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# A Meta-Analysis of Treatment and Housing for the Severely Mentally Ill

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# Walden University

College of Allied Health

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Val Major

has been found to be complete and satisfactory in all respects,  
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Walden University  
2024

Abstract

A Meta-Analysis of Treatment and Housing for the Severely Mentally Ill

by

Val Major

Final Study Submitted in Fulfillment  
of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

November 2024

## Abstract

This systematic literature review and quantitative meta-analysis focused on homelessness for severely mentally ill (SMI) individuals with such conditions as schizophrenia, bipolar, and major depressive disorders. The conceptual groundwork for the study was based on humanism as expressed in Maslow's hierarchy of needs. The research question explored whether there was a relationship between Housing First program interventions and outcomes for the SMI client in housing programs for the unhoused. The interventions identified were Housing First, transitional housing with and without case management, and standard treatment. The outcomes identified were mental health symptoms measured by symptom scales, emergency services use, quality of life scales, hospitalizations, and length of time housed. Meta-analysis of the eight studies meeting the criteria for inclusion demonstrated that many programs addressed homelessness but did not explicitly highlight specific interventions for the needs of the SMI individual. Interventions were identified through regression modeling that produced the best outcomes for unhoused individuals who have SMI and ascertained statistically significant differences in individual outcomes in comparison with the groups that received treatment as usual. The outcomes with the most frequencies were stable housing periods, assertive community treatment, and symptom reduction, showing a small but significant effect of  $d=0.23$ ,  $p=0.74$ , with a CI 95%. The results may provide policymakers and program developers with useful information that can be used to contribute to policies and program development that more effectively address the specific needs of individuals with SMI and thus contribute to positive social change.

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## Dedication

This body of work is dedicated to my children as an example that anything is possible.

## Acknowledgments

My mother held hope in me when no one else had, hugged me when she might have cast me out, and believed in me when fear and procrastination overwhelmed me. Thank you, Mother, for my professors, friends, and siblings who carried me when I needed them.

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## Chapter 1: Introduction to the Study

### **Introduction**

Homelessness is a growing problem across the United States. The unhoused can be seen on sidewalks, under bridges, and in city subway systems. Data from the United States Interagency Council on Homelessness (USICH) recorded the growth of homelessness, as increasing steadily despite federal, state, and local housing programs' attempts to address the problem. Homelessness can affect anyone at any given time. Homelessness can fall on individuals who face unexpected unemployment or attrition by company efforts to adjust to crises like COVID-19. Many of the homeless are severely mentally ill (SMI) and could benefit from individualized services in addition to housing.

There are shelters and housing programs to assist the unhoused. Homeless populations consist of individuals who have fallen into social circumstances beyond their control and many who suffer from various mental illnesses. According to Schneider et al., (2016), the homeless population consists of individuals that suffer social issues like unemployment, and low-skill employment. This is amplified by the lack of affordable housing, and the overloading of social agencies. The mentally ill population has grown the homeless numbers, and housing solutions for those with severe mental illnesses have become a growing industry (Quigley et al., 2001).

Homelessness and housing the homeless is not a new phenomenon. Homelessness can be traced back to the settlement house movement and services to poor immigrants in 1884 London. Because of social ills, homelessness is no longer recognized as a single white man's issue (Schneider et al., 2016). Those who are mentally ill makeup one-third

of the homeless population, and this ratio has grown significantly since the 1980s (Quigley et al., 2001).

Homeless programs have developed effective programs that address housing but not the specific needs of the mentally ill. There have been programs that have succeeded in providing services for the unhoused, but there is no consensus on which interventions produce the best outcomes and whether there is a significant relationship between interventions and outcomes. Many studies have identified the effectiveness of several approaches; however, there is no rating or singling out of which components have the most efficacy and produce the best outcomes for the SMI. This quantitative meta-analysis study intends to use a regression model to synthesize program intervention components and measure, identify and explore whether there are relationships between interventions and outcomes for addressing the unhoused individual who is also SMI. Efficacy is referred to as the effectiveness of an intervention.

