94 | 3.15 | 3.15 |
| Mental health | | | | | | | | |
| SF-12 MCS | 1.04 | 0.04 | 2.79 | 0.97 | 1.26 | 0.67 | 0.07 | 0.88 |
| Positive PTSD screen | 0.83 | 0.38 | 0.61 | 9.66 | 0.41 | 2.59 | 0.04 | 1.57 |
| Positive GAD screen | 0.46 | 0.11 | 1.75 | 0.64 | 0.65 | 0.05 | 1.53 | 0.45 |
| Positive MDD screen | 0.64 | 0.10 | 2.71 | 0.03 | 0.73 | 0.07 | 0.00 | 0.11 |
| Suicidal ideation | 0.15 | 0.04 | 1.60 | 0.22 | 0.09 | 0.12 | 0.00 | 3.90 |
| BSI-hostility | 1.54 | 0.63 | 0.18 | 5.32 | 0.00 | 4.79 | 0.00 | 0.00 |
| BSI-paranoia | 0.40 | 0.65 | 0.21 | 6.32 | 0.00 | 4.27 | 0.05 | 1.66 |
| BSI-psychoticism | 0.03 | 0.83 | 1.70 | 3.03 | 0.26 | 1.46 | 0.04 | 0.01 |
| Psychosocial status | | | | | | | | |
| Q-LES-Q-SF | 2.24 | 0.06 | 3.76 | 1.16 | 2.32 | 7.78 | 0.25 | 6.24 |
| Any treatment | | | | | | | | |
| Alcohol treatment | 1.07 | 0.57 | 0.00 | 0.00 | 0.00 | 0.00 | 1.84 | 1.84 |
| Drug treatment | 2.17 | 0.11 | 0.01 | 0.03 | 0.25 | 2.06 | 0.06 | 3.50 |
| Mental health treatment | 0.10 | 0.14 | 0.20 | 0.25 | 2.86 | 5.78 | 0.14 | 0.20 |

Values shown are F values. Housing assessed days spent in various settings since last follow-up

SF-12 PCS Short-Form Health Survey Mental Health Component Summary, GAD generalized anxiety disorder, MDD major depressive disorder, BSI- Brief Symptom Inventory, Q-LES-Q-SF Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ after Bonferroni correction for each follow-up period

eviction court, 17% of participants also reported suicidal ideation, and evictions have found to be a precipitating factor for suicide [9]. Importantly, we found low utilization rates of mental health services among participants despite their high rates of probable mental illness. While a strong link between homelessness and mental illness has long been established [21–23], our finding contributes to the literature by indicating the high levels of mental health problems before most individuals became homeless. Our finding also points to the need to address mental health issues in this population as they may relate to continued housing instability over time.

Taken together, the results of this study suggest that evictions are not only a legal issue, but one that is associated with impaired housing, mental health, and social functioning over time. We found that many eviction court participants had persistent housing and mental health problems and may not be receiving adequate treatment or services. There may be novel opportunities to intervene early during the eviction process before or soon after participants present to eviction court. The results of this study are intended to spur future directions for research.

We were limited by the modest convenience sample of participants and the attrition over time. Participant attrition

was greater after 3-month follow-up, so we have less confidence in results beyond that timepoint, although we used inverse probability weighting to adjust for attrition. We do not know whether the results are generalizable to tenants who are facing eviction, but do not appear for eviction court and they represent an important subgroup for future research. In eviction courts, tenants are much less likely to have formal legal representation than landlords, which can result in an imbalanced court process and further research is needed on how to properly address this and what impact the lack of legal representation has on outcomes [24]. We also did not know the exact reasons for evictions among participants which may be important in understanding originating or precipitating factors, and more research is needed. Because this was an observational study, we cannot infer causality or directionality of the findings. For example, it may be that high-stress individuals are more likely to be evicted instead of evictions causing more high stress. Surprisingly, we discovered in this study a steady increase in participants' quality of life over time. It is difficult to know what to attribute these changes to, but we speculate that it is possible that some tenants experienced a greater quality of life after resolving a stressful landlord–tenant situation or personally resolved to avoid such encounters in the future. Alternatively, since many tenants experienced housing instability after eviction court and decreased monthly rent payments (most likely associated with poorer quality housing), they may have had more money for other expenses which may have influenced their quality of life. Nonetheless, further research is needed to better understand the plight of individuals and families facing adverse housing circumstances.

Author contributions JT conceptualized the study, interpreted the data, and wrote the manuscript. NJ collected the data and help interpret the data. DS analyzed the data and helped write the manuscript. RR helped write the manuscript.

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Data availability The data are securely stored and available only to authorized researchers and auditors. Copies of the measures used in the study are available upon request.

Code availability The programming code for analyses in the study can be made available upon request as determined by the authors.

Compliance with ethical standards

Conflict of interest None of the authors report any conflict of interest.

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