



Ohio Recovery Housing

A Descriptive Review of Outcomes
According to Housing Level



Prepared by Mighty Crow Media
July, 2024



Ohio Recovery Housing



MIGHTY CROW



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Executive Summary

Since its inception in 2014, Ohio Recovery Housing (ORH) has been using outcomes data from recovery housing residents to inform policy and practice. Data from the Outcomes Tool, a survey given to residents at move-in, six months into a stay, and move-out from recovery housing, has been used to create predictive models of success in housing, to drive diversity, equity and inclusion efforts, and to map the prevalence and gaps in recovery housing stock across the state, among other things. With this report, ORH uses data once again to advance the story of recovery housing in Ohio, exploring how resident profiles (age, gender, criminal justice involvement, etc.) and outcomes differ by housing level (Level 1, Level 2, Level 3) both at move-in and six months into one's stay.

The report analyzes data from 4,933 move-in surveys and 809 six-month surveys submitted by residents from May 1, 2022 - December 31, 2023. ORH owns the outcomes survey tool and does not rely on a third-party platform for improvements. As of December 2023, 137 organizations were using the tool; 91 of these were organizations with ORH-certified recovery residences. This report uses data from the 91 certified recovery houses only. The following questions guided our inquiry and examined common points of interest when thinking about the impact of recovery housing at each housing level:

1. Is there a difference in the [racial, gender, sexual identity] composition of residents from move-in to 6-month follow-up?
2. Is there a difference in rates of alcohol use in the past 30 days at move-in compared to the 6-month follow-up?
3. Is there a difference in rates of illicit drug use in the past 30 days at move-in compared to the 6-month follow-up?
4. Is there a difference in residents' self-ratings of physical and mental health ratings at the time of move-in compared to the 6-month follow-up?
5. Is there a difference between the residents' use of recovery supports from move-in to 6-month follow-up?
6. Is there a difference between involvement with drug court and/or status of being on probation or parole at the time of move-in compared to the 6-month follow-up?
7. Is there a difference in education or skilled training pursuits at the time of move-in compared to the 6-month follow-up?
8. Is there a difference in employment at the time of move-in compared to the 6-month follow-up?
9. At the time residents moved into recovery housing, Is there a difference across housing levels in where residents were living?

Key Findings

- Across all three housing levels, there were no statistically significant differences in the racial composition of residents from move-in to the 6-month follow-up. This finding suggests that there was not a differential drop-out rate based on race.
- There was a clinically and/or statistically significant decline in substance use across all three housing levels from move-in to the six-month follow-up.



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- Mental and physical health ratings improved across all three housing levels. The improvements were statistically significant for Levels 2 and 3, meaning the improvements were likely due in part to recovery housing.
- Alcohol and illicit drug use decreased across all three levels. Levels 2 and 3 showed a statistically significant decrease in use, meaning the decline in use was likely due at least in part to recovery housing and not chance alone.
- Utilization of recovery supports increased significantly across all levels. Residents reported more recovery supports at the six-month follow-up compared to move-in.
- Involvement with drug court and/or status of being on probation or parole did not vary significantly during the six months for all housing levels. It does not appear that length of stay or housing level contributes to residents' involvement in the criminal justice system.
- The percentage of residents who reported no involvement with educational pursuits in the last thirty days declined across all three housing levels. This increase in educational pursuits has practical significance, but the association was only statistically significant for Level 2 housing.
- Employment rates increased and unemployment decreased across all housing levels. These changes were significant, meaning recovery housing at any level very likely had a role in improving employment status.

Next Steps

This report opens the door to more exploration of how recovery housing level relates to outcomes of residents, including:

- Reasons residents give for leaving each housing level,
- How residents at each housing level rate their success in recovery housing,
- The impact of housing level on parenting and family relationships, and
- Comparing the outcomes of residents in the appropriate level of housing for their needs to those who are not.

Acknowledgements

The team at Mighty Crow acknowledges the partnership with ORH for the preparation and analysis of this data, specifically thanking Danielle Gray for her assistance in developing research questions and her feedback on this report.

Suggested citation: Gallant, K., Beaujolais, B., & Hammond, G. C. (2024). Ohio recovery housing: Descriptive statistics and outcomes according to housing level. Mighty Crow Media, LLC.

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Introduction

Recovery Housing Overview

Housing is an essential recovery support. For people in recovery from a substance use disorder, having access to housing that is safe, stable, and affordable is paramount. Often, this means opting to live in a recovery home for the explicit purpose of supporting one's recovery.

The National Alliance of Recovery Residences (NARR) defines recovery housing as sober, safe, and healthy living environments dedicated to promoting recovery from alcohol, drugs and other associated problems.¹

According to the Ohio Revised Code Section 5119.01 (A)(17), "Recovery Housing' means a residence for individuals recovering from alcohol use disorder or drug addiction that provides an alcohol-free and drug-free living environment, peer support, assistance with obtaining alcohol and drug addiction services, and other recovery assistance for alcohol use disorder and drug addiction."²

Ohio Recovery Housing (ORH), officially established in 2014, is an organization dedicated to the development and operation of quality alcohol and drug-free living in a community of recovery for people with substance use disorders and is an affiliate of the NARR in meeting the quality established by the NARR Standards. As such, ORH creates and maintains NARR standards of excellence for recovery housing in Ohio through a peer review certification process. Additionally, ORH provides training, technical assistance and tools to assist operators of recovery housing to advance their understanding and practice of what a quality recovery home is.

Nationally, researchers are also learning which recovery residence program characteristics improve outcomes for residents. For example, house meetings, resident autonomy, and the presence of peer staff members in recovery can foster an overall sense of belonging, community, and hope.³ Additionally, studies show that recovery housing that creates specialized spaces for and caters to the cultural needs of racial and ethnic minority groups improves outcomes. These specialized approaches help to foster an equitable, person-centered environment for people in recovery to thrive, ultimately leading to healthier communities.^{4,5}

Recovery housing resident outcomes across the multiple levels of housing have not yet been widely studied. Much of the existing research has focused on Oxford Houses, or Level 1 housing, but research about the other housing levels has been sparse. The purpose of this study was to contribute to growing knowledge about recovery house resident outcomes in Ohio and about how resident outcomes may vary by housing level in recovery houses certified by ORH.

¹OhioMHAS. (n.d.). *Recovery Housing in Ohio*. Ohio.gov. Retrieved January 26, 2024, from <https://mha.ohio.gov/static/SupportingProviders/HousingProviders/RecoveryHousing/Recovery-Housing-in-Ohio-2021-Environmental-Scan.pdf>

²<https://codes.ohio.gov/ohio-revised-code/section-5119.01>

³Miles, S. B., Burton, H. V., & Kang, H. (2019). Community of practice for modeling disaster recovery. *Natural Hazards Review*, 20(1), 1-11. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000313](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000313)

⁴Dingle, G. A., Stark, C., Cruwys, T., & Best, D. (2015). Breaking good: breaking ties with social groups may be good for recovery from substance misuse. *The British Journal of Social Psychology*, 54(2), 236-254. <https://doi.org/10.1111/bjso.12081>

⁵Harrison, R., Blickem, C., Lamb, J., Kirk, S., & Vassilev, I. (2019). Asset-based community development: narratives, practice, and conditions of possibility—a qualitative study with community practitioners. *Sage Open*, 9(1), 1-11. <https://doi.org/10.1177/2158244018823081>



ORH Outcomes Tool

Ohio saw a need for quantitative data to describe recovery housing experiences and outcomes. At the time of ORH's founding, most recovery housing literature was qualitative in nature, focused on U.S. areas outside of Ohio, or was otherwise not always comparable. In 2015, the Ohio Department of Mental Health and Addiction Services (OhioMHAS) partnered with ORH and Mighty Crow Media to develop an outcomes tool comprised of resident surveys and a data dashboard for housing operators. The resulting tools included many questions that recovery housing operators were already answering for federal and state grant funders and county reporting requirements. Additional questions were created and added to collect information for operators to assist them in providing services and supporting residents' recovery and housing needs, education, employment, and financial planning. Data collection began in 2016, and in 2021, after five years of data collection, ORH and Mighty Crow Media re-examined and revised the outcomes tool to ensure the data it was collecting was still accurate, useful, and comprehensive for operators and other stakeholders. As a result of this process, some questions were tailored to provide more specific information (e.g., employment status), some were adjusted to reflect new information (e.g., gender identity), and some additional questions were added (e.g., insurance status). The updated version of the outcomes tool was launched in May 2022. Currently, the tools are primarily a resource for operators to continuously assess their services and engage in quality improvement.

ORH owns the tool and does not rely on a third-party platform for improvements. As of December 2023, 137 organizations were using the outcomes tool; 97 of these were organizations with ORH-certified recovery residences. This report uses data from certified recovery houses only.

Levels of Recovery Housing

NARR has established four levels of recovery housing that offer differing levels of support for residences. Rather than serving as a linear, step-down continuum of services, the models meet the varying needs of people in recovery. People may move in and out of the different levels depending on their individual circumstances. The four levels of recovery housing are described below:

- **Level 1 Houses:** Peer-run houses that operate democratically, generally without paid positions. Services include drug screenings and house meetings. Housing often provided as shared living within a single-family residence.
- **Level 2 Houses:** Residences monitored by house managers or senior residents. Clinical services are unavailable on-site, but there may be drug screenings, house meetings, and peer-run groups. Houses have structure and rules for residents. Housing often provided as shared living within a single-family residence.
- **Level 3 Houses:** Supervised houses that have an organizational hierarchy with policies and procedures in place to facilitate recovery and staffed by a facility manager, certified staff, or case managers. Services emphasize life skills development and using clinical services within the community; programs provide limited services. Housing is in various types of residential settings.
- **Level 4 Houses:** Offered through a service provider with an organizational hierarchy, clinical supervision, and administrative oversight. Clinical services are in-house. Level 4 residences are often a step-down house within a continuum of substance use treatment and recovery supports. Housing is typically within a treatment center or institutional setting. (The State of Ohio considers Level 4 houses residential treatment that require licensure by OhioMHAS).



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Much research is needed to understand how level of recovery housing affects residents' outcomes, how well residents are appropriately matched to the level of housing they need, and whether the level of housing needed is available for residents when they need it. This report focuses on Level 1, 2, and 3 recovery homes; as noted above, Level 4 housing considered residential treatment is not one of the levels of certification through ORH. Level 1 housing is also not required to be certified through ORH; the State also accepts licensure through Oxford House. Therefore, the sample size for Level 1 is smaller than Levels 2 and 3 recovery housing, where the only option is certification through ORH.

Methods

The ORH Outcomes Survey is administered to residents in recovery housing at three points: move-in, six months into their stay and move-out via a web-based Typeform® survey. Residents may use any device with an Internet connection and browser to complete the survey. Staff or volunteers at the recovery home may assist the resident in navigating to the survey and explaining the survey's purpose, but residents are intended to be the individuals completing the survey. Data are then displayed in real time on a Klipfolio® data dashboard, which can be tailored to individual house, organization, county, or state-level data. In this way, stakeholders can view data that is relevant to their needs.

Survey questions ask about participant demographics, criminal justice history, length of stay, drug use, physical and mental health and social improvements, parenting, recovery support activities, employment and education, income and debt, and perceived benefits of recovery housing. A selection of questions was chosen for further analysis in this report. These variables related to demographic characteristics, drug use, physical and mental health, recovery supports, criminal justice involvement, education and employment, and previous living situations.

This report analyzes data from move-in and six-month follow-up surveys submitted by residents at ORH-certified recovery houses from May 1, 2022 - December 31, 2023. This timeframe represents the utilization of the updated version of the Outcomes Tool which was launched in May 2022. A total of 4,933 move-in surveys and 809 six-month surveys were submitted by 97 certified recovery houses. As stated earlier, only ORH certified houses were included in this analysis.

- Level 1 housing had 156 move-in surveys and 37 six-month surveys;
- Level 2 housing had 3,152 move-in surveys and 544 six-month surveys; and
- Level 3 housing had 1,625 move-in surveys and 228 six-month surveys.

As previously mentioned, many Level 1 houses in Ohio are certified through Oxford House, Inc. instead of ORH, so there are far fewer survey responses at both intervals compared to levels 2 and 3.





Research Questions

The purpose of the analyses was to examine resident outcomes at each housing level after six months of living in recovery housing. As outlined above, different levels of housing provide services and supports at different intensities and, thus, may result in different outcomes for the residents. It should be noted that residents may not always be placed in the appropriate level of housing for their needs; data to assess this is not available. The following questions guided our inquiry and examined common points of interest when thinking about the impact of recovery housing at each housing level:

1. Is there a difference in the [racial, gender, sexual identity] composition of residents from move-in to 6-month follow-up?
2. Is there a difference in rates of alcohol use in the past 30 days at move-in compared to the 6-month follow-up?
3. Is there a difference in rates of illicit drug use in the past 30 days at move-in compared to the 6-month follow-up?
4. Is there a difference in residents' self-ratings of physical and mental health ratings at the time of move-in compared to the 6-month follow-up?
5. Is there a difference between the residents' use of recovery supports from move-in to 6-month follow-up?
6. Is there a difference between involvement with drug court and/or status of being on probation or parole at the time of move-in compared to the 6-month follow-up?
7. Is there a difference in education or skilled training pursuits at the time of move-in compared to the 6-month follow-up?
8. Is there a difference in employment at the time of move-in compared to the 6-month follow-up?
9. At the time residents moved into recovery housing, is there a difference across housing levels in where residents were living?