This study can add to positive social change by examining the relationships between specific interventions and outcomes for the unhoused SMI client. Effective programming has the potential to save community resources and help to provide not only sustainable housing periods, but greater personal wellbeing. This meta-analysis may help to identify the interventions that may be implemented to assist in developing concisely tailored program interventions that will increase positive outcomes for SMI and homeless individuals. The following chapter will give the background of the study, problem statement, purpose, research questions, nature of the study, the conceptual framework,

assumptions, limitations, and significance. The chapter will end with a summary and transition to the next chapter.

### **Background**

Homelessness is a problem that has persisted for years and has taxed communities across America. According to the current literature, many programs and approaches address the ever-growing issue of homelessness. Many are founded on the Housing First (HF) approach, which focuses on housing with no requirement to address causation or treat mental illness. Homeless programs have impacted the number of those who are homeless; however, the numbers continue to grow. The numbers of the mentally ill homeless have grown exponentially over the years, making it difficult to house and aid those SMI individuals. The inability to address their specific needs only contributes to the phenomenon of chronic homelessness.

This quantitative study aims to highlight housing programs delivering interventions that provide the highest efficacy in producing the best outcomes when addressing the specific needs of the SMI individual. Current research demonstrates the need for future research and holds evidence of proven best practices. Aubry et al. (2015) found that HF successfully addresses housing and can address the needs of a diverse population, including the mentally ill. The study did not specify which program interventions held the most significant impact on outcomes. This study analyzed program information regarding the relationship between interventions and outcomes.

The method used in the Bassuk et al. (2014) study focused on the outcomes of housing status, employment, parental trauma, mental health, and substance use in a

review of studies from 10 large databases and six studies. The findings resulted in identifying several practical programming components. Bassuk et al. claimed that poor definitions and methodology limitations impeded the development of effective and consistent programming. According to Bassuk et al. future research is needed to develop and implement effective programming to address the needs of homeless individuals and families. Individuals have been shown to maintain housing for a sustained period after programming.

### **Problem Statement**

To date, best practices for addressing the needs of the SMI homeless population remain non-synthesized as a body of accessible knowledge. This is problematic as homelessness for SMI individuals continues to grow despite the many programs containing components and interventions deemed best practices. Regardless of programming and current research on housing, chronically homeless retention in housing continues to be a growing issue for cities across America (USICH, 2019).

The HF structure does not provide treatment-specific goals for the individual client. Thus, HF does not address issues or concerns with any significant level of effectiveness past impacting homelessness for short periods. According to Tsai (2020), who found that all housing programs promote stability, neither HF nor any other housing model materialized as being better. There is a need to identify which HF programming practices have the most efficacy to increase client-centered effectiveness for the individual, that is SMI and better outcomes.



Programs lack client-centered effectiveness that will promote personalized positive outcomes. According to Csillik (2013), clients are the prominent persons responsible for their behavior change. Self-actualizing is a tendency of human beings that gives them the tendency to grow, develop, and realize their full potential, an innate tendency of the human being (Csillik, 2013).

A review of the program shows that many components have shown to be best practices but are not tapered to the specific needs of the individual. Maslow's central hypothesis and humanistic approach demonstrate that this actualizing tendency has effectiveness in helping the client develop a relationship with hope, respect, esteem, and belief in the person and their possibilities for recovery (Csillik, 2013). Researchers acknowledge the need for effective programming with outcome research for the assortment of utilized models. Based on research results, consensus or a synthesis regarding the approach has not been reached, and recorded outcomes remain unexceptional (Aubry et al., 2020)

According to Sarvis (2017), the homelessness chaos is not likely to end soon, partly because of the cultural factors perpetuating it. This proposed quantitative study looks to provide a synthesis of current data that could assist program developers in creating effective programming that will complement an individual approach to addressing a problem that is an individual one.

