

Spring 6-14-2024

Length of Stay, Social Support, and Sex Differences in Recovery

Elizabeth K. Garrity
DePaul University, elizabethkgarrity@gmail.com

Follow this and additional works at: https://via.library.depaul.edu/csh_etd



Part of the [Psychology Commons](#)

Recommended Citation

Garrity, Elizabeth K., "Length of Stay, Social Support, and Sex Differences in Recovery" (2024). *College of Science and Health Theses and Dissertations*. 530.
https://via.library.depaul.edu/csh_etd/530

This Thesis is brought to you for free and open access by the College of Science and Health at Digital Commons@DePaul. It has been accepted for inclusion in College of Science and Health Theses and Dissertations by an authorized administrator of Digital Commons@DePaul. For more information, please contact digitalservices@depaul.edu.

Length of Stay, Social Support, and Sex Differences in Recovery

A Thesis Proposal

Presented in

Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Research Psychology

By

Elizabeth Garrity

June 2024

Department of Psychology

College of Science and Health

DePaul University

Thesis Committee

Leonard Jason, Ph.D., Chairperson

Jerry Cleland, Ph.D.

Acknowledgements

I would like to express my sincere appreciation to my advisor, Dr. Leonard Jason, for his guidance, patience, and support in the completion of this project. His mentorship has been an invaluable part of my academic career. I would also like to extend my gratitude to my program advisor and committee member, Dr. Jerry Cleland, for his insightful contributions and instruction in this process.

A special thanks to my family who have supported me since I was a little girl, eager to explore the world. I would not be the person I am today, if not for them. To my parents, my brother, my aunt, my godmother, and my grandparents, I am indebted by lessons of resilience, compassion, and diligence.

My final thanks to my loving partner who has helped me persevere through times of hardship and has held unwavering confidence in my ability to accomplish this feat. Thank you for being my heart, my best friend, and my confidant. Your love is the greatest gift.

Table of Contents

Thesis Committee	i
Acknowledgements.....	ii
Abstract.....	1
Introduction.....	2
The Oxford House Network.....	2
Literature Review.....	3
Social Support and Recovery Outcomes.....	3
Length of Stay in Recovery Homes and Recovery Outcomes.....	3
Biological Sex and Gender Differences in Social Support.....	4
Biological Sex and Gender Differences in Addiction Recovery	4
Rationale	5
Method	7
Participants.....	7
Procedure.	8
Materials.	8
The Drug-Taking Confidence Interval.....	9
The Interpersonal Support Evaluation List.	10
Results.....	11
Discussion.....	13
Limitations	17
Conclusion	18
References.....	19
Appendix A: The Drug-Taking Confidence Questionnaire (Self Efficacy)	22
Appendix B: The Interpersonal Support Evaluation List (ISEL)	24

Table of Figures

<i>Figure 1. Conceptual Model of a Moderated Mediation.....</i>	<i>11</i>
<i>Figure 2. Results of the Conditional Direct Effect of Social Support on Recovery Outcomes.....</i>	<i>13</i>

Abstract

The Oxford House model is an expanding network of sober-living houses that aid individuals struggling with substance use disorders. Research exploring sober-living environments can be essential in understanding the factors that relate to sustained addiction recovery. This study examined whether sex differences were present within the relationship between perceived social support and recovery outcomes, to which no significant results were found. These findings contributed to existing research that seeks to understand whether gendered differences exist in recovery outcomes. This study also investigated whether length of stay within a recovery home mediated the relationship between perceived social support and one's recovery outcomes. Results suggested that length of stay fully mediated this relationship. Individuals that had greater social support demonstrated longer durations within their recovery home and maintained greater confidence in remaining abstinent from their substance of choice. These findings suggested the importance of retaining social support within one's recovery process and prioritizing longer durations within recovery settings. Moreover, this research aimed to identify existing disparities that may lead to vulnerabilities within addiction with hopes of providing meaningful change to communities and groups in need.

Keywords: Oxford House, substance use, social support, length of stay, recovery outcomes

Introduction

The alarming rise in substance use disorders (SUDs) has become prevalent in recent years. SUDs can create irreparable damage to the substance user, their family, and their social network for consecutive years while the substance user is in active addiction. As the diagnoses of SUDs have become increasingly common in recent years, the impact of substance use research has become vital. Researchers have attempted to determine what factors are most indicative of a healthy addiction recovery, and many researchers look to the 12-Step Model as a template to conceptualizing these factors. The 12-Step Model of Recovery was developed by the founder of Alcoholics Anonymous and has been utilized in many recovery communities (Gross, 2010). The aforementioned steps include an emphasis on abstinence, spiritualism, and the remedy of existing social support connections (Nash, 2020). As social support is an emphasized factor in the model of recovery, identifying its significance is an important facet of research. Due to the existing research on the benefits of social support, current research has begun to explore the relationship between social support and addiction recovery outcomes. Social Support is defined as the allocation of aid or comfort to another through means of practical assistance, tangible support, or emotional support (American Psychological Association, n.d.). Though there are many different definitions of recovery outcomes, the fundamental aspects of recovery outcomes are abstinence from substances with changes in an individual's perspective of recovery, symptom management, wellness, and safety (Luszczakoski et al., 2014).