Statistical Analysis

A dataset of this size, combined with the inquiry to compare outcomes between recovery housing levels, required the use of statistical analysis software. We utilized SPSS⁷ for all analyses. We first extracted the data from the Outcomes Tool via excel. As we prepared the data for input into SPSS, we determined for some variables it was necessary to combine response options because there were too few responses for some categories. This practice of collapsing response options is a standard one in statistical analysis when data are sparse.⁸ We also created composite variables by combining two or more survey items when appropriate. For example, survey skip patterns were used, so it was necessary to combine some items to capture the entire sample.

⁷IBM Corp. Released 2021. IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp

⁸DiStefano, C., Shi, D., & Morgan, G. B. (2021). Collapsing categories is often more advantageous than modeling sparse data: Investigations in the CFA framework. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(2), 237-249. <https://doi.org/10.1080/10705511.2020.1803073>



After preparing the data, we imported the excel file into SPSS to perform the analyses. In the first level of analysis, we used descriptive statistics to determine frequencies and percentages for all variables of interest, as detailed in the research questions. Next, we used chi-square tests to determine whether any changes in the outcomes of interest from move-in to the six-month follow-up period were statistically significant. All the analyses used multiple comparisons (e.g., comparing two or three housing levels with outcomes having two or more categories), so the Bonferroni correction was used to reduce the risk of making a Type 1 error (i.e., erroneously stating that the study found significant differences when there were not statistical differences). This correction reduces the threshold for significance, which is typically set at $p=.05$ or a 95% confidence interval. The adjusted probability value calculation is α/K , where K is the number of comparisons in the test. Alpha is conventionally set at .05 and is the threshold by which we measure the p value of the test statistic. If the alpha is set at .05, a test statistic with a p value of .05 or smaller would tell us to reject the null hypothesis (that there is no difference between the groups) and accept the alternative hypothesis (that there is a difference between groups).

Cramer's V was used to report the strength of association (effect size) of statistically significant results, adhering to Akoglu's Cramer's V effect size interpretation.⁹ Cramer's V is a value between 0 and 1 that is used to understand the strength of the relationship between two variables, most often ones that are categorical. Categorical variables are non-numeric (e.g. type of housing lived in during the past 30 days, employment status), etc. The use of the Cramer's V test provides us with an understanding of the strength of that relationship. It has been a common recommendation to apply Cohen's d effect size thresholds to interpret Cramer's V correlation, but Cohen's d is used with continuous data and not categorical data.⁸ Furthermore, literature from disciplines like human behavior, medicine, and social psychology suggests that using Cohen's d effect size thresholds to interpret Cramer's V correlation coefficients may produce inaccurate results.^{6,10,8} Rather, Akoglu (2018) indicates that the following interpretation guidelines should be used for Cramer's V :

CRAMER'S V	INTERPRETATION
> 0.25	Very Strong
> 0.15	Strong
> 0.10	Moderate
> 0.05	Weak
> 0	No or very weak association

⁹Akoglu, H. (2018). User's guide to correlation coefficients. *Turkish Journal of Emergency Medicine*, 18(3), 91-93.

¹⁰Volker, M. A. (2006). Reporting effect size estimates in school psychology research. *Psychology in the Schools*, 43(6), 653-672. <https://doi.org/10.1002/pits.20176>



Findings

The results of the analysis are presented in this section, organized by research question.

RQ1: Is there a difference in the [racial, gender, sexual identity] composition of residents from move-in to 6-month follow-up?

The first difference we examined was race. There are several options from which to choose when a resident indicates their race. Residents are asked to self-identify their race each time they complete the outcomes tool from a list that includes: White, Black or African American, American Indian or Alaska Native, Chinese, Vietnamese, Native Hawaiian, Filipino, Korean, Samoan, Asian Indian, Japanese, Chamorro (indigenous people of the Mariana Islands), Other Asian, Other Pacific Islander, Prefer not to answer, and Other. Residents can choose as many options as apply.

Race

Most residents identified as White (78.0% - 86.1%) compared to all other racial categories in all three levels of recovery housing. This demographic point is reflective of Ohio’s overall demographics, with 80.9% of Ohioans identifying as White.¹¹ The second largest racial group identified was Black/African-American (13.4% - 15.6%), which is reflective of Ohio’s demographics, with 13.4% of Ohioans identifying as Black or African American. The breakdown of responses is provided in Table 1.

A chi-square test of independence was conducted between racial identity and length of stay for Levels 2 and 3 housing. Level 1 housing date could not be tested because the sample was too small. There were no statistically significant associations between housing and racial identity, meaning the racial identities of residents at move-in and at the six-month follow-up period were not statistically different and did not change over time.

Table 1: Race at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
White	121 (78.6)	2,434 (78.0)	1,272 (79.1)
Black/African American	24 (15.6)	442 (14.2)	215 (13.4)
American Indian or Alaskan Native	0 (0.0)	19 (0.6)	14 (0.9)
Chamarro	3 (1.9)	45 (1.4)	20 (1.2)
Other racial minority*	5 (3.2)	139 (4.5)	66 (4.1)
Multi-racial	1 (0.6)	42 (1.3)	21 (1.3)
Total	154 (100.0)	3,121 (100.0)	1,608 (100.0)

*For this analysis, “Other racial minority” includes those who selected Chinese, Vietnamese, Native Hawaiian, Filipino, Korean, Somoan, Asian Indian, Japanese, Other Asian, or Other; “Multi-racial” includes those who selected more than one racial category.

¹¹Census.gov/quickfacts/fact/table/OH,US/PST045222

Figure 1: Race at Move-In by Housing Level

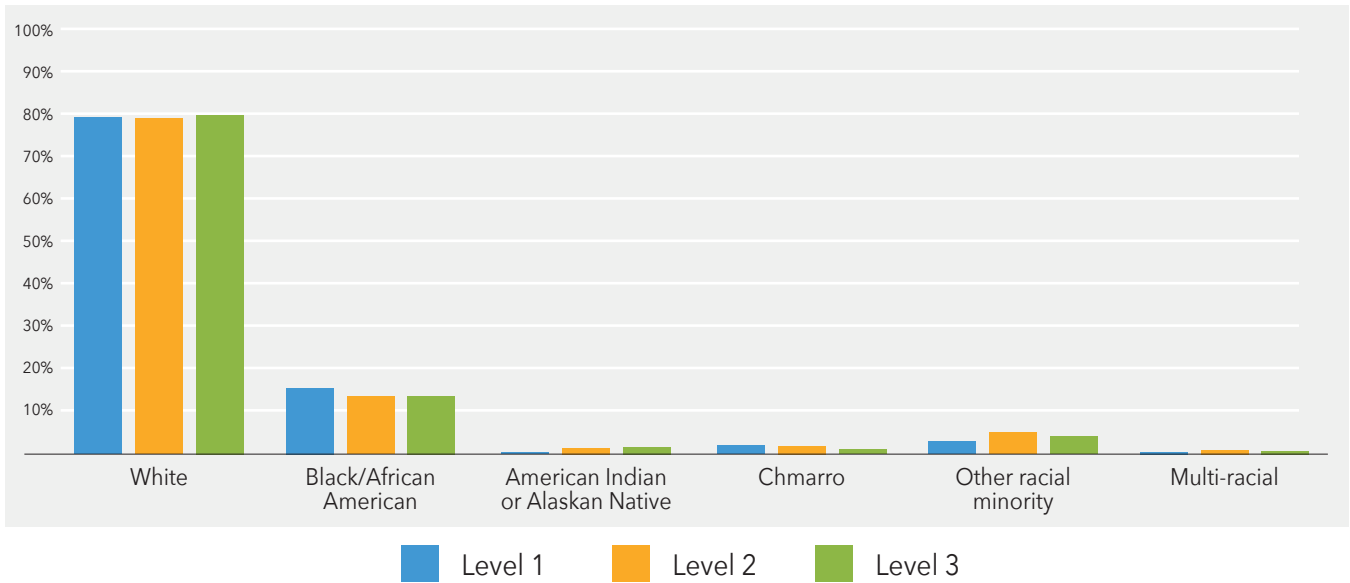
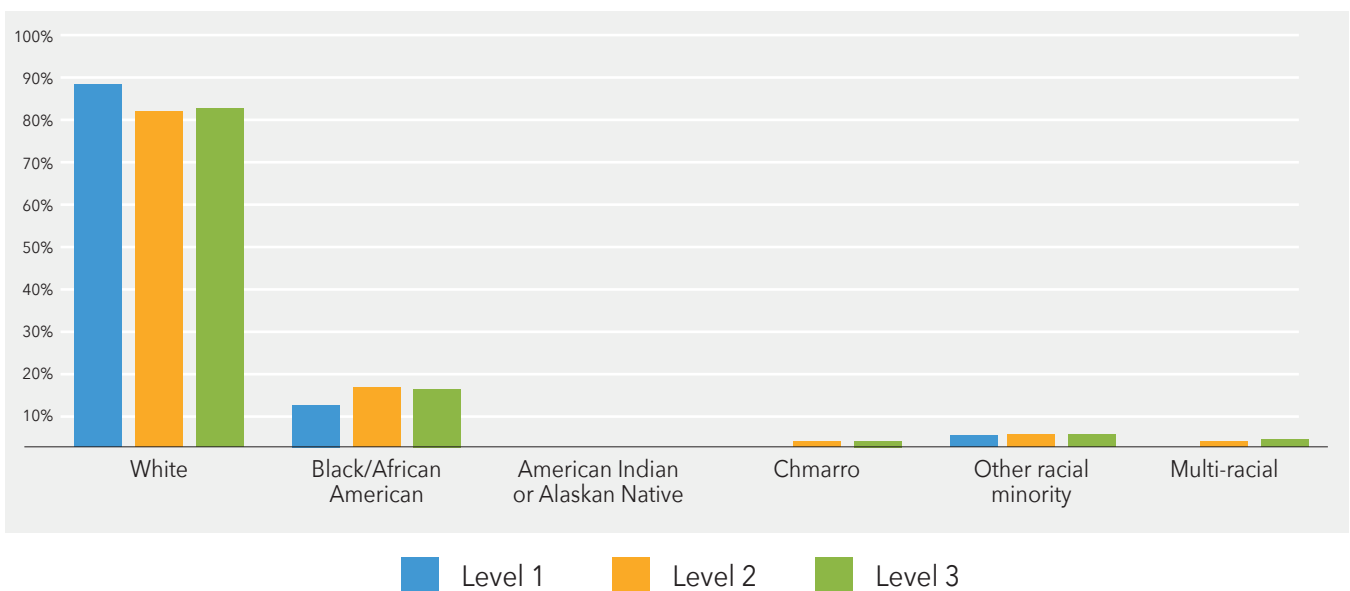


Table 2: Race at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
White	31 (86.1)	432 (80.0)	185 (81.5)
Black/African American	4 (11.1)	79 (14.6)	30 (13.2)
American Indian or Alaskan Native	0 (0.0)	0 (0.0)	0 (0.0)
Chamarro	0 (0.0)	6 (1.1)	2 (0.9)
Other racial minority	1 (2.8)	16 (3.0)	6 (2.6)
Multi-racial	0 (0.0)	7 (1.3)	4 (1.8)
Total	36 (100.0)	540 (100.0)	227 (100.0)

Figure 2: Race at Six Months by Housing Level





Gender

Residents are asked how they currently identify their gender identity from a list that includes: agender, genderqueer, gender fluid, man, non-binary, questioning or unsure, transgender, trans man, trans woman, woman, prefer not to answer, and other. Residents may choose as many options as apply.

Most residents identified as woman (38.9% - 59.0%) or man (28.2% - 59.0%). These demographics are in line with Ohio’s overall demographics, with 50.7% of the population identifying as female and 49.3% as male.¹² Some of the options given to respondents to indicate gender were collapsed in this analysis. “Transgender” includes anyone who selected transgender, trans man, or trans woman. “Other Gender Minority” includes anyone who identified as agender, genderqueer, gender fluid, non-binary, questioning or other unsure, or other. It also includes anyone who selected more than one gender category.

In Level 1 housing, nearly 11.5% of respondents at move-in identified as transgender or another gender minority, but this percentage decreased to 2.7% at the six-month follow-up. In Levels 2 and 3, the portion of respondents who identified as gender minority (including transgender) stayed the same or nearly same (no change for level 2 and only a minor change of .6 for level 3). From move-in to the six-month follow-up, the portion of women in Level 1 housing essentially stayed the same while the portion of men increased slightly. From move-in to the six-month follow-up, the portion of women in Level 2 housing increased while the portion of men decreased. The trend was reversed in Level 3 housing—the portion of women decreased and the portion of men increased from move-in to the six-month follow-up.