### **Purpose of Study**

The purpose of this study is to give an overview of the current relevant literature, and empirical evidence to identify and measure the interventions of programs and their

outcomes that demonstrate efficacy and a statistically significant relationship. SMI clients are identified as being diagnosed with schizophrenia, major depressive disorders and bipolar I and II considered as (covariate variables). The outcomes of interest are medication adherence, occurrences of hospitalizations, and length of stay in the housing system or discharge preparedness. The independent variables are the program interventions.

### **Research Question**

RQ: Is there a relationship between HF program interventions and outcomes for the SMI client in housing programs for the unhoused?

HO: There is a correlation between treatment interventions and outcomes for SMI homeless individuals.

Null: There is no correlation between treatment interventions and outcomes for SMI homeless individuals.

### **Conceptual Model Framework**

The model that underlines the premise of this study applies Maslow's hierarchy of needs in treating the mentally ill individual's personal human needs. According to Maslow (1987), an individual's basic needs can be mainly satisfied interpersonally. However, human relationships' functions are diverse, specifically, the giving of safety, love, belongingness, feeling of worth, and self-esteem (Maslow, 1987). These ultimate needs Maslow considered essential to studying human motivation toward wellbeing. Housing program studies highlight the lack of client centered treatment that addresses the

specific hierarchy needs of the individual SMI client. (Bassuk et al., 2014;) (Csillik, 2013).

### **Nature of the Study**

A meta-data-analysis model is used for this quantitative study. Units of analysis include descriptive data of populations served, parameters for accessing HF programs, types of interventions offered, degree of uptake of interventions, and program outcomes. A meta-analysis review is best used to identify and synthesize interventions used by housing and treatment programs (Rosenblad, 2009). The data are used for mapping the efficacy of program outcomes in the housing and treatment of the SMI individual. The meta-analysis is a systematic way of collecting and synthesizing existing research. A meta-analysis provides the opportunity to code data from multiple studies which used various data gathering methods and measures (Rosenblad, 2009).

The dependent variables are the outcomes, medication adherence, occurrences of hospitalizations, and length of stay in the housing system or discharge preparedness. The independent variables were the interventions identified, including HF programming, assertive community treatment (ACT), medication management, and treatment as usual (TAU), with and without case management.

### **Sources of Data**

The core of the data collected is peer-reviewed literature and studies that use primary data sources. Data sources were grounded in empirically based evidence and gathered from multiple frameworks to ensure the reliability of the findings. Previous research findings and conclusions included other controlled studies using survey

questionnaires and structured interviews providing supportive data. The results are analyzed in quantitative measures such as standardized means differences and trend coding of the results of the findings. The literature data sources came from library search engines ProQuest central/dissertation, APApsyc info, APApsyc articles, psychology database combined search, Thoreau multi-database, and Google scholar.

### **Definitions**

*Homelessness:* Homelessness is defined differently according to its context and setting. In this study, the homeless are defined as the unhoused. It refers to any individual who is left without the physical domain of shelter (Philippot et al., 2007).

*Interventions:* In this study, the independent variables are the program interventions. These interventions are embodied in programs and should not be confused with housing programs.

*Outcomes:* Dependent variables are the outcomes that are incidences of emergency room use, time to discharge to permanent housing, periods of baseline symptoms, length of maintaining permanent housing.

*Severely mentally ill:* According to the American Psychiatric Association's DSM V, SMI involves schizophrenic, major affective, paranoid, organic, or another psychotic disorder, or a disorder that may lead to a chronic disability such as a borderline personality disorder (APA, 2000). This quantitative study used the DSM's definition of the SMI being those clients with the diagnosis of schizophrenia, bipolar and major depressive disorder and have experienced three or more incidents of inpatient mental health hospitalizations in a 5-year period (APA, 2000).

### **Assumptions**

The assumptions in this study are related to the studies included in the meta-analysis. Although all studies included in this research are critically appraised, it is assumed that the primary studies to be reviewed all have been performed thoroughly and used reliable measures during the study's design and data gathering. It is assumed that correct statistical analysis was conducted. It is assumed that, despite different criteria used for program outcomes, the effects on outcomes are related to the intervention and that researcher bias is minimal.

There are a few assumptions for this study: (a) the participants in reviewed studies were all diagnosed with a severe mental illness for 2 or more years, (b) all participants in the reviewed studies were unhoused and fully engaged in similar interventions, (c) the previously unhoused who were housed between 12 and 24 months displayed behaviors associated with wellbeing, and (d) HF and program interventions have produced outcomes related to program interventions. However, according to Sagoff (2012), assumption is not a good way to conduct scientific research, and therefore every effort was made to ascertain the veracity of the assumptions listed above.

### **Scope**

The purpose of the analysis is to give an overview of the current relevant literature, precise data, and empirical evidence to identify and measure the components of programs that have the best outcomes demonstrating a statistically significant relationship. The target population for this proposed quantitative study are individuals

who were once unhoused and are in homeless programs and diagnosed with a SMI. The subjects are housed in transitional and permanent housing programs.

### **Limitations**

Analysis of existing works often lacks thoroughness and rigor and is conducted ad hoc rather than following a specific methodology (Baumeister & Leary, 1997). Questions can be raised about the quality and reliability of studies based on data collection methods, sample size, validity, and other aspects of the research analyzed. Researcher bias may also be challenging due to personal contact and relationship to the subject matter. Every effort was made to critically assess each study included in this meta-analysis to describe difficulties noted, and to analyze data carefully with transparency.

### **Significance**

This study has social significance for providing further information for enhancing the housing and treatment of the SMI. A meta-analysis model is used, which helps to identify the most effective interventions for assisting program developers in tailoring effective programming to the specific needs of homeless individuals with mental illnesses. A synthesis of programming highlights the interventions that have the most effective outcomes for programming within the housing community for addressing the individual needs of the SMI.

This quantitative study will help clarify specific program needs and identify where scarce resources are needed and applied for greater efficacy in addressing the homeless. This includes programming that addresses specific, and often, special needs of the SMI. When no other housing options are available, persons with serious mental

illness may travel an institutional circuit consisting of sequential stints in hospitals, jails, homeless shelters, and other residential facilities (Montgomery et al., 2013). This meta-analysis can provide data for the future development of programs that can provide better outcomes for the current costly system of addressing the SMI patients who experience chronic homelessness, informing future research and positively impacting policies and communities.

Clark et al. (2016) noted that analytic studies could determine which case management model works most effectively with supported housing clients so policymakers can develop more effective programming. According to Ponce et al. (2017), the discipline of a psychologist should be more involved in the planning and treatment of the population and program planning because psychologists are skilled at research, program development, and treatment.

### **Summary**

Homelessness continues to grow in all populations. Programs that address the homeless issue use remarkably similar interventions. Interventions implemented by housing programs are intended to use best practices. However, the interventions are not explicitly developed for the individual but for the masses. This review is vital as homelessness numbers have been both growing nationally and at local levels. There have been many evaluations of housing and treatment programs for homeless individuals and persons at risk of homelessness. Many reviews and meta-analyses have been published; however, a large share of the studies does not focus on the individual or are not systematic reviews of effectiveness. A meta-analysis helps synthesize interventions that

produce the best outcomes for the targeted group of SMI who will benefit from future program development.

In this chapter, I discussed the background of the study, problem statement, and purpose. I identified the research question and conceptual model for the study. I concluded with a discussion on the significance of the research and the implications for positive social change. A review of the literature will be presented in Chapter 2. It will support this study and includes relevant studies on housing and treating the SMI client.



## Chapter 2: Literature Review

### **Introduction**

Best practices for addressing the needs of the SMI homeless population remain non-synthesized as a body of accessible knowledge. This is problematic as homelessness for SMI individuals continues to grow despite the many programs containing components and interventions deemed best practices. Regardless of programming and current research on housing, retention of chronically homeless in housing continues to be a growing issue for cities across America (USICH, 2019).

Homelessness is a social problem with a history dating back to the era of industrialization. Homelessness first became a national issue in the 1870s, facilitated by the construction of the national railroad system; urbanization and automation mobility led to the emergence of tramps “riding the rails” in search of jobs. Homelessness has grown exponentially, as has the population (Munthe-Kaas et al., 2018). The problem of housing the homeless has grown, and according to the literature, many approaches have also been developed to address homelessness (Sarvis, 2017; USICH, 2021).

The study’s goal is to use a meta-analysis model to synthesize information regarding program interventions of programming and of the heterogeneity of the homeless population, including the mentally ill. The study aimed to identify the current best practice interventions that contribute to the efficacy of program outcomes and explore if a relationship exists between level of efficacy and interventions. The purpose of this analysis is to give an overview of the current relevant literature, precise data, and

empirical evidence, to identify and measure the components of programs that have the best efficacy.

The literature findings identify those situational conditions precipitate homelessness in many cases. Some cases can be mitigated by way of social services, and many require interventions that are targeted for the SMI or chronically homeless. The literature also tells of many approaches that address the homelessness issue at macro levels, but few explicitly speak to the individual.

The literature provides studies that depict housing programs that address homelessness utilizing similar program components with some successes. The programs are not explicitly set to address the specific needs of the SMI but describe many programs with very effective features and outcomes. The needs of the mentally ill began to take toll on systems during deinstitutionalization of the 1960s. According to Aubry et al. (2015), deinstitutionalization caused significant challenges for housing the mentally ill. While its goal was to minimize costs, unfortunately, achieving this objective fell well short of the mark. Subsequently, the SMI added to the numbers of the homeless in many communities (Aubry et al., 2015).

This quantitative study aims to identify and synthesize information about programs and their components that are most effective at addressing the specific needs of the SMI homeless by specifying the HF program components that have the most significant efficacy for outcomes. Chronic homelessness experienced by the SMI makes programs that address their unique needs necessary to ease the burden on the homeless, the systems, and the communities that house them.

### **Literature Search Strategy**

Relevant literature was obtained by searching electronic databases, journals' websites, theses, and dissertations. The electronic databases included ABI/INFORM, Cochrane Database of Systematic Reviews, Dissertations and Abstracts, and Educational Resource Information. I searched only for articles using the time frames from 2015 to 2022, except when using history references, there was no limit.

I systematically searched for literature in the databases, PsycINFO, Psych Info, PubMed, Social Services Abstracts, and Sociological Abstracts. In addition, I searched for grey literature through Google and Google Scholar and reference lists of identified and included studies using terms related to homelessness and housing the mentally ill. Terms used were *homelessness and the mentally ill, - treating and housing the SMI, - housing programs for the mentally ill, - and best practices for housing and treating the SMI client.*

### **Theoretical/Conceptual Foundations**

Humanistic psychology as a foundation for this study supports the epistemological foundations necessary for the complete and positive outcomes for the subjects of the study. According to a study by Resnick (2001) and associates, humanistic foundations incorporate philosophical humanism, existentialism, and phenomenology.

The roots of recovery are based in service organizations and can be traced back to humanistic-existentialist oriented models of care in the 1970s (Hummelvoll et al., 2015). The humanistic approach to the science of psychology meets the task in developing a rigorous understanding and treatment of human beings (Resnick et al., 2001). Abraham

Maslow developed many leading concepts that also laid the foundation for humanistic psychology (Hoffman, 2020). Maslow's hierarchy of needs has generated growing research. Among Maslow's most widely known constructs is that of self-actualization, which essentially posits that all individuals have the capacity to develop and fulfill their innate potential. According to Maslow's hierarchy of needs definition, individuals are primarily motivated by their higher needs (Hoffman, 2020).

This study focused on the core of a person's being and innate desire to succeed. I hypothesized that responding to an individual's needs improves outcomes in treatment. According to Whitson (2023), numerous sources inspired the evolution of the concept of self-actualization. Staying from Freud's traditional psychoanalytic formulations, Otto Rank, Carl Jung, and Alfred Adler stressed individuality and social elements. Jung introduced the idea that achieving self-actualization consist of integrating and harmonizing all aspects of one's personality, viewing it as a life goal. Rank highlighted the importance of expressing one's uniqueness to be innovative.

A humanistic foundational approach supports the purpose of this study by not only housing the individual but addressing the whole person and the factors that cause homelessness. According to Resnick et al. (2001), humanistic psychologists delve into not only suffering and trauma, but they also want to know what works, and how to assess outcomes in therapy.

Hummelvoll et al. (2015) conducted a qualitative study of the lived experience of mentally ill individuals and gained solid data in the context of daily life and the processes of recovery which govern practices towards becoming more person-centered. More

importantly, the study gave empirical data that a humanistic approach led to better outcomes for the SMI. What was essential to understand about recovery was shown to be that a person's unique experience was the starting point for all actions (Hummelvoll et al., 2015).

The purpose of the study on person-centeredness was to highlight critical development in person-centered therapies, concepts, and practices and how they can nurture each other. The study by Hummelvoll et al. (2015) noted the debate concerning humanistic approaches to defy the psychiatric institutional approach of mandatory treatment courses. According to Hummelvoll et al., recovery based on person-centeredness is about the person trying to find meaning and keep control over their lives by making informed decisions and creating genuine partnerships with families and service providers.

The study by Hummelvoll et al. (2015) concluded that individuals with mental health illnesses required individualized considerations rather than merely being viewed as cases or a diagnosis with issues being addressed from the perspective of the service systems. The theoretical approach taking by Hummelvoll and company is supported by a study by Shih et al. (2019); best practices are to treat the individual's other issues depending on their economic and social statuses along with their identified problem. According to these researchers, four components comprise what positively impact the lives of the mentally ill via a person-centered approach: first, the focus on the client, second, acknowledging the mental illness, third, it must be more than just the outcome, and fourth, treatment cannot be generalized, it must be holistic (Hummelvoll et al., 2015).

Currently, issues are addressed from the perspective of the service systems. The study concluded that providers must understand that the first change is to place the person at the center (Hummelvoll et al., 2015). The findings of the study concluded that there is a radical change in placing the person in the center and the acknowledgment of mental health problems as personal and social issues. The clients' life is not merely an outcome but rather about identifying ways of navigating life. Life and treatment of the mentally ill cannot just be manualized or generalized (Hummelvoll et al., 2015). Lastly, person-centeredness should heed the spiritual recovery process and the domain in an individual's life where hope and meaning are sought. This study took a humanistic perspective of person centeredness as its theoretical approach.

### **Literature Review Related to Variables and Concepts**

The following literature review will describe programs that implemented interventions and outcome variables for SMI clients who are homeless. The studies in this review included utilized intervention variables consisting of HF, case management with and without treatment as a requirement, ACT, and other interventions where the outcome variables are emergency service use, time frames for being housed and symptom scales. The studies in the purposed analysis are selected because of the type of interventions used and populations served. The goal of the purposed study aims to use the most common variables, both interventions and outcomes in the reviewed studies.

This meta-analysis aims to explore housing programs and their interventions and to note the relationship between interventions and the outcomes. The literature in this review explores an array of housing programs whose outcomes and interventions help to

answer the research question. The background literature presented will provide the basis for more formal scrutiny.

According to Munthe- Kaas et al. (2018), there are five basic categories of programs that utilize evidence-based interventions. The first category is case management. Case management uses four-component interventions, high intensity, high intensity with consumer case management, low intensity, and critical time intervention. The second is abstinence contingent housing (ACH) programs that use two interventions including ACH with case management and ACH with day treatment Munthe-Kaas et al. (2018). The third program category is HF. As stated earlier, HF has become the premier program approach used to address the homeless phenomenon. According to Munthe-Kaas et al. (2018), HF encompasses non-abstinence contingent housing programs (NACH), consisting of high-intensity case management levels and community day treatments as intervention components. The fourth category is housing vouchers, with case management as the program and the intervention (Munthe-Kaas et al., 2018). The last category is residential treatment, where residential treatment is the intervention. According to Munthe-Kaas et al. (2018), residential treatment holds the usual services, case management, and educational services.

Programs that used case management programs effectively also collaborated with ACT teams (Clark et al., 2016). The researchers did not identify which case management programs were most effective for individuals with co-occurring disorders and chronic homelessness. Homeless programs utilized monetary means to help prevent program users from returning to the homeless. A systematic review of the effectiveness of

permanent supportive housing using income assistance interventions found that permanent supportive housing and income assistance interventions were successful in reducing homelessness and reaching housing stability (Aubry et al., 2020). The study did not identify if the individual's wellbeing improved aside from maintaining housing for longer periods.

Aubry et al. (2020) used a meta-analysis of 72 articles and 15908 citations which analyzed 15 studies that found that income interventions provided increased long-term housing stability. This performed meta-analyses underscored the need to identify the benefit of person-centered approaches. The Aubry et al. study concluded that further research should focus on the long-term effects of interventions on mental health and other quality of life outcomes. The length of sustained housing differed depending on the approaches and treatment plans provided. Positive outcomes could be attributed to addressing the specific needs of the individual and matching program components that meet the client's specific and individual needs.

### **Housing First Approach**

HF has shown effectiveness in taking individuals off the street for minimum periods because there is no requirement to address the ailments or conditions that caused the problem. Haskins (2018) found that the HF approach effectively and theoretically addressed the need for housing the homeless with no prerequisites for the housing or mandates for treatment compliance.

The HF approach has become the prevalent program intervention used as a best practice because its model's core follows the concept that the unhoused are housed, and



then treatment is offered and is not a requirement for housing. HF has successfully reduced the time it takes to place the homeless (Tsai, 2020).

Watson et al. (2017) reviewed HF, an evidence-based practice for housing those with SMI and co-occurring disorders. The study pointed out that the harm reduction components of HF programming should be factored in as an effective part of HF's success. Watson et al. used a literature review method, including 55 articles that only mentioned harm reduction as a viable component of HF best practices. The review concluded that harm reduction is likely a contributing factor in the outcomes of HF programming. According to Watson et al., future research should include the contribution of harm reduction in this evidence-based program. Watson et al. found that HF has a research gap, with a need to explain the harm reduction's role and effectiveness in addressing the specific needs of the SMI within the program approach.

Tsai (2020), using a meta-analysis model, found that HF is ineffective as a stand-alone model for addressing the specific needs of individuals suffering from multiple disorders. Tsai also found that HF will provide some sustained housing for some individuals. However, more studies are needed to identify specific components and interventions that effectively deliver the skills to assist individuals in living more productive lives. Tsai noted that HF requires further research to identify who benefits most from the HF model, which services are needed, and which housing models are the most effective.

Sarvis (2017) noted that housing is a human right and housing advocates form programs that house the homeless without prerequisites. The approach studied by Sarvis

is the basis for the HF approach, and it has shown efficacy in maintaining housing for a significant period. Addressing the specific needs of the SMI and others with co-occurring disorders continues to be challenging when utilizing the HF approach because of the homelessness muddle of the homeless population. According to Sarvis, the homeless muddle refers to the clouding of the definition for homelessness and the causes of becoming unhoused. There are many contributing factors in the surge in homelessness, such as increased housing costs, gentrification, and the baby boomer demographic reaching the common age spectrum of homelessness. The numbers of homeless increased as did the causes.

There are many defining terms of “homeless” for identifying and differentiating the characteristics of homeless people (Sarvis, 2017). Sarvis (2017) noted that to make significant gains in meeting the homeless population’s needs, mainly the mentally ill, the specific individual needs and causes of homelessness must be addressed. Homelessness evokes sympathy and focuses on the personal woes of individuals without addressing cause and effect issues, such as past personal financial choices or the validity of self-proclaimed mental health issues (Sarvis, 2017). The study supports the soundness of a client-centered approach as a viable component within housing programs.

According to Montgomery et al. (2013) mental illness becomes less manageable under conditions of homelessness. A meta-analysis of relevant research regarding housing for SMI will contribute to identifying the factors that can support the goal of sustaining long-term housing and stability for the SMI client. All these homeless individuals are housed and treated under programs using the HF model, which operates

on the mandate to reduce homelessness. While this mandate is appropriate, it does not address the specific individual needs of the homeless SMI client for obtaining housing stability or self-efficacy.

This quantitative study explored the relationships between interventions and outcomes in the housing and treatment of mentally ill clients. Transitional, short-term housing is a prevalent intervention within HF and other housing programs. A controlled study performed by researchers Gutman and Raphael-Greenfield (2017) assessed the effectiveness of a transitional housing program as an intervention for housing the homeless. These researchers found substantial differences in study and control groups measuring outcomes utilizing life scales.

The method in Gutman and associates' (2017) study was a two-group controlled study design used to assess the program, with 10 participants in an intervention group and 10 in a control group. Goal attainment scaling and quality of life ratings were used pre- and post-intervention to determine if a statistically significant difference existed between groups at post-intervention. Results showed that there was a statistical and significant difference existing between intervention and control group according to goal attainment scaling scores ( $U \frac{1}{4} 9.50$ ,  $p < .03$ ,  $d \frac{1}{4} 1.34$ ) and quality-of-life scores ( $U \frac{1}{4} 10.50$ ,  $p < .04$ ,  $d \frac{1}{4} 1.30$ ) at post-intervention. At a 6-month follow-up, 57.14% of intervention group participants had transitioned into supportive housing, while only 25% of control group participants had transitioned (Gutman & Raphael-Greenfield, 2017).

The study by Gutman and Greenfield (2017) aimed to evaluate the efficacy of a housing transition program for homeless shelter clients with chronic mental illnesses and

other comorbidities. According to these researchers roughly one-third of homeless adults had severe chronic mental illness comprising of bipolar disorder, schizophrenia, and major depression, and two-thirds have a substance use disorder (SUD). Unhoused adults with mental illness and SUDs are more likely to remain homeless and lose housing than those without these diagnoses.

Gutman and Raphael-Greenfield (2017) noted that providers needed to develop and assess interventions to help homeless adults with mental illness live a higher quality of life in supportive housing with transitional supported interventions of programs. The goal of the transitional programs was to assist the SMI individual with the adult living skills which were interrupted at the onset of their mental illness (Gutman & Raphael-Greenfield, 2017). The study measured the SMART program's effectiveness by using the goal attainment scale (GAS). GAS scores were used pre-and post-intervention to ascertain subject-selected goals and evaluate progress for the goals at program end. In goal attainment scaling, subjects worked with a provider to develop individualized interventions that were meaningful to the client (Gutman & Raphael-Greenfield, 2017).

The study concluded that supportive housing as an intervention for homeless individuals with chronic mental illnesses benefited subjects in achieving housing goals and a higher level of life scores when compared to a control group (Gutman & Raphael-Greenfield, 2017). The study demonstrated that when programs geared their interventions specifically to the client, they had a positive affect outcome.

Smelson et al. (2018) wanted to answer if an EBT intervention improved the outcomes on homeless programs for veterans exposed to the implementation of hybrid

program approaches. Smelson et al. believed there was a need for evidence-based treatment in housing programs for the homeless, especially those with co-occurring disorders. Smelson et al. hypothesized that EBP was necessary for the client to sustain housing for meaningful periods. The group performed their study within housing programs and systems integration, outreach, and MISSION Vet, which used Urban Development - Veterans Affairs Supportive Housing (HUD-VASH) programs with and without an implementation strategy called Getting to Outcomes (GTO). This trial employed GTO to assist HUDVASH treatment teams in adopting and implementing MISSION-Vet (Smelson et al., 2018).

Smelson et al. (2018) compared 81 programs with a similar group of veterans with mental health disorders. This research team used a comparison approach with the treatment of outcomes, and measures were done using a Cox regression or mixed effect model. According to Smelson et al. the results of the study found that treatment engagement was