The Oxford House Network

Oxford House members are residents of any housing under the Oxford House INC., a non-profit organization that aims to assist people who are struggling with substance use issues.

Oxford House members live in this organization's housing with the agreement that they will maintain sobriety and contribute to a self-governed model of recovery. Oxford House members must agree to pay dues, including rent and chapter dues, and maintain a steady form of income while housed (Oxford House, n.d.). The Oxford House network has continued to flourish since its inception in 1975 to accommodate over 2,000 living homes for residents all over America (Oxford House, n.d.).

Literature Review

Social Support and Recovery Outcomes

Social support has become a well-documented concept concerning recovery outcomes. Researchers have identified that individuals with stronger social support often remain in treatment settings longer, demonstrate better recovery outcomes, and exhibit a higher likelihood of abstinence (Lookatch, Wimberly, & McKay, 2019). Furthermore, researchers Jason et al. (2021) studied a population of Oxford House residents and discovered that an individual's likelihood of recovery is closely related to how many recovered individuals are in their network, as opposed to their individual recovery.

Length of Stay in Recovery Homes and Recovery Outcomes

Researchers Jason et al. (2016) identified that those with longer stays in Oxford, of six months or more, had better recovery outcomes, employment, and self-efficacy than those with shorter stays. This study was further supported by the works of Subbaraman et al. (2023), disclosing that differences were found among residents who were categorized as either early discontinuers or stable residents. Stable residents were found to have a higher percentage of days

of abstinence, fewer psychiatric or depressive symptoms, and fewer legal problems. Conners et al. (2006) found similar results within length of stay in treatment settings, in populations of mothers, suggesting longer treatment stays were related to abstinence from Alcohol Use Disorder and cigarette use, employment, reduction in depression and likelihood of arrest, and positive parenting attitudes. As length of stay has well-documented benefits to recovery outcomes, it would prove fruitful to include in this study.

Biological Sex and Gender Differences in Social Support

Gender and social support have become an extensively researched relationship within academia. More specifically researchers Caetano, Silva, and Vettore (2013) recognized the role that gender and social support play on physical health. Gender differences in social support have been studied concerning self-rated health status (SRH) and demonstrate intriguing results that women demonstrated poorer SRH when they perceived less social support, whereas men only demonstrated poorer SRH when they expressed less social interaction (Caetano et al., 2013). This interaction may support the postulation that women may benefit more from meaningful relations as opposed to only having social interaction.

Biological Sex and Gender Differences in Addiction Recovery

As researchers have reviewed the relationship between gender, social support, and physical health, gender has also demonstrated a significant role in substance use research. Researchers Fonseca et al. (2021) recognized specific gender disparities in substance use and recovery. Most notably, women are reported to have a more accelerated onset of addiction after substance use in comparison to men. Additionally, women experience a higher likelihood of medical complications, cravings, and relapse risk (Fonseca et al., 2021). Growing literature

suggests that substance use can have lasting detriment on women and pursuing further research could provide informational resources to populations in need.

Rationale

The current research endeavored to delineate the relationship between social support and addiction recovery outcomes among Oxford House residents. Given the vast network of Oxford House INC., Oxford House members proved to be a viable and tremendously beneficial population to examine when considering recovery outcomes. An important tool in various recovery groups is the element of social support. 12-step groups, Alcoholics Anonymous, Narcotics Anonymous, and many sober-living organizations often encourage individuals to engage and make amends with their social networks, as referred to in the 8th and 9th steps within the 12-step model, as a mode of achieving recovery (Nash, 2020). Maintaining relationships with a social network can be seen to have substantially positive effects in preventing relapse (Laudet et al., 2006). Determining the relationship between social support and addiction recovery outcomes contributes to existing literature that aims to conceptualize this complex relationship.

The following study assessed whether gender and length of stay in a recovery home may influence the recovery outcomes of Oxford House residents. This study hypothesized that individuals would demonstrate a significant positive effect of social support on recovery outcomes, as maintaining a strong social support will aid individuals in maintaining motivation to remain sober. An individual with weaker social support may feel discouraged to abstain from using substances if they have no external motivations for remaining sober and accountable. Moreover, it was theorized that an individual who maintains social support is more likely to have a longer stay within their recovery home, and in having a longer stay, individuals will be exposed

to protective factors that assist in recovery maintenance. This study hypothesized that the following outcome will be more significant in women as opposed to men. Women may find social support more meaningful and choose to prioritize social support more than men. Therefore, results for female Oxford House members may show a steady increase in recovery outcomes due to stronger social support, whereas men may show some increase in recovery outcomes due to the inclusion of social support in their lives but are likely to plateau in recovery outcomes regardless of additional social support.

Research identifies existing differences across gender in relation to recovery outcomes (Abreu Minero et al., 2022; Fonseca et al., 2021). Contributing to existing research on gender differences in recovery outcomes could assist in prevention and intervention strategies catered toward the specific needs of the individual. As many residential rehabilitation facilities are gendered, understanding the mechanisms of recovery among gender would be pivotal. Moreover, there is merit in exploring length of stay in recovery homes addressing the existing gap in research regarding length of stay and social support. Length of stay has been documented in relation to recovery outcomes, disclosing a significantly positive relation among the two variables (Connors et al., 2006; Jason et al., 2016). If length of stay contributes to the processes involving recovery, its mention in research could prove significant for residential programs and sober-living communities. Examining these variables could provide pertinent information to promote positive recovery processes for populations struggling with SUDs. This study may also contribute to policy changes and community initiatives that enhance advocacy for populations in need.

Hypotheses

Hypothesis I. Individuals who have a stronger support system are likely to have better recovery outcomes.

Hypothesis II. Individuals who maintain high levels of social support will feel supported and be more inclined to stay in Oxford Houses for longer, and in doing so, individuals with greater recovery stays will demonstrate better recovery outcomes.

Hypothesis III. Biological sex will moderate the relationship between social support and recovery outcomes.

Method

Participants.

The data for this study is a subset of an ongoing project that regularly assesses residents at Oxford Houses in North Carolina, Texas, and Oregon. For this study, the responses from 352 respondents were analyzed. Participants ranged from ages 18-70 ($M = 37.54$, $SD = 10.74$). Approximately 80.1% of participants were White, 8.8% were Black or African American, 8.6% were Hispanic or Latinx, and the remaining 2.6% of participants identified as other ethnicities such as Asian, American Indian, and Alaskan Native. Biological sex self-reports indicated 52% of the population as male and 48% of the population as female.

The data was collected using university IRB-approved protocols. Member-elected Oxford House presidents were provided with written scripts from researchers that gave information to participants regarding this study. Participants were informed that this study aimed

to understand Oxford House members' general thoughts and feelings on living in an Oxford House and report certain details regarding their sober experience.

Procedure.

This study assessed the relationship between the variables of social support and addiction recovery using data collected by DePaul's team of Oxford House researchers.

Individuals who agreed to participate in this study were asked to complete assessments periodically over two years. Assessments were conducted every four months and participants were paid \$20 per assessment. Any resident of the consenting Oxford Houses could join the study at any point over the two years in which the study was conducted.

Materials.

Participants were given an assessment that included a variety of shortened questionnaires to assess recovery outcomes. Participants were asked demographic questions such as age, ethnicity, and biological sex. The variable of biological sex was asked in the two-prompt fashion of "female" or "male. Participants were asked to answer their biological sex in a two-prompt fashion in accordance with the existing categorization of house type based on biological sex. Researchers administered the Drug-Taking Confidence Interval, the Interpersonal Support Evaluation List, and asked participants to self-report their length of stay in their current Oxford House.

The Interpersonal Support Evaluation List (ISEL; Cohen et al., 1985) was used to measure social support in Oxford House residents (see Appendix B). The ISEL considered social

support to be categorized into three different subtypes: tangible, appraisal, and belonging. The ISEL scale is a 12-item questionnaire that allows individuals to answer general statements with which they agree or disagree, on a 4-point Likert scale. Response types ranged from “definitely false”, “probably false”, “probably true” and “definitely true”. This measure was used to quantifiably measure an individual’s perception of social support (e.g., There is someone I can turn to for advice about handling problems with my family). Higher composite scores demonstrated stronger social support and lower composite scores demonstrated weaker social support.

The Drug-Taking Confidence Interval.

The Drug-Taking Confidence Interval (Self-Efficacy; Sklar, Annis, & Turner, 1999) was used to determine an individual’s confidence and ability to abstain from using substances. The DTCQ Self-Efficacy measure is an 8-item questionnaire that prompts individuals with hypothetically risky situations that pertain to substance use (e.g. If I unexpectedly found my drug of choice or happened to see something that reminded me of my drug of choice) and individuals measure their confidence in their ability to remain sober on a scale of values from 0 to 100 (see Appendix A). This measure was used to assess recovery outcomes as it regards an individual’s ability to avoid relapse. Individuals selected 100 if they are 100% confident that they could resist the urge to use their drug of choice, select 80 if they are 80% confident; 60 if they are 60% confident, 40 if they are 40% confident, 20 if they are 20% confident and 0 if they have no confidence regarding the hypothetical situation. Lower scores were considered to demonstrate less confidence in abstinence and higher scores are considered to demonstrate higher confidence in abstinence.

Recovery Outcome scores were calculated by calculating the mean score of the scale items. Individuals with higher scores would demonstrate better recovery outcomes, whereas individuals with lower scores demonstrated poorer recovery outcomes. Cronbach alpha scores were previously assessed and demonstrated reliability with a value of .90 (Majer, Bobak, and Jason, 2021). Given its establishment in psychological research, the DTCQ is considered a valid measure for recovery outcomes for the purposes of this study.

The Interpersonal Support Evaluation List.

Social Support was calculated by the mean scores of subscales and computation of a composite score of average social support. Items 3,4,5,6,9 and 10 were scored in the manner that high scores indicated high levels of social support. Items 1,2,7,8,11 and 12 were reverse scored in which high scores indicate low levels of social support. Any participants who did not score similarly on reverse-scored questions were excluded from the data. The Interpersonal Support Evaluation List was also previously assessed for internal reliability, with a Cronbach's alpha value of .87 (Majer, Bobak, and Jason, 2021). The ISEL is also a highly utilized measure in research that provides adequate validity for this study.

Additionally, any participants who had missing values from either the Drug-Taking Confidence Interval, the Interpersonal Support Evaluation List, or biological sex were excluded from this data set.

Analyses

Results were examined using Hayes PROCESS Macro to determine the main effects of the predictor variable (Social Support) on the criterion variable (Recovery Outcomes), as well as

the mediating effect of Length of Stay on the predictor and criterion variable. To determine whether social support has any impact on recovery outcomes, participants' first reported score of social support and second reported score of recovery outcomes were utilized in this study. As the second reported score of recovery outcomes was reported four months after the initial reported score of social support, this study will serve to view this effect longitudinally.

Hayes PROCESS Macro was also be used to determine the interaction effects of the predictor variable (Social Support) and the moderator variable (Biological Sex) on the criterion variable (Recovery Outcomes). A conceptual model is displayed below in Figure 1.

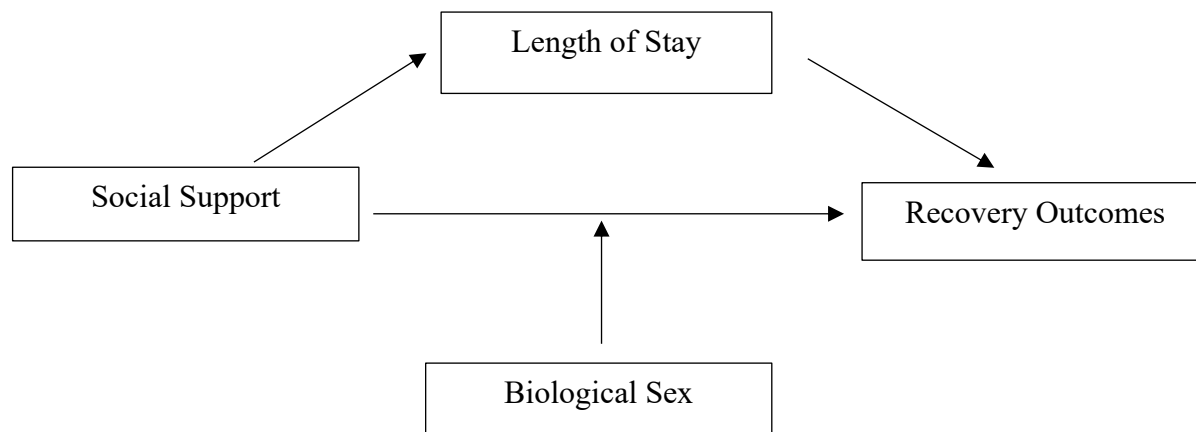


Figure 1. Conceptual Model of a Moderated Mediation

Results

The study hypothesized that individuals that demonstrated stronger support systems were likely to have better recovery outcomes and individuals that maintained high levels of social support would maintain the external motivation to remain in Oxford House for longer durations and improve their recovery outcomes by means of their length of stay. It was also hypothesized

that biological sex would moderate the relationship between perceived social support and recovery outcomes.

Analyses were conducted using SPSS PROCESS macro model 5. The analysis assessed the mediating role of length of stay on the relationship between perceived social support and recovery outcomes. Perceived social support significantly predicted length of stay [$\beta = .46, p < .01$], where higher levels of social support predicted longer length of stay. Length of stay also significantly predicted recovery outcomes [$\beta = .09, p < .05$], indicating that longer length of stay within an Oxford House led to better recovery outcomes. Results displayed a significant indirect effect of perceived social support on recovery outcomes through length of stay [Effect = .04, 95% CI (.0027, .0899)]. The direct effect of perceived social support on recovery outcomes was found to be nonsignificant [$\beta = .19, 95\% \text{ CI } (-.35, .72), p = .50$], confirming a full mediating effect of length of stay on the relationship between perceived social support and recovery outcomes. Furthermore, the study assessed whether biological sex moderated the relationship between perceived social support and recovery outcomes. The results of the moderation analysis demonstrate a nonsignificant effect [$\beta = .18, 95\% \text{ CI } (-.66, 1.02) p = .68$], indicating that biological sex does not moderate the relationship between perceived social support and recovery outcomes. Results are demonstrated below in Figure 2.

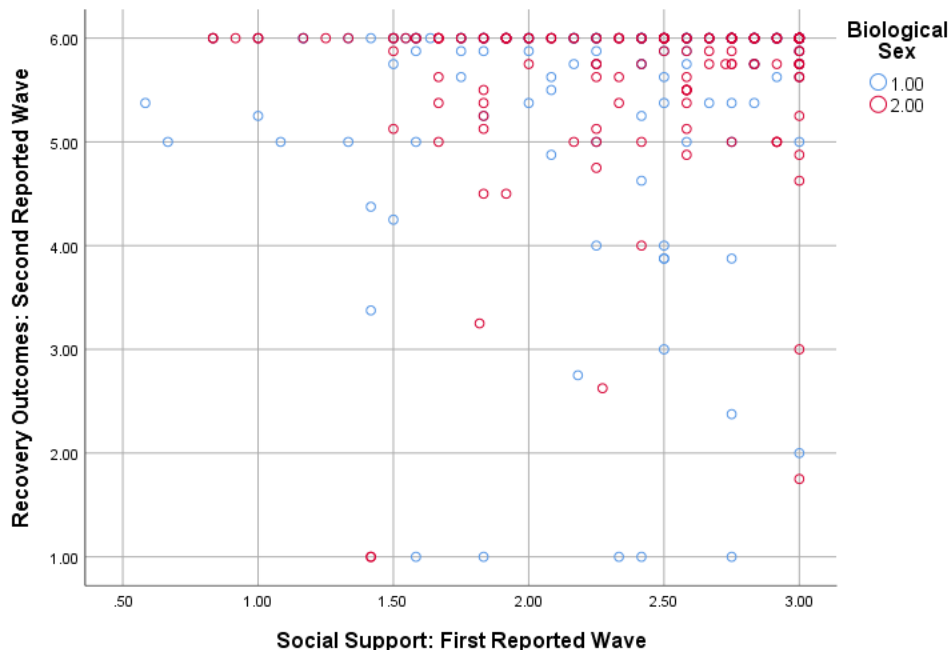


Figure 2. Results of the Conditional Direct Effect of Social Support on Recovery Outcomes
 Note: Male responses coded as 1; Female responses coded as 2.

Discussion

Our hypothesis that individuals that display more perceived social support are likely to maintain longer durations within their Oxford House and subsequently present better recovery outcomes was supported. Though our hypothesis that there may be sex differences among the relationship between social support and recovery outcomes was not supported, this finding remains important in identifying generalizable patterns of success in recovery outcomes among all populations. Contributing to information regarding sex differences in recovery, despite its nonsignificant outcome, encourages the continuation of research to best assist individuals in need. While one might posit that no sex differences in outcomes would suggest that the current Oxford House procedures work equally well for males and females, there remains conflicting literature that needs more granular assessment.

This study attempted to bridge the research divide that is present in examining the relationship between social support and length of stay, a relationship that is currently underinvestigated. This study suggests that an avenue for further study is to determine if individuals that exhibit higher levels of social support may have external motivators and supports that assist them in lengthening their stay at their current recovery home. As many 12-step model endorse the remedying of social support (Nash, 2020), its significance on length of stay may suggest that individuals that have existing support may find an easier time in transitioning into their recovery home, following the 12-step model, and subsequently lengthening their time at their house.

Jason et al. (2016) suggested that individuals maintaining residency for six months or more presented better outcomes in abstinence in comparison to those with shorter length of stays. Moreover, researchers Connors et al. (2006) and Subbaraman (2023) shared findings suggesting that individuals who maintain longer recovery stays demonstrated reduction in depressive mood, engagement in substance use, and legal complications. These findings reflected the current study that displayed a positive association among length of stay and recovery outcomes. Individuals within this sample demonstrated that with longer durations in an Oxford House, residents gain confidence in remaining abstinent. This may be due to extended time in developing recovery network relationships. Jason et al. (2012) identified that Oxford House residents that maintained a social support network that consisted of other Oxford House members had more likelihood to remain abstinent. One may posit that recovery outcomes are influenced by the relationships built within recovery settings. Researchers Bishop et al. (1998) support this notion indicating that

individuals who displayed greater length of time within an Oxford House demonstrated an improvement in their sense of community. As mentorship and sponsorship are significant factors in 12-step groups (McGovern et al., 2021), individuals may benefit from hearing the experiences and guidance of their peers that are also in recovery.

Length of stay within recovery settings has been briefly researched in relation to outcomes in those struggling with addiction. Increases in length of stay have been found to improve self-esteem, decrease depressive symptoms, and improve overall physical activity (Lashley, 2018). Other factors that impact length of stay have been explored, such as age. Length of stay was found to be significantly related to age, where individuals that were younger were more likely to complete substance use treatment stays (Stones & Dennis, 2023). This may be because individuals have life stressors or other significant barriers that increase with age. Another factor identified as significant in extended treatment stays was attendance in one or more self-help groups and setting personal goals (Baird et al., 2023). Such findings help clarify the factors that may lead to one's extension in recovery settings and may be beneficial in understanding the results of this study. Future research may examine factors such as depressive symptomology, overall esteem, and age as factors that promote one's length of stay. As this study has solely examined how social support may influence length of stay, further exploration would consider these elements.

The exploration of sex and gender differences in substance use research is unique as it has led to conflicting evidence. Certain researchers identified baseline factors that contribute or mitigate addictive behaviors. Specifically with men, having a substance-using spouse created

challenges in abstinence (Hser et al., 2003). Others indicated that relapse factors for women included marriage, negative affect, and interpersonal conflict, whereas relapse factors in men were related to isolation. More notably, being married was a protective factor for men, and having children was a protective factor for women (Hozhauer et al., 2020). Hser and colleagues (2003) also identified the positive impact of 12-step involvement on abstinence for both men and women. Researchers Davis and Jason (2005) found that longer durations spent in Oxford House led to greater abstinence self-efficacy, more prominently for men. However, it was also found that social support was related to abstinence self-efficacy, where women more directly benefited from social supports. These findings opposed our current research, as sex differences were not found in the current sample. Perhaps, these differences may have been related to the difference measures of social support. The Interpersonal Support Evaluation List that measured social support for this study assessed general perceived support, whereas Davis and Jason (2005) utilized the Important People and Activities Inventory (IPA) that assessed social support directly related to substance use and abstinence. The IPA scale may prove itself valuable at understanding differences in abstinence self-efficacy among gender as it provides a more nuanced and fine-grained approach at understanding how substance use may impact social support systems. Future studies may seek to include and compare both scales to determine their impact on recovery. Moreover, differences among samples may relate to various results, where Davis and Jason display a more ethnically diverse, yet smaller, sample. Overall, the research on recovery outcomes and biological sex requires further investigation. Environmental, cultural, and social factors should be considered when understanding the unique interplay between sex differences and addiction recovery as these factors may explain the varied results found in existing research.

Such findings pose implications for clinical-community psychologists and other mental health providers. Understanding the effects of length of stay on the relationship between social support and recovery outcomes may encourage practitioners to consider implementation of treatment plans that prioritize extended stays in recovery settings. Many individuals may undergo time in a thirty-day rehabilitation or detox center, and practitioners may create tailored plans that include after-care recovery stays, such as Oxford Homes. Incorporation of after-care plans that involve sober living settings may help to promote confidence in maintained abstinence. Moreover, such findings may encourage policy change that proposes funding and investment in recovery house settings and sober living environments. Advocacy for community integration of sober living houses could help expand these residential settings to accommodate individuals in need.

Limitations

One limitation of the following study may be the predominantly White sample size. The following sample could present concern with lack of representation among minority populations, and more so, a more diverse sample may present alternate results in relation to the proposed hypotheses. Additionally, a more inclusive sample may contribute to addressing health disparities that may assist underrepresented groups in substance use treatment and aid in policy change. Another limitation may be the assessment of biological sex instead of gender. As this study focuses solely on the sex binary, it excludes the lived experiences of Non-binary and Transgender individuals. Assessing for gender would be beneficial in understanding how gender identity may also influence recovery outcomes, especially given the lack of research in this domain. Lastly, as this study is conducted solely with Oxford House residents, inference to

broader populations may be difficult to achieve. Such results in this study may not reflect all treatment settings. However, this study builds upon existing frameworks that demonstrate success in Oxford Houses that may help understand the complexities of recovery outcomes within other environments. Future research may examine and compare various treatment settings to optimize generalizability.

Conclusion

This study contributes to ongoing research that could be beneficial for those who are living within recovery homes or sober-living environments. As social support is predicted as being critical to recovery outcomes (Lookatch, Wimberly, & McKay, 2019; Jason et al., 2021), individuals who are living in recovery homes may find benefit in growing their relationships with their social support, as well as existing members in their recovery home. Moreover, identifying length of stay as a mediating variable in the relationship between social support and recovery outcomes can guide recovery home policies to promote future successes for their residents. Though this research did not demonstrate differences in biological sex, these results build upon existing research that continues to determine whether disparities exist in different recovery settings. Future research would aim to incorporate a more diverse sample to promote more inclusive research for various communities. Other areas of exploration would consider both social supports (non-Oxford House) and Oxford House social support, and how both groups may influence and impact the resident of Oxford House. Research will also determine, cognitive, social, and environmental factors that may contribute to improvement of recovery outcomes.

References

- American Psychological Association. (n.d.). *APA Dictionary of Psychology*. American Psychological Association. <https://dictionary.apa.org/social-support>
- Abreu Minero, V., Best, D., Brown, L. Patton, D., Vandersplasschen, W. (2022). Differences in addiction and recovery gains according to gender – gender barriers and specific differences in overall strengths growth. *Substance Abuse Treatment, Prevention, Policy* **17**(1). <https://doi.org/10.1186/s13011-022-00444-8>
- Baird, A., Cheng, Y., & Xia, Y. (2023). Determinants of outpatient substance use disorder treatment length-of-stay and completion: the case of a treatment program in the southeast U.S. *Scientific reports*, *13*(1), 13961. <https://doi.org/10.1038/s41598-023-41350-8>
- Bishop, P. D., Jason, L. A., Ferrari, J. R., & Cheng-Fang, H. (1998). A survival analysis of communal-living, self-help, addiction recovery participants. *American Journal of Community Psychology*, *26*, 803-821. PMID: 10085534
- Caetano, S.C., Silva, C.M. & Vettore, M.V. (2013). Gender differences in the association of perceived social support and social network with self-rated health status among older adults: a population-based study in Brazil. *BMC Geriatrics*, **13**(1). <https://doi.org/10.1186/1471-2318-13-122>
- Cohen S., Mermelstein R., Kamarck T., & Hoberman, H.M. (1985). Measuring the functional components of social support. In Sarason, I.G. & Sarason, B.R. (Eds), *Social support: theory, research, and applications*. The Hague, Netherlands: Martinus Nijhoff.
- Connors, N. A., Grant, A., Crone, C. C., & Whiteside-Mansell, L. (2006). Substance abuse treatment for mothers: Treatment outcomes and the impact of length of stay. *Journal of Substance Abuse Treatment*, *31*(4), 447–456. <https://doi.org/10.1016/j.jsat.2006.06.001>
- Davis, M. I., & Jason, L. A. (2005). Sex differences in social support and self-efficacy within a recovery community. *American journal of community psychology*, *36*(3-4), 259–274. <https://doi.org/10.1007/s10464-005-8625-z>
- Fonseca, F., Robles-Martínez, M., Tirado-Muñoz, J., Alías-Ferri, M., Mestre-Pintó, J.-I., Coratu, A. M., & Torrens, M. (2021). A gender perspective of addictive disorders. *Current Addiction Reports*, *8*(1), 89–99. <https://doi.org/10.1007/s40429-021-00357-9>
- Gross, M. (2010). Alcoholics Anonymous: still sober after 75 years. 1935.. *American journal of public health*, *100* 12, 2361-3 . <https://doi.org/10.2105/AJPH.2010.199349>.
- Holzhauser, C. G., Cucciare, M., & Epstein, E. E. (2020). Sex and Gender Effects in Recovery From Alcohol Use Disorder. *Alcohol research : current reviews*, *40*(3), 03. <https://doi.org/10.35946/arcr.v40.3.03>

- Hser, Y. I., Huang, D., Teruya, C., & Douglas Anglin, M. (2003). Gender comparisons of drug abuse treatment outcomes and predictors. *Drug and alcohol dependence*, 72(3), 255–264. <https://doi.org/10.1016/j.drugalcdep.2003.07.005>
- Jason, L.A., Guerrero, M., Salomon-Amend, M., Stevens, E., Light, J.M. and Stoolmiller, M. (2020), Context Matters: Home-level But Not Individual-Level Recovery Social Capital Predicts Residents' Relapse. *American Journal of Community Psychology*, 67(3-4) 392-404. <https://doi.org/10.1002/ajcp.12481>
- Jason, L., Stevens, E., Ferrari, J. R., Thompson, E., & Legler, R. (2012). Social Networks among Residents in Recovery Homes. *Advances in psychology study*, 1(3), 4–12.
- Jason L.A., Salina D., & Ram D. (2016). Oxford recovery housing: Length of stay correlated with improved outcomes for women previously involved with the criminal justice system. *Substance Abuse*; 37(1), 248-254. <http://doi.org/10.1080/08897077.2015.1037946>
- Lashley M. (2018). The impact of length of stay on recovery measures in faith-based addiction treatment. *Public health nursing (Boston, Mass.)*, 35(5), 396–403. <https://doi.org/10.1111/phn.12401>
- Laudet, A. B., Morgen, K., & White, W. L. (2006). The role of social supports, spirituality, religiousness, life meaning and affiliation with 12-step fellowships in quality of life satisfaction among individuals in recovery from alcohol and Drug Problems. *Alcoholism Treatment Quarterly*, 24(1–2), 33–73. https://doi.org/10.1300/j020v24n01_04
- Luszczakoski, K. D., Olmos-Gallo, P. A., McKinney, C. J., Starks, R., & Huff, S. (2014). Measuring recovery related outcomes: A psychometric investigation of the Recovery Markers Inventory. *Community Mental Health Journal*, 50(8), 896–902. <https://doi.org/10.1007/s10597-014-9728-5>
- Lookatch, S. J., Wimberly, A. S., & McKay, J. R. (2019). Effects of social support and 12-step involvement on recovery among people in continuing care for cocaine dependence. *Substance Use & Misuse*, 54(13), 2144–2155. <https://doi.org/10.1080/10826084.2019.1638406>
- Majer, J. M., Bobak, T. J., & Jason, L. A. (2021). Psychiatric severity and stress among recovery home residents utilizing medication assisted treatment: A moderated mediation analysis of homophily. *Advances in Dual Diagnosis*, 14(3), 147–158. <https://doi.org/10.1108/add-07-2020-0011>
- Majer, J. M., Jason, L. A., & Bobak, T. J. (2021). An examination of abstinence social support among recovery home residents with psychiatric comorbidity. *Drug and Alcohol Dependence*, 228, 108971. <https://doi.org/10.1016/j.drugalcdep.2021.108971>
- McGovern, W., Addison, M., & McGovern, R. (2021). An Exploration of the Psycho-Social Benefits of Providing Sponsorship and Supporting Others in Traditional 12 Step, Self-Help

Groups. *International journal of environmental research and public health*, 18(5), 2208.
<https://doi.org/10.3390/ijerph18052208>

Nash, A. J. (2020). The twelve steps and adolescent recovery: A concise review. *Substance Abuse: Research and Treatment*, 14, 117822182090439.
<https://doi.org/10.1177/1178221820904397>

Oxford House. (n.d.) *The Purpose and Structure of Oxford House*.
https://www.oxfordhouse.org/purpose_and_structure

Sklar, S.M. and Turner, N.E. (1999), “A brief measure for the assessment of coping self-efficacy among alcohol and other drug users”, *Addiction*, Vol. 94 No. 5, pp. 723-729.

Stones, B., & Dennis, C. B. (2023). Childhood Trauma and Substance Use Treatment Length of Stay and Completion. *Alcoholism Treatment Quarterly*, 41(3), 265–277.
<https://doi.org/10.1080/07347324.2023.2205830>

Subbaraman, M.S., Mahoney, E., Mericle, A., Polcin, D. (2023). Six-month length of stay associated with better recovery outcomes among residents of sober living houses, *The American Journal of Drug and Alcohol Abuse*, 49(5), 675-683,
<http://doi.org/10.1080/00952990.2023.2245123>

Appendix A: The Drug-Taking Confidence Questionnaire (Self Efficacy)

Each dimension is numerically rated from not confident to very confident. 0 being not confident, 100 being very confident. Circle 100 if you are 100% confident right now that you could resist the urge to use your drug of choice; 80 if you are 80% confident; 60 if you are 60% confident. If you are more unconfident than confident, circle 40 to indicate that you are only 40% confident that you could resist the urge to use your drug of choice; 20 for 20% confident; or 0 if have no confidence at all about that situation.

1. If I were angry at the way things had turned out

0 20 40 60 80 100

2. If I had trouble sleeping

0 20 40 60 80 100

3. If I remembered something good that had happened

0 20 40 60 80 100

4. If I wanted to find out whether I could use occasionally without getting hooked

0 20 40 60 80 100

5. If I unexpectedly found my drug of choice or happened to see something that reminded me of my drug of choice.

0 20 40 60 80 100

6. If other people treated me unfairly or interfered with my plans

0 20 40 60 80 100

7. If I were out with friends and they kept suggesting we go somewhere and use my drug of choice

0 20 40 60 80 100

8. If I wanted to celebrate with a friend

0 20 40 60 80 100

Appendix B: The Interpersonal Support Evaluation List (ISEL)

For each of the statements below, choose the single response that best indicates how often each is true or false. Responses range from “definitely false” to “definitely true”.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

1. If I wanted to go on a trip for a day (for example, to the country or mountains), I would have a hard time finding someone to go with me.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

2. I feel that there is no one I can share my most private worries and fears with.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

3. If I were sick, I could easily find someone to help me with my daily chores.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

4. There is someone I can turn to for advice about handling problems with my family.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

5. If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

6. When I need suggestions on how to deal with a personal problem, I know someone I can turn to

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

7. I don't often get invited to do things with others.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

8. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.).

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

9. If I wanted to have lunch with someone, I could easily find someone to join me.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

10. If I was stranded 10 miles from home, there is someone I could call who could come and get me

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

11. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it.

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True

12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me

(1) Definitely False (2) Probably False (3) Probably True (4) Definitely True