A chi-square test of independence was conducted between gender identity and length of stay. The association was only significant for level 2 housing ($\chi^2(2) = 11.45, p < .005, V = .06$) and this association was weak. In other words, the change in gender proportions – which increased for women, decreased for men, and stayed the same for gender minorities – may not be caused by chance alone. Rather, it could be possible that a person’s length of stay could be affected by one’s gender. It is important to note, however, that there is a differential need for men’s and women’s houses across all three housing levels.¹³ We do not feel that we have enough information to conclude that women compared to men are more successful in Level 2 housing. We advise caution when interpreting these results.

Table 3: Gender at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Woman	92 (59.0)	1,224 (38.9)	677 (41.7)
Man	44 (28.2)	1,860 (59.0)	912 (56.2)
Transgender	12 (7.7)	7 (0.2)	9 (0.6)
Other Gender Minority	6 (3.8)	41 (1.3)	21 (1.3)
Prefer Not to Answer	2 (1.3)	18 (0.6)	5 (0.3)
Total	156 (100.0)	3,150 (100.0)	1,624 (100.0)

¹²<https://www.census.gov/quickfacts/fact/table/OH,US/PST045223>

¹³Green, B., Kim, F., Hammond, G., & Hammond, J. (2023). *Mapping the Gap: An Assessment of Capacity, Cost-Benefits, and Disparities in Utilization in Ohio Recovery Housing*. Retrieved July 9, 2024 from <https://www.ohiorecoveryhousing.org/resource-documents-and-linkages>.

Figure 3: Gender at Move-In by Housing Level

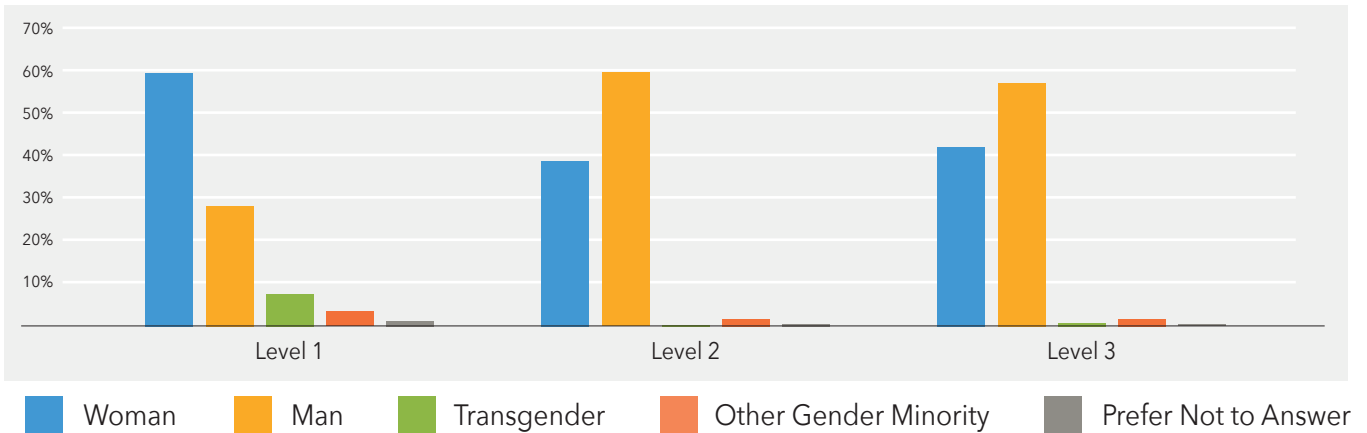
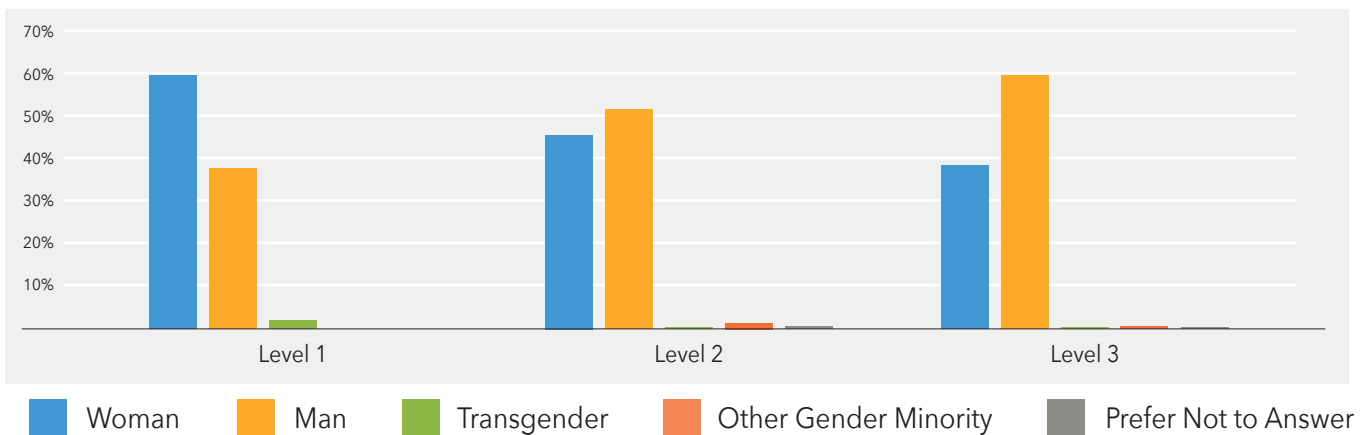


Table 4: Gender at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Woman	22 (59.5)	248 (45.6)	89 (39.0)
Man	14 (37.8)	279 (51.3)	135 (59.2)
Transgender	1 (2.7)	2 (0.4)	1 (0.4)
Other Gender Minority	0 (0.0)	10 (1.8)	2 (0.9)
Prefer Not to Answer	0 (0.0)	5 (0.9)	1 (0.4)
Total	37 (100.0)	544 (100.0)	228 (100.0)

Figure 4: Gender at Six Months by Housing Level





Sexuality

Residents are asked to self-identify their sexuality each time they complete the outcomes tool from a list that includes: asexual, bisexual, gay, straight (heterosexual), lesbian, pansexual, queer, questioning or unsure, same-gender-loving, prefer not to answer, or other. Most residents identified as heterosexual (66.7% - 86.5%). The second most common identification was “Other Sexual Minority Identity” which includes respondents who identified as asexual, bisexual, pansexual, queer, questioning or unsure, other, or who selected more than one option. Gay or Lesbian residents ranged from 2.6% to 11.5%, and a small percentage of residents preferred not to answer.

In Levels 2 and 3 housing there were higher percentages of sexual minority residents at move-in compared to the six-month follow-up period. However, the chi-square test of independence indicated no associations between sexuality and length of stay in any of the housing levels. These observed changes, therefore, were not likely a result of recovery housing but rather happened by chance.

Table 5: Sexual Identity at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Heterosexual	104 (66.7)	2,699 (85.6)	1,406 (86.5)
Gay, Lesbian, Same-Gender Loving	18 (11.5)	93 (3.0)	43 (2.6)
Other Sexual Minority Identity	31 (19.9)	317 (10.1)	158 (9.7)
Prefer Not to Answer	3 (1.9)	43 (1.4)	18 (1.1)
Total	156 (100.0)	3,152 (100.0)	1,625 (100.0)

Figure 5: Sexual Identity at Move-In by Housing Level

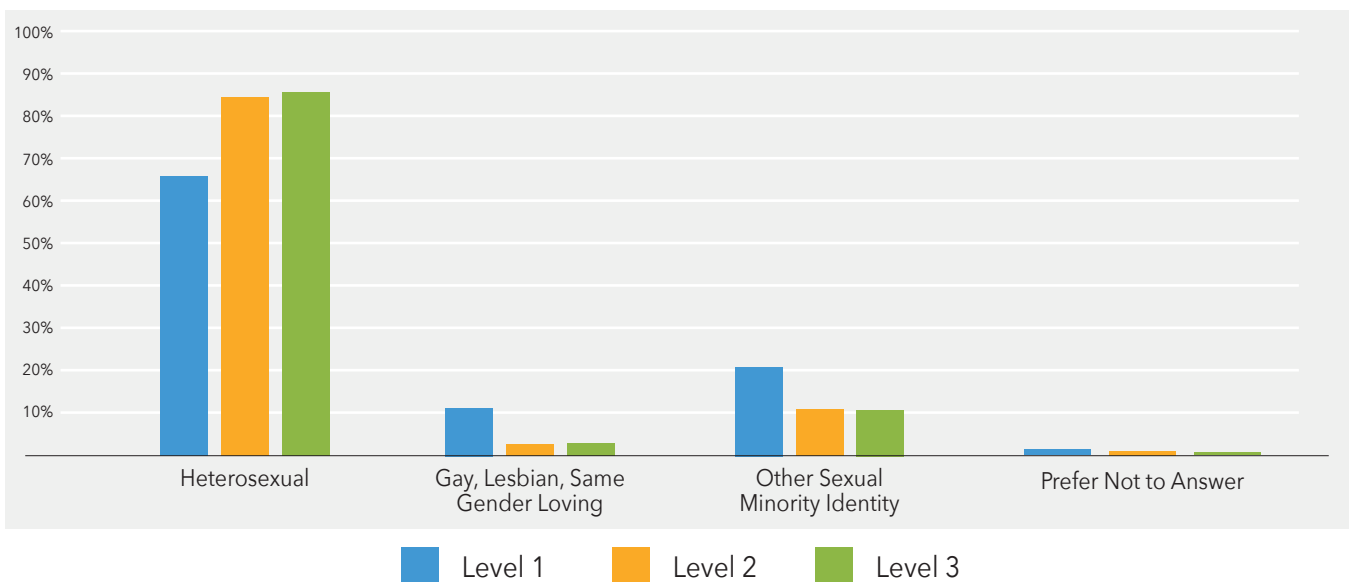
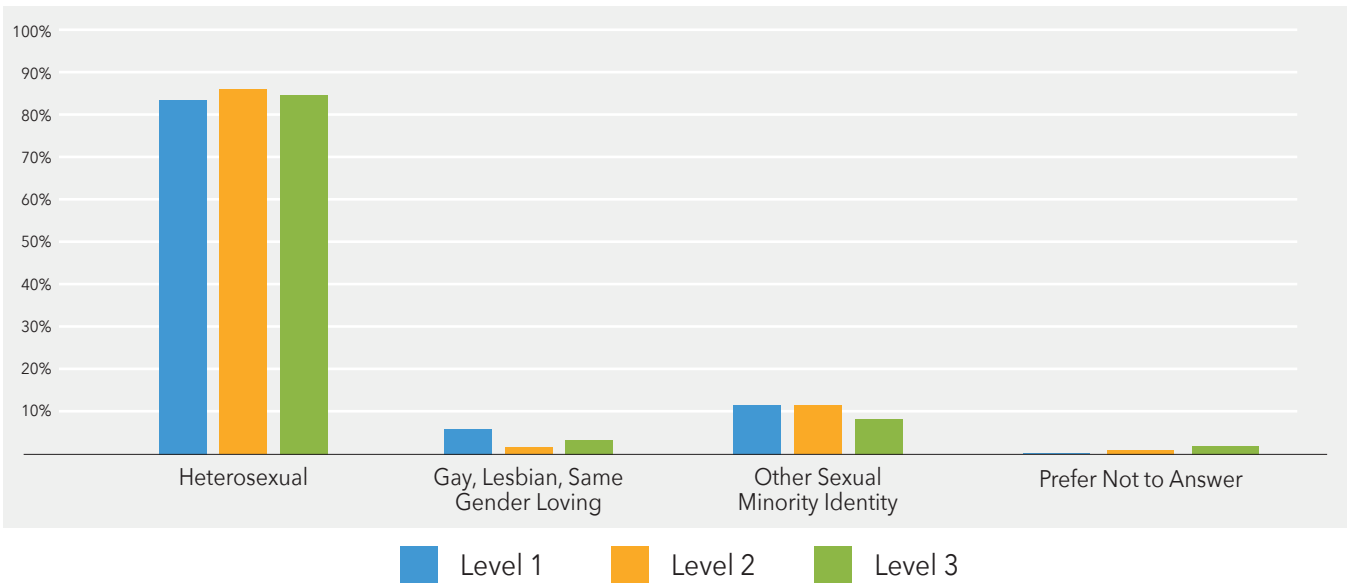


Table 6: Sexual Identity at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Heterosexual	31 (83.8)	466 (85.7)	193 (84.6)
Gay, Lesbian, Same-Gender Loving	2 (5.4)	11 (2.0)	9 (3.9)
Other Sexual Minority Identity	4 (10.8)	57 (10.5)	21 (9.2)
Prefer Not to Answer	0 (0.0)	10 (1.8)	5 (2.2)
Total	37 (100.0)	544 (100.0)	228(100.0)

Figure 6: Sexual Identity at Six Months by Housing Level





RQ2: Is there a difference in rates of alcohol use in the past 30 days at move-in compared to the 6-month follow-up?

RQ3: Is there a difference in rates of illicit drug use in the past 30 days at move-in compared to the 6-month follow-up?

At each survey interval, respondents are asked to indicate how many days out of the last 30 they have used alcohol and illegal drugs, respectively. The options are: no use, 1-10 days, 11-20 days, 21-30 days, prefer not to answer. That means at the time of move-in, residents are asked about their use in the 30 days before their transition into a recovery house. Residents may have been living in unsafe situations (e.g. on the street or staying in a home where alcohol and drug use was present), or they may have been in a safer situation like a treatment setting or a hospital. Thus, their response to this question may be influenced by their living situation.

There was a decrease of use across all three housing levels with more residents reporting no use and fewer residents reporting some use across all response categories between move-in and six months. In all three housing levels the percentage of respondents reporting no recent substance use is at or near 100% at six months (i.e., between 97.3% to 100%). Those entering Level 1 recovery housing reported more frequently that they had not recently used alcohol or illicit drugs, followed by Levels 2 and 3, respectively.

A chi-square test of independence was conducted between alcohol use in the past 30 days and length of stay. In level 2 and level 3 housing, there was a significant association between alcohol use and length of stay ($\chi^2(3) = 80.25, p < .001, V = .15$ and $\chi^2(3) = 66.11, p < .001, V = .19$ respectively). The association was strong for Level 2 housing and between strong and very strong for Level 3 housing.

A chi-square test of independence was conducted between illegal drug use in the past 30 days and length of stay. There was a significant association between illegal drug use and length of stay for Levels 2 and 3. The association between illegal drug use and length of stay was strong for Level 2 housing ($\chi^2(3) = 113.22, p < .001, V = .18$). The association was also strong for Level 3 housing ($\chi^2(3) = 81.68, p < .001, V = .19$). Results for Level 1 housing did not show a significant association.

Significant associations suggest that the decreased use of alcohol and/or illegal drug use from move-in to six-months was not likely due to chance and that recovery housing may have contributed to the change. Although there were no significant associations detected in Level 1 housing, it is notable that the percentage of residents who reported no use increased at the six-month follow-up period for both alcohol and illegal drug use. As previously noted, the sample population of Level 1 residents was very small and may have prevented the detection of significance.





Table 7: Alcohol Use in the Last 30 Days at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
No Use	145 (94.8)	2,627 (84.6)	1,214 (75.3)
1-10 Days	5 (3.3)	262 (8.4)	235 (14.6)
11-20 Days	1 (0.7)	124 (4.0)	69 (4.3)
21-30 Days	2 (1.3)	94 (3.0)	94 (5.8)
Total	153 (100.0)	3,107 (100.0)	1,612 (100.0)

Figure 7: Alcohol Use in the Last 30 Days at Move-In by Housing Level

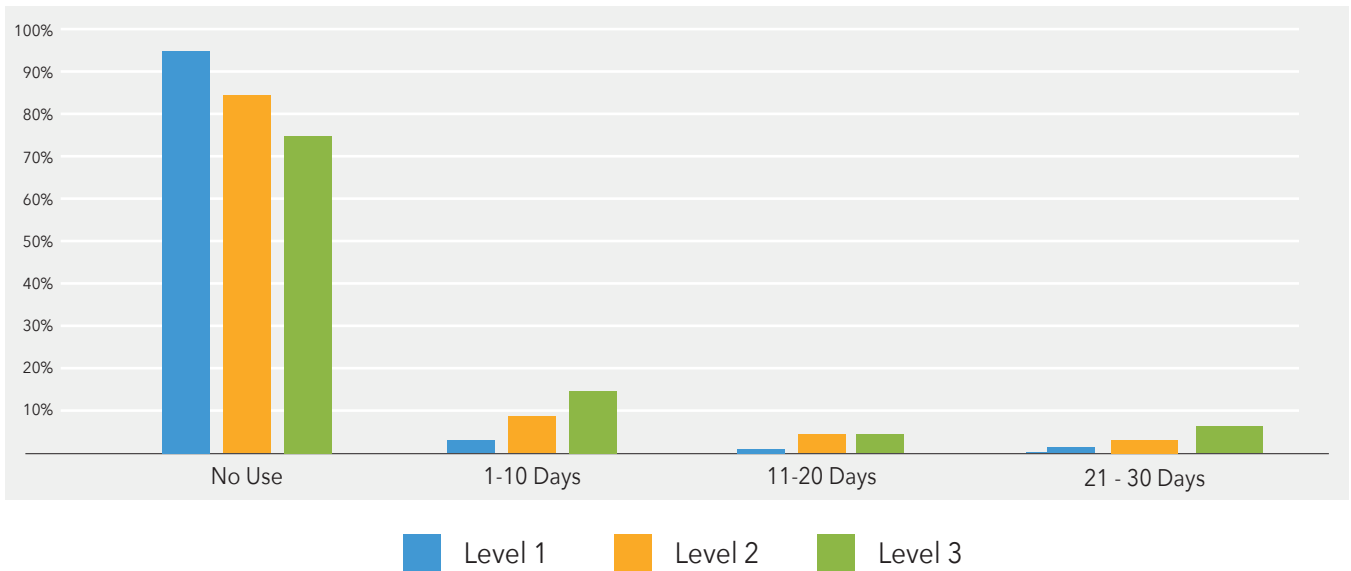


Table 8: Alcohol Use in the Last 30 Days at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
No Use	36 (97.3)	532 (98.7)	224 (99.1)
1-10 Days	0 (0.0)	1 (0.2)	0 (0.0)
11-20 Days	0 (0.0)	2 (0.4)	1 (0.4)
21-30 Days	1 (2.7)	4 (0.7)	1 (0.4)
Total	37 (100.0)	539 (100.0)	226 (100.0)

Figure 8: Alcohol Use in the Last 30 Days at Six Months by Housing Level

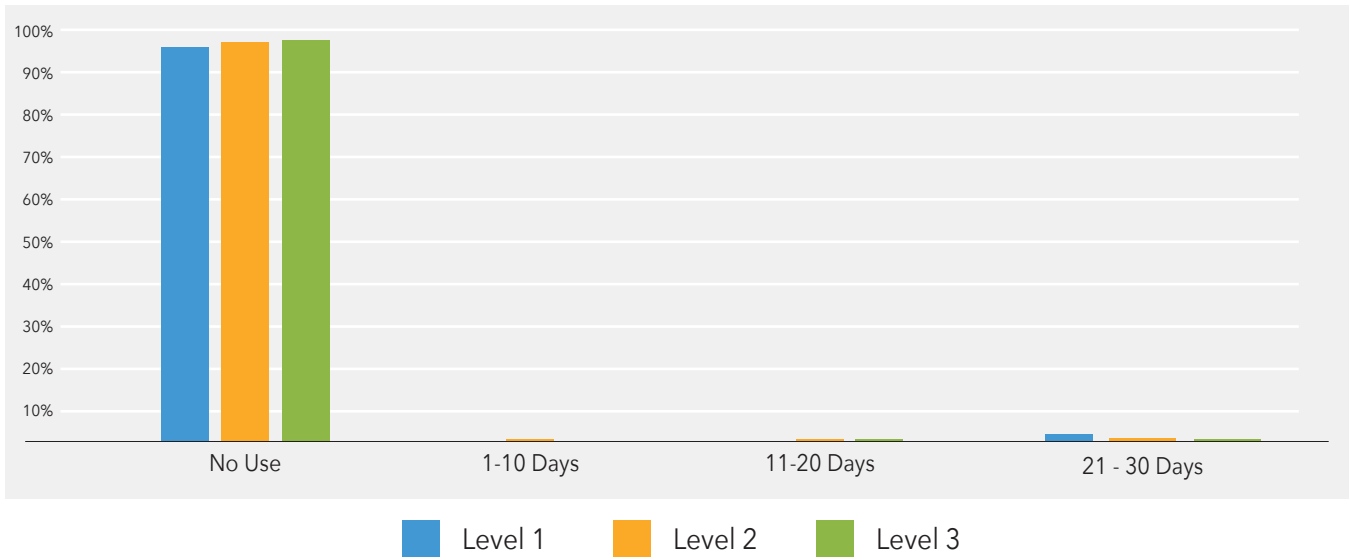


Table 9: Illegal Drug Use in the Last 30 Days at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
No Use	141 (92.8)	2,476 (80.1)	1,126 (70.0)
1-10 Days	7 (4.6)	284 (9.2)	235 (14.6)
11-20 Days	2 (1.3)	191 (6.2)	110 (6.8)
21-30 Days	2 (1.3)	142 (4.6)	137 (8.5)
Total	152 (100.0)	3,093 (100.0)	1,608 (100.0)

Figure 9: Illegal Drug Use in the Last 30 Days at Move-In by Housing Level

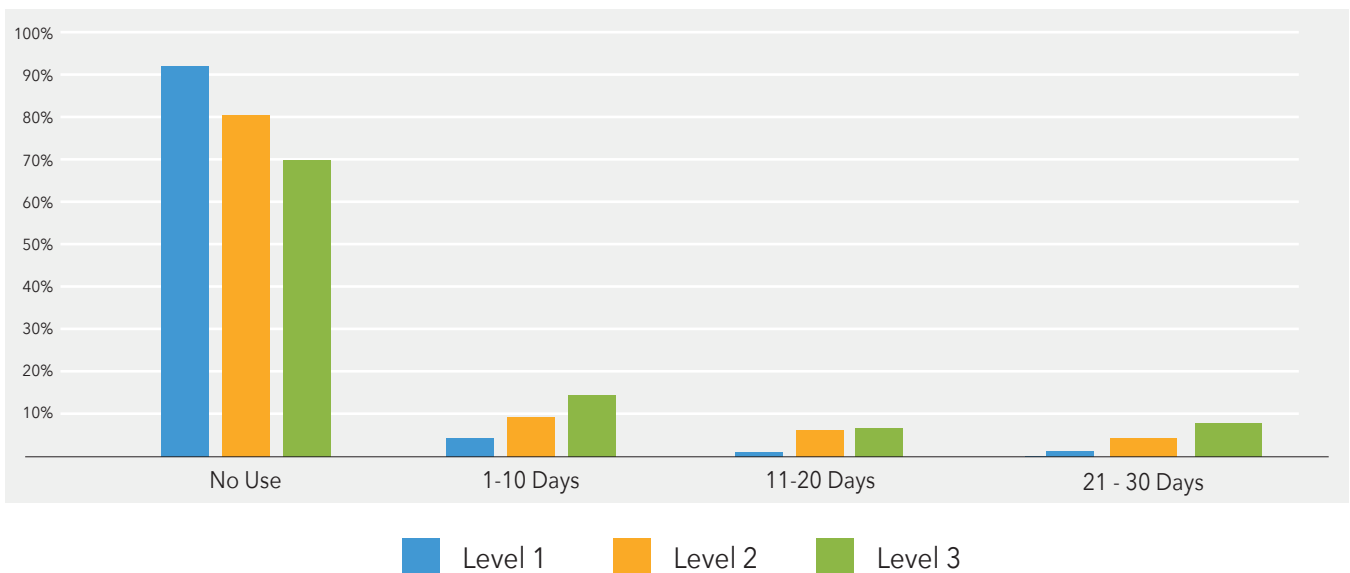
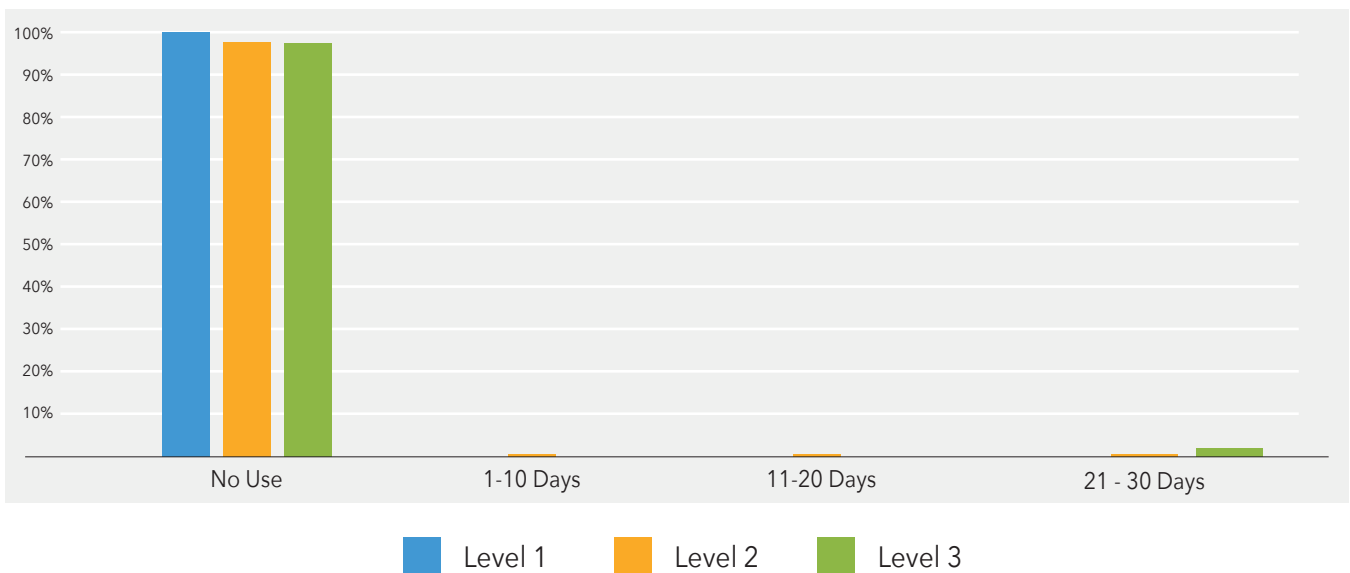




Table 10: Illegal Drug Use in the Last 30 Days at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
No Use	37 (100.0)	533 (98.7)	222 (98.2)
1-10 Days	0 (0.0)	1 (0.2)	0 (0.0)
11-20 Days	0 (0.0)	1 (0.2)	0 (0.0)
21-30 Days	0 (0.0)	5 (0.9)	4 (1.8)
Total	37 (100.0)	540 (100.0)	226 (100.0)

Figure 10: Illegal Drug Use in the Last 30 Days at Six Months by Housing Level



RQ4: Is there a difference in residents’ self-ratings of physical and mental health ratings at the time of move-in compared to the 6-month follow-up?

Residents are asked to report on their physical and mental health by providing a rating of “good on most days,” “fair on most days” or “poor on most days.” At move-in, the difference between residents reporting their mental health as “good on most days” as opposed to “fair on most days” or “poor on most days” was most notable for Level 1 respondents (59.9% versus 32.2% and 7.9%, respectively). When looking at the data from six-month responses, however, all three housing levels show a similarly high proportion of respondents indicating their mental health is good on most days. This trend was not evident in respondents’ analysis of their physical health, though all three housing levels again showed increased percentages of respondents indicating their physical health was good on most days from move-in to six-months.

Table 11: Mental Health at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Good on Most Days	91 (59.9)	1,641 (53.1)	697 (43.6)
Fair on Most Days	49 (32.2)	1,164 (37.7)	640 (40.0)
Poor on Most Days	12 (7.9)	283 (9.2)	262 (16.4)
Total	152 (100.0)	3,088 (100.0)	1,599 (100.0)

Figure 11: Mental Health at Move-In by Housing Level

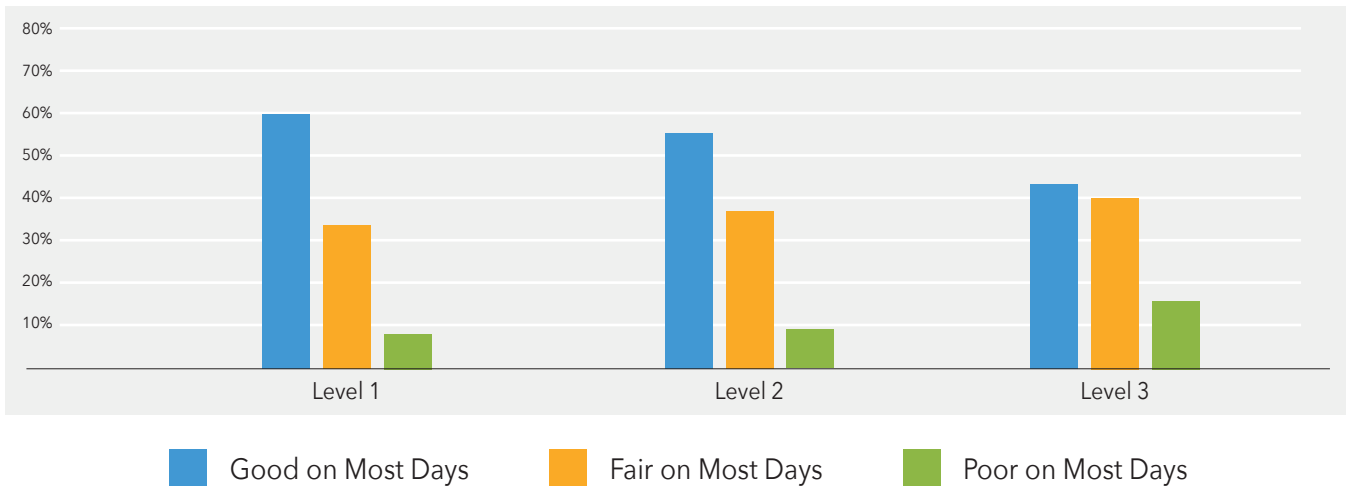


Table 12: Mental Health at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Good on Most Days	26 (70.3)	344 (64.2)	155 (68.3)
Fair on Most Days	11 (29.7)	177 (33.0)	64 (28.2)
Poor on Most Days	0 (0.0)	15 (2.8)	8 (3.5)
Total	37 (100.0)	536 (100.0)	227 (100.0)



Figure 12: Mental Health at Six Months by Housing Level

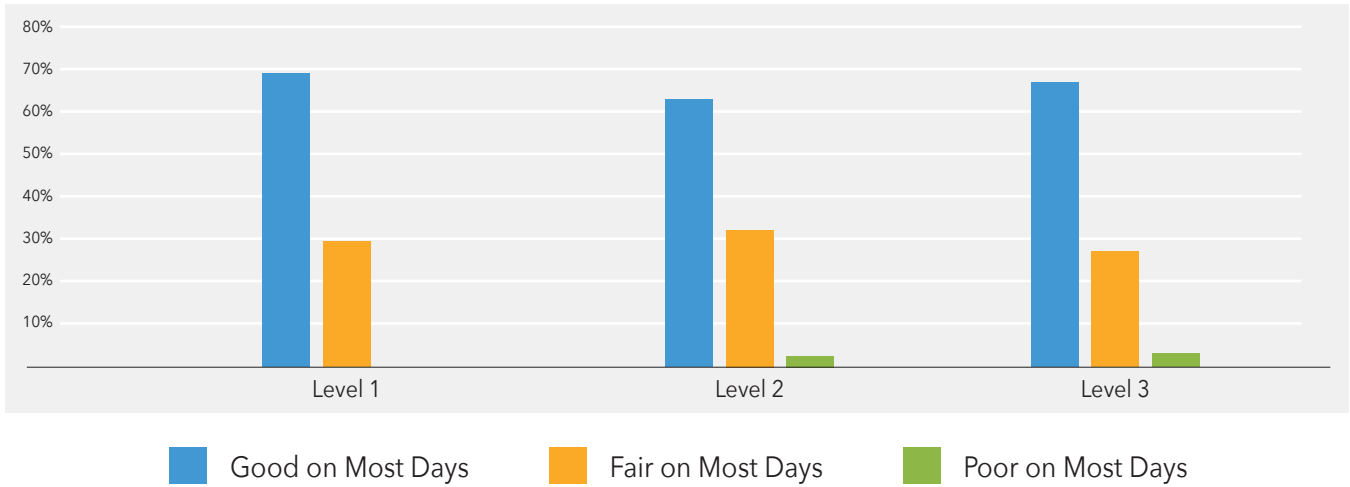


Table 13: Physical Health at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Good on Most Days	98 (64.5)	1,926 (62.4)	873 (54.4)
Fair on Most Days	46 (30.3)	988 (32.0)	562 (35.0)
Poor on Most Days	8 (5.3)	172 (5.6)	170 (10.6)
Total	152 (100.0)	3,086 (100.0)	1,605 (100.0)

Figure 13: Physical Health at Move-In by Housing Level

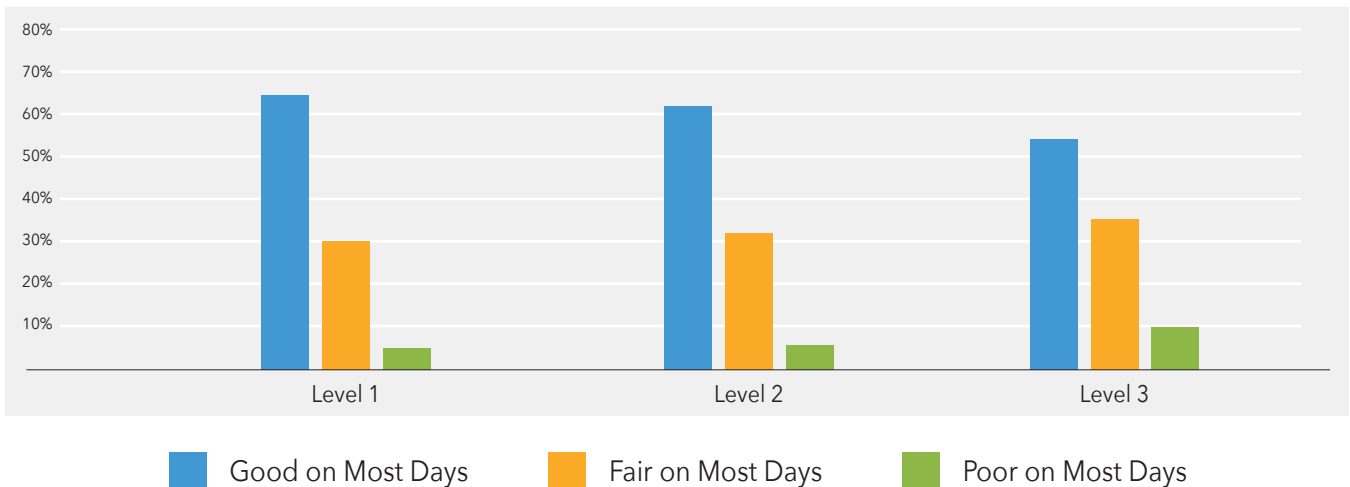
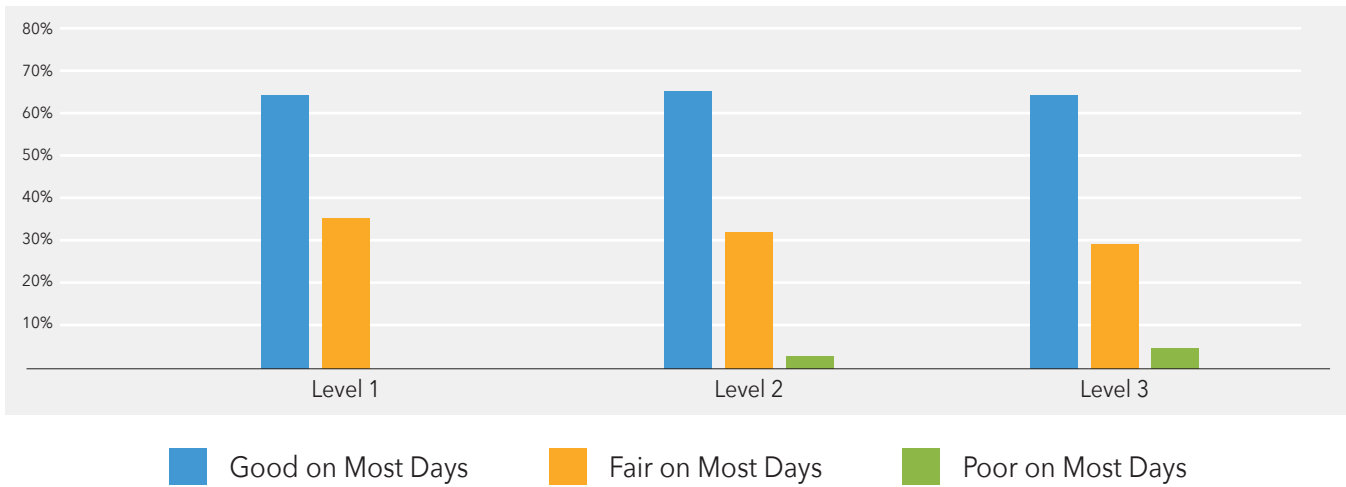




Table 14: Physical Health at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Good on Most Days	24 (64.9)	354 (65.8)	145 (64.4)
Fair on Most Days	13 (35.1)	171 (31.8)	29.3 (29.3)
Poor on Most Days	0 (0.0)	13 (2.4)	14 (6.2)
Total	37 (100.0)	538 (100.0)	225 (100.0)

Figure 14: Physical Health at Six Months by Housing Level



For the chi-square tests of independence, Level 1 housing data could not be included in the analysis due to expected cell counts less than 5. The chi-square test of independence between mental health rating and length of stay was significant for housing Levels 2 and 3. In the Level 2 housing ($\chi^2(2) = 35.36, p < .001, V = .10$) the association was moderate. The association was strong for Level 3 housing ($\chi^2(2) = 55.43, p < .001, V = .17$).

The chi-square test of independence between physical health rating and length of stay was significant for Levels 2 and 3. In Level 2 housing ($\chi^2(2) = 9.79, p < .01, V = .05$) the association was weak. The association was slightly stronger but still weak for Level 3 housing ($\chi^2(2) = 9.19, p < .001, V = .07$).

These findings suggests that the increase in positive mental and physical health ratings (i.e., good on most days) with a corresponding decrease in less positive ratings (i.e., fair on most days or poor on most days) was not likely due to chance alone and that recovery housing had an influence on the residents' improved mental and physical health ratings.



RQ 5: Is there a difference between the residents’ use of recovery supports from move-in to 6-month follow-up?

Residents are asked to identify which type of recovery supports they are using. (List the question(s). The number of recovery supports respondents were taking advantage of was calculated from two questions asking them to indicate which recovery supports they use. Residents first choose the recovery supports they use from a list that includes: 12-step/AA/CA/NA/HA group (or other 12-step program), organized religious group, other support group for a recovery-related issue, sober support outing (like with other friends in recovery), activities sponsored by the recovery residence, activities provided while incarcerated, did not attend any of these activities in the past 30 days, and prefer not to answer. Next, they are asked if they have received peer support in the last 30 days (yes, no, or prefer not to answer).

Across each housing level, the number of recovery supports residents reported increased during the length of their stay. Whereas fewer than 50% of respondents in each housing level utilized three or more supports at move-in, over half of the respondents in Levels 1, 2, and 3 housing reported using three or more supports at the six-month follow-up period (i.e., 62.1%, 57.2%, and 58.8%, respectively).

Table 15: Number of Recovery Supports Used at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
None	11 (7.1)	484 (15.4)	277 (17.0)
One	16 (10.3)	717 (22.7)	343 (21.1)
Two	60 (38.5)	991 (31.4)	552 (34.0)
Three	18 (11.5)	395 (12.5)	245 (15.1)
Four	26 (16.7)	271 (8.6)	114 (7.0)
Five	17 (10.9)	195 (6.2)	61 (3.8)
Six	8 (5.1)	92 (2.9)	25 (1.5)
Seven	0 (0.0)	7 (0.2)	8 (0.5)
Total	156 (100.0)	3,152 (100.0)	1,625 (100.0)

Figure 15: Number of Recovery Supports Used at Move-In by Housing Level

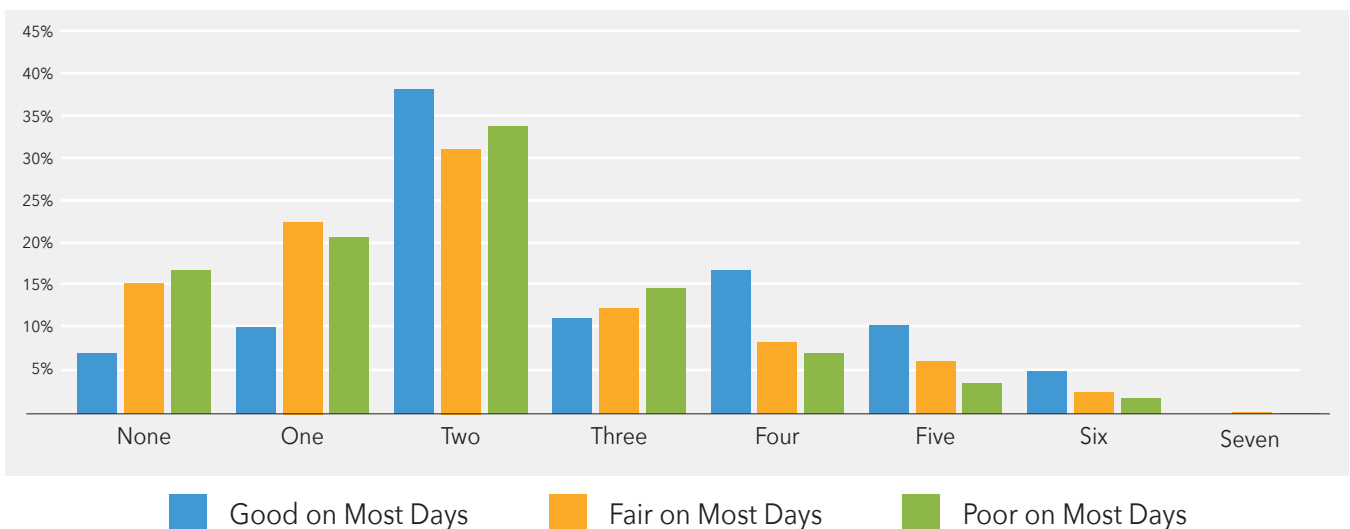
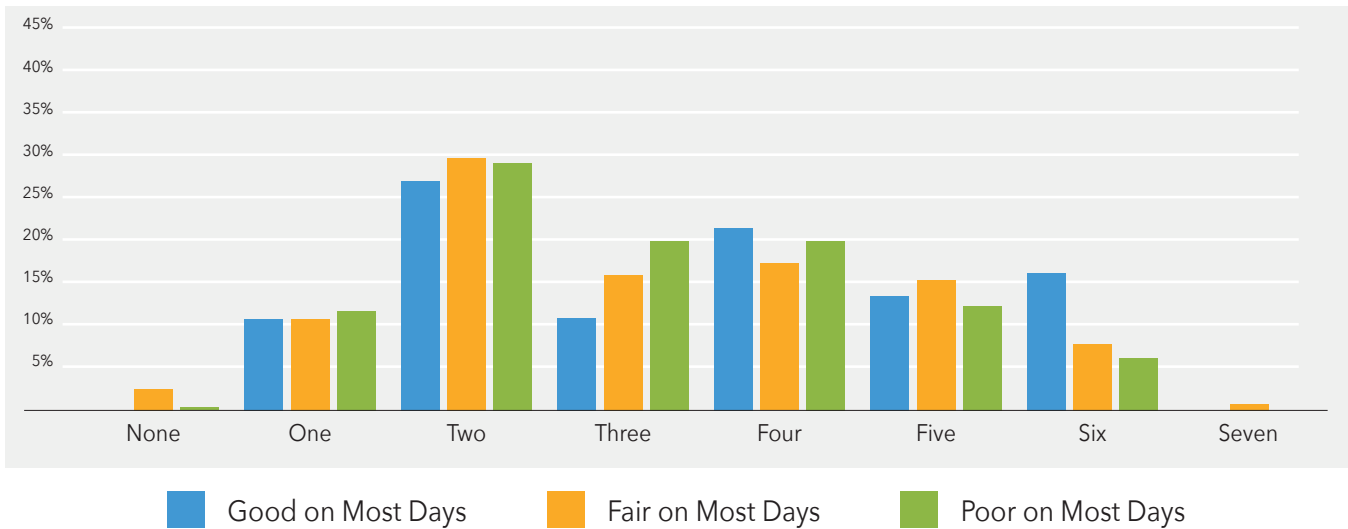


Table 16: Number of Recovery Supports Used at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
None	0 (0.0)	12 (2.2)	1 (0.4)
One	4 (10.8)	60 (11.0)	27 (11.8)
Two	10 (27.0)	161 (29.6)	66 (28.9)
Three	4 (10.8)	87 (16.0)	46 (20.2)
Four	8 (21.6)	94 (17.3)	46 (20.2)
Five	5 (13.5)	84 (15.4)	28 (12.3)
Six	6 (16.2)	43 (7.9)	14 (6.1)
Seven	0 (100.0)	3 (0.6)	0 (0.0)
Total	37 (100.0)	544 (100.0)	228 (100.0)

Figure 16: Number of Recovery Supports Used at Six Months by Housing Level



A chi-square test of independence was conducted between recovery supports and length of stay. Although there was no significant association for Level 1 housing, the associations for Level 2 and 3 were both significant. Level 2 housing results showed a strong association ($\chi^2(2) = 153.58, p < .001, V. = .20$). The association in Level 3 housing was also strong and nearly very strong ($\chi^2(2) = 90.47, p < .001, V. = .22$). Residents reported significantly more recovery supports after six months of living in level 2 and level 3 housing.

RQ6: Is there a difference between involvement with drug court and/or status of being on probation or parole at the time of move-in compared to the 6-month follow-up?

Residents are asked their current status with being involved in drug court, parole, or probation. They can choose as many options as apply from a list that includes: currently on parole/probation, currently participating in drug court, not involved with the criminal justice system, prefer not to answer. For this analysis, an additional category was created called “currently on parole/probation and participating in drug court” to determine how many residents were involved with both categories.



Ohio Recovery Housing

Respondents in Level 1 recovery housing were more likely to be uninvolved with drug court and/or parole or probation at both move-out and six months into a recovery housing stay. Respondents in Levels 2 and 3 housing had similar rates of involvement, though those in Level 2 were slightly more likely to be on parole or probation and those in Level 3 were slightly more likely to be participating in drug court.

Because of the small counts in some of the involvement categories, it was necessary to collapse the four categories into two (i.e., any involvement and no involvement) to perform the chi-square test of independence. Collapsing categories is a commonly used strategy used to meet the test assumptions necessary to run proper statistical analyses. Results indicated no significance between involvement and length of stay for all Levels. These results suggest that length of stay does not have an effect on involvement in drug court, parole, or probation in any housing level. It is also important to recognize that the length of one's probation or parole can vary and go beyond a length of stay in recovery housing. Maintaining these obligations is an indicator of progress toward successful completion at some point.

Table 17: Criminal Justice Obligations at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Currently on Parole/Probation	45 (30.6)	1,241 (41.8)	635 (41.3)
Currently Participating in Drug Court	6 (4.1)	95 (3.2)	49 (3.2)
Currently on Parole/Probation and Participating in Drug Court	3 (2.0)	113 (3.8)	64 (4.2)
No Involvement	93 (63.3)	1,522 (51.2)	790 (51.4)
Total	147 (100.0)	2,971 (100.0)	1,538 (100.0)

Figure 17: Criminal Justice Obligations at Move-In by Housing Level

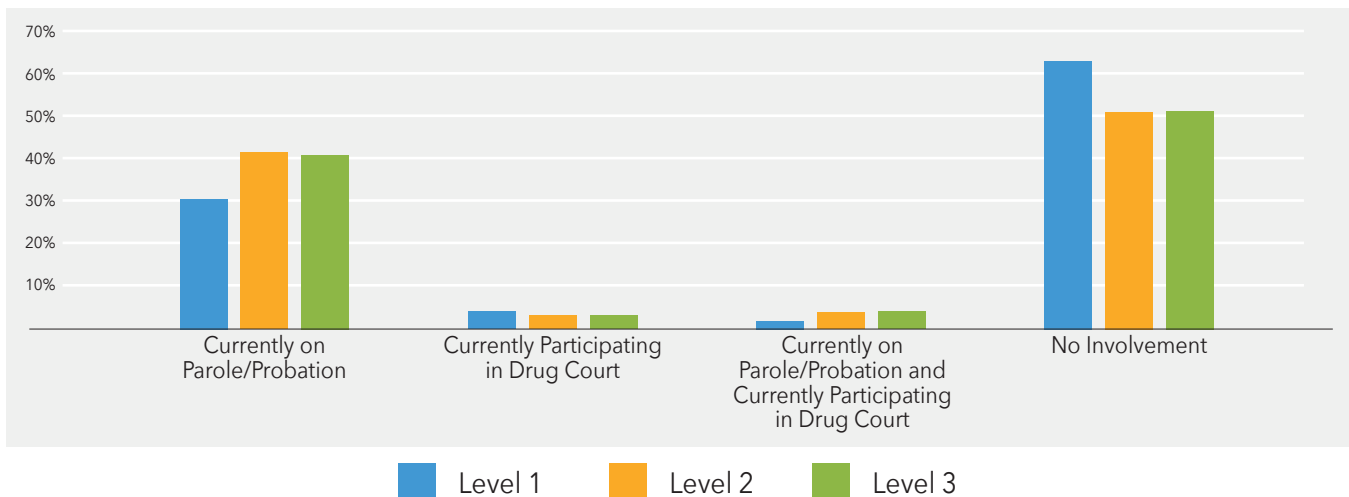
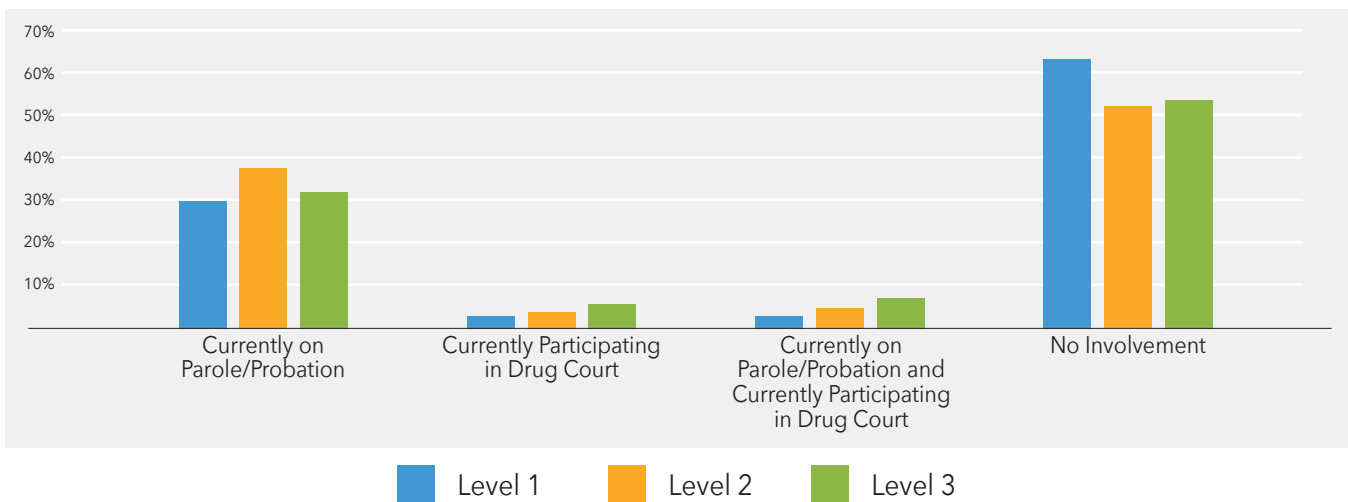




Table 18: Criminal Justice Obligations at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Currently on Parole/Probation	11 (30.6)	204 (38.3)	73 (32.9)
Currently Participating in Drug Court	1 (2.8)	19 (3.6)	14 (6.3)
Currently on Parole/Probation and Participating in Drug Court	1 (2.8)	26 (4.9)	15 (6.8)
No Involvement	23 (63.9)	283 (53.2)	120 (54.1)
Total	36 (100.0)	532(100.0)	222 (100.0)

Figure 18: Criminal Justice Obligations at Six Months by Housing Level



RQ7: Is there a difference in education or skilled training pursuits at the time of move-in compared to the 6-month follow-up?

RQ8: Is there a difference in employment at the time of move-in compared to the 6-month follow-up?

Educational status was calculated using two questions on the survey. Respondents were first asked if they consider their education to be complete. If they responded no, they were shown the other options in the table below and asked to choose which apply to them. "Multiple Pursuits" includes anyone who selected more than one option. Compared to Levels 2 and 3, a higher proportion of Level 1 residents reported not being involved in educational pursuits at both survey intervals, but they also had a lower percentage who considered their education to be complete. Across all three housing levels, the percentage of residents who reported not being involved in educational pursuits in the last 30 days declined from move-in to six months.



Ohio Recovery Housing

A chi-square test of independence was conducted between educational pursuits and length of stay. The association was only significant for Level 2 housing ($\chi^2(3) = 17.87, p < .001, V = .1$) and this association was small. At the six-month period, the proportion of respondents who were not involved in educational pursuits during the previous 30 days decreased. At the same time, there was an increased proportion who were engaged with vocational school, skilled training, college, or multiple pursuits. The proportion of respondents who considered their education to be complete stayed the same. Therefore, it is likely that the increased involvement in educational pursuits could be contributed, at least in part, to the role of recovery housing.

Table 19: Educational Status at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
General Education/ Working Toward a GED	13 (8.7)	143 (4.7)	65 (4.1)
Vocational School	1 (0.7)	11 (0.4)	9 (0.6)
Skilled Training	1 (0.7)	27 (0.9)	21 (1.3)
College	2 (1.3)	78 (2.6)	61 (3.9)
Not Involved in the Last 30 Days	73 (48.7)	1,168 (38.4)	686 (43.6)
Multiple Pursuits	1 (0.7)	22 (0.7)	11 (0.7)
Considers Education to be Complete	58 (38.7)	1,533 (50.4)	700 (44.5)
Other	1 (0.7)	60 (2.0)	20 (1.3)
Total	150 (100.0)	3,042 (100.0)	1,573 (100.0)

Figure 19: Educational Status at Move-In by Housing Level

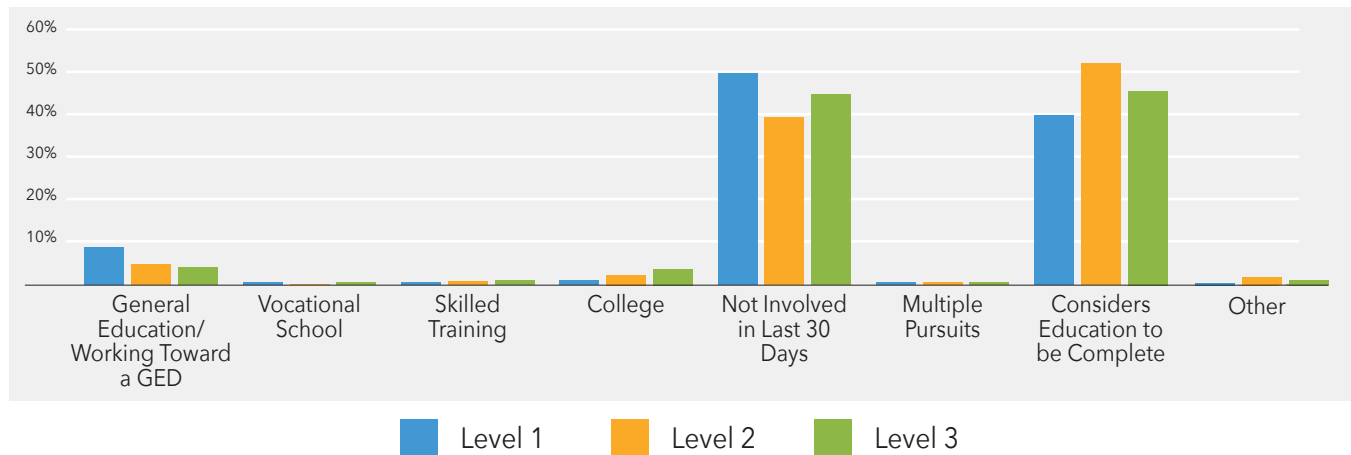
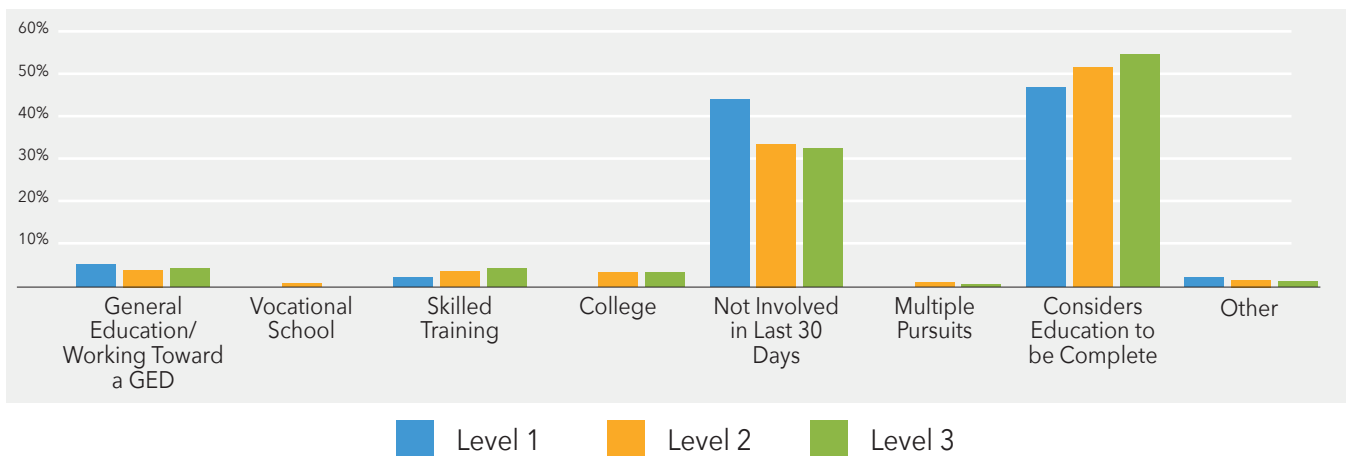


Table 20: Educational Status at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
General Education/ Working Toward a GED	2 (5.4)	23 (4.3)	10 (4.5)
Vocational School	0 (0.0)	6 (1.1)	0 (0.0)
Skilled Training	1 (2.7)	22 (4.1)	10 (4.5)
College	0 (0.0)	19 (3.6)	8 (3.6)
Not Involved in the Last 30 Days	16 (43.2)	175 (33.0)	70 (31.7)
Multiple Pursuits	0 (0.0)	8 (1.5)	2 (0.9)
Considers Education to be Complete	17 (45.9)	268 (50.5)	118 (53.4)
Other	1 (2.7)	10 (1.9)	3 (1.4)
Total	37 (100.0)	531(100.0)	221 (100.0)

Figure 20: Educational Status at Six Months by Housing Level



Compared to Levels 2 and 3, there was a higher percentage of Level 1 respondents who were working at move-in to recovery housing; this difference was not notable in the six-month results. There were also relatively fewer respondents from Level 1 housing reporting they were unable to work due to incarceration at move-in. Across all levels, the percentage of respondents unemployed or looking for work dropped dramatically when comparing move-in to six-month results. The percentage of respondents disabled and receiving disability benefits increased for all levels, while the percentage who were disabled and not receiving disability benefits declined for Levels 1 and 3. These results suggest that recovery housing may have had a role in helping residents with a disability enroll and obtain disability benefits they were previously eligible for but were not receiving.

A chi-square test of independence was conducted between employment pursuits and length of stay. The small cell sizes precluded analysis of Level 1 housing. The associations between employment pursuits and length of stay for Level 2 housing ($\chi^2(10) = 581.13, p < .001, V = .41$) and Level 3 housing ($\chi^2(10) = 298.76, p < .001, V = .41$) were significant, and both levels had very strong associations, suggesting that recovery housing played a role in residents' ability to gain employment and/or receive disability benefits after moving in.

Table 21: Employment Status at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Part-Time Paid Work	18 (12.2)	229 (7.8)	92 (5.9)
Full-Time Paid Work	25 (17.0)	298 (10.2)	151 (9.8)
Temporary Assignment	2 (1.4)	28 (1.0)	23 (1.5)
Looking for Work	35 (23.8)	730 (24.9)	422 (27.3)
Retired	0 (0.0)	25 (0.9)	21 (1.4)
Unable to Work While Incarcerated	3 (2.0)	268 (9.1)	135 (8.7)
Working within Institution Where Incarcerated	1 (0.7)	45 (1.5)	13 (0.8)
Disabled and Not Receiving Disability Benefits	4 (2.7)	129 (4.4)	59 (3.8)
Disabled and Receiving Disability Benefits	15 (10.2)	216 (7.4)	153 (9.9)
Unemployed	38 (25.9)	790 (26.9)	428 (27.6)
Other	6 (4.1)	176 (6.0)	51 (3.3)
Total	147 (100.0)	2,934 (100.0)	1,548 (100.0)

Figure 21: Employment Status at Move-In by Housing Level

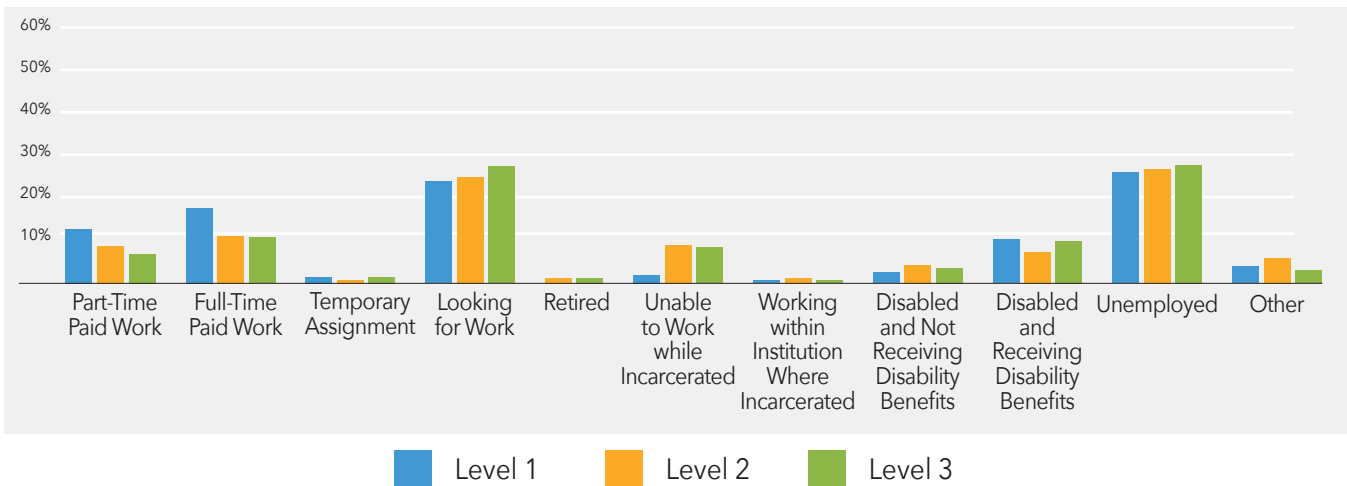
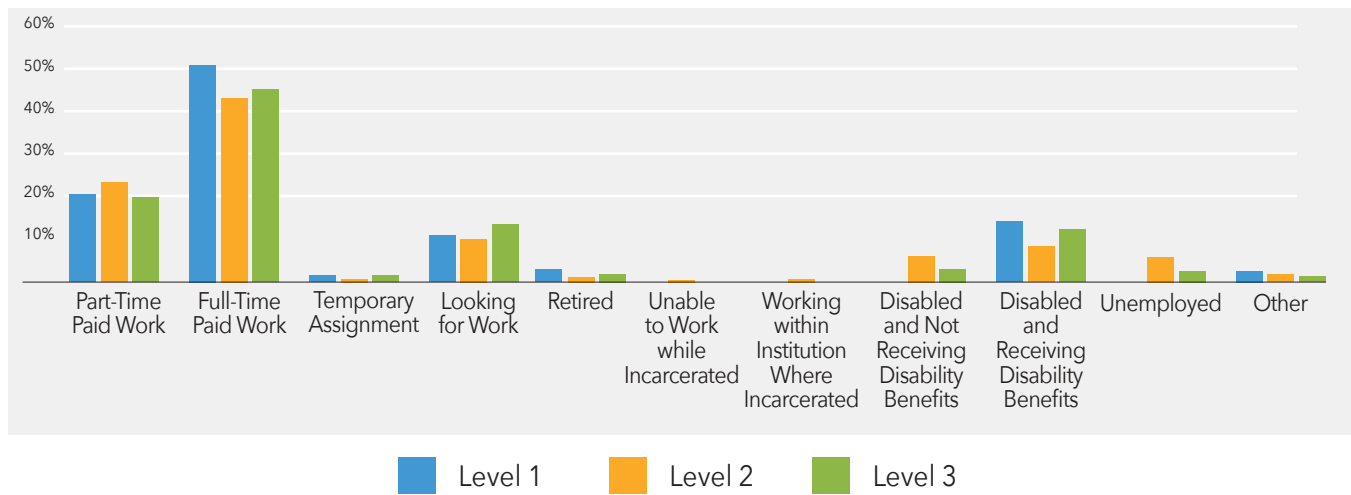


Table 22: Employment Status at Six Months by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Part-Time Paid Work	7 (19.4)	116 (22.2)	42 (18.6)
Full-Time Paid Work	18 (50.0)	221 (42.3)	100 (44.2)
Temporary Assignment	0 (0.0)	4 (0.8)	4 (1.8)
Looking for Work	4 (11.1)	53 (10.2)	31 (13.7)
Retired	1 (2.8)	4 (0.8)	5 (2.2)
Unable to Work While Incarcerated	0 (0.0)	3 (0.6)	0 (0.0)
Working within Institution Where Incarcerated	0 (0.0)	3 (0.6)	0 (0.0)
Disabled and Not Receiving Disability Benefits	0 (0.0)	32 (6.1)	7 (3.1)
Disabled and Receiving Disability Benefits	5 (13.9)	43 (8.2)	28 (12.4)
Unemployed	0 (0.0)	32 (6.1)	6 (2.7)
Other	1 (2.8)	11 (2.1)	3 (1.3)
Total	36 (100.0)	522(100.0)	226 (100.0)

Figure 22: Employment Status at Six Months by Housing Level





RQ9: At the time residents moved into recovery housing, is there a difference across housing levels in where residents were living?

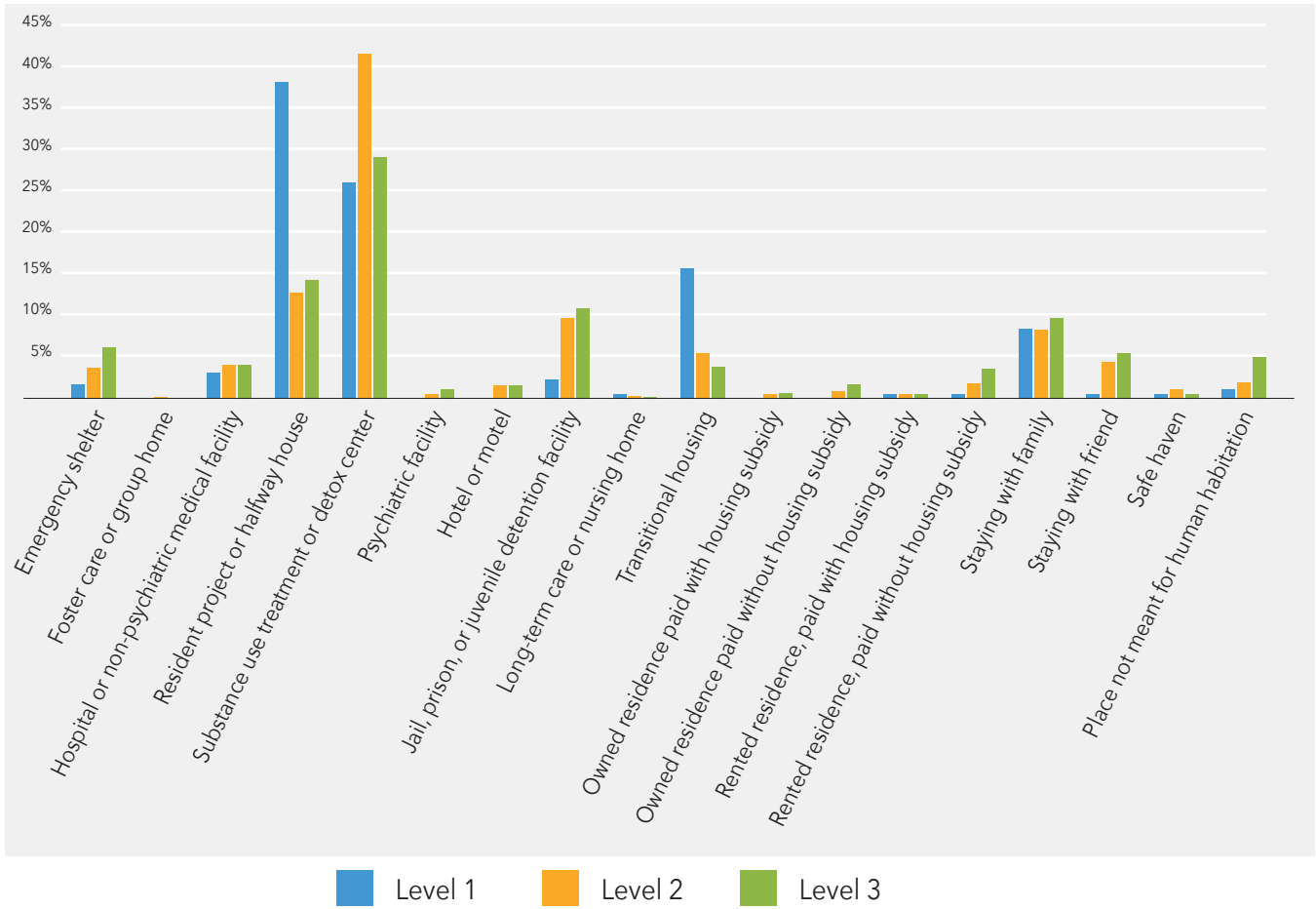
At move-in, residents are asked to identify their living situation(s) for the 30 days prior, choosing from the list in the table below. If they have stayed more than one place, they are instructed to choose where they were the longest.

Differences were apparent amongst housing levels when looking at where respondents had been living in the 30 days prior to move-in to recovery housing. Compared to Levels 2 and 3, the Level 1 respondents more often came from halfway houses or transitional living. In contrast, respondents coming from jail, prison, or an emergency shelter were more frequently going into Level 2 or 3 housing. A high proportion of residents in all levels were moving to recovery housing from a treatment or detox center, though this was most notable for Level 2 housing (41.1%).

Table 23: Living Situation at Move-In by Housing Level

	LEVEL 1 n (%)	LEVEL 2 n (%)	LEVEL 3 n (%)
Emergency shelter	3 (1.9)	113 (3.7)	102 (6.4)
Foster care or group home	0 (0.0)	5 (0.2)	1 (0.1)
Hospital or other non-psychiatric medical facility	5 (3.2)	127 (4.2)	69 (4.3)
Resident project or halfway house	58 (37.7)	388 (12.7)	226 (14.2)
Substance use treatment or detox center	40 (26.0)	1,252 (41.1)	459 (28.8)
Psychiatric facility	0 (0.0)	20 (0.7)	19 (1.2)
Hotel or motel	0 (0.0)	46 (1.5)	27 (1.7)
Jail, prison, or juvenile detention facility	4 (2.6)	297 (9.7)	177 (11.1)
Long-term care or nursing home	1 (0.6)	13 (0.4)	4 (0.3)
Transitional housing	24 (15.6)	165 (5.4)	63 (4.0)
Owned residence, paid with housing subsidy	0 (0.0)	21 (0.7)	12 (0.8)
Owned residence, paid without housing subsidy	0 (0.0)	30 (1.0)	28 (1.8)
Rented residence, paid with housing subsidy	1 (0.6)	20 (0.7)	9 (0.6)
Rented residence, paid without housing subsidy	1 (0.6)	59 (1.9)	56 (3.5)
Staying with family	13 (8.4)	249 (8.2)	157 (9.8)
Staying with friend	1 (0.6)	137 (4.5)	90 (5.6)
Safe Haven	1 (0.6)	39 (1.3)	11 (0.7)
Place not meant for human habitation	2 (1.3)	67 (2.2)	84 (5.3)
Total	154 (100.0)	3,048 (100.0)	1,594 (100.0)

Figure 23: Living Situation at Move-In by Housing Level



Using the move-in data only, a chi-square test of independence was conducted between each of the housing levels and residents' reports of where they were living prior to moving into their recovery house. The association was significant ($\chi^2(34) = , p < .001, V = .23$) and the effect size was strong. This result means that the variation in previous living situation patterns across the three levels was not likely due to chance alone.



Conclusion

Results from the analyses suggest that recovery housing plays a critical role in improving outcomes for residents and that there are some differences in population across housing levels. Some of the main findings include:

- **RQ1:** There were no statistically significant associations between housing and race at any housing level, meaning the racial identities of residents at move-in and at six months were not statistically different. This suggests that there were not differential drop-out rates for residents based on race. This result was also true for sexual identity.
- **RQ1:** There was an association, albeit weak, between housing and gender for Level 2 housing only. The percentage of women increased while the percentage of men decreased at the six-month period, and this change may have been related to recovery housing.
- **RQs 2 and 3:** Alcohol and illicit drug use decreased across all three levels. Levels 2 and 3 showed a statistically significant decrease in use, meaning the decline in use was likely due at least in part to recovery housing and not chance alone.
- **RQ4:** Mental and physical health ratings improved across all three housing levels. The improvements were statistically significant for Levels 2 and 3, meaning the improvements were likely due in part to recovery housing.
- **RQ5:** Recovery supports increased significantly across all levels. Residents reported utilization of more recovery supports at the six-month follow-up compared to move-in.
- **RQ6:** Involvement with drug court and status of being on parole or probation was less prevalent in Level 1 residents but did not vary significantly after six months across any housing level. It does not appear that length of stay in recovering housing contributes to residents' involvement in the criminal justice system.
- **RQ7:** The percentage of residents who reported no involvement with educational pursuits in the last thirty days declined across all three housing levels. This increase in educational pursuits is clinically significant, but the association was only statistically significant for Level 2 housing.
- **RQ8:** Employment rates increased and unemployment decreased across all housing levels. These changes were significant, meaning recovery housing very likely had a role in improving employment status. Level 1 residents were more likely to be employed at move-in; by six-months there was no discernible difference in rates of employment across housing levels.
- **RQ9:** A high proportion of residents in all levels were moving to recovery housing from a treatment or detox center, though this was most notable for Level 2 housing (41.1%).



Limitations

Limitations of this work include the fact that it is secondary data, with no personal identifying information, thus, a matched-case study of move-in and six-month surveys from the same residents was not possible. The makeup and availability of recovery housing across Ohio also factors into the results. According to *Mapping the Gap: An Assessment of Capacity, Cost-Benefits, and Disparities in Utilization in Ohio Recovery Housing*¹⁴, recovery housing is a scarce resource across much of Ohio, thus residents are often placed in the housing that is available, regardless of whether it meets their stated needs. Furthermore, housing is often segregated by gender; the availability of each housing type across levels was not incorporated into the calculations for that section. Operators of Level 1 housing have the option to certify through ORH or Oxford House, leading to a smaller sample size of this population that may not be as representative of the whole. With the small sample of residents in Level 1 housing, some statistical analyses could not be performed, and in cases where they could be performed, the small sample size may have lacked sufficient power to detect statistical significance. Finally, this survey relies on self-report data which is inherently subject to bias.

Future Research

This report is meant to serve as a baseline understanding of population characteristics and outcomes in Levels 1, 2, and 3 recovery housing residents in Ohio. More work can be done to explore the dynamics at play in each level of recovery housing, including looking at residents' reasons for leaving housing, how successfully they rate their time in recovery housing, and the impact of housing level on parenting and family relationships. There is also interest in investigating how well-matched residents are to their appropriate level of housing. An analysis of the outcomes of residents in the appropriate level of housing compared to those who are not would shed light on the extent of this issue and what effect it has on residents' quality of life.



¹⁴Green, B., Kim, F., Hammond, G., & Hammond, J. (2023). *Mapping the Gap: An Assessment of Capacity, Cost-Benefits, and Disparities in Utilization in Ohio Recovery Housing*. Retrieved June 25, 2024 from <https://www.ohiorecoveryhousing.org/resoucre-documents-and-linkages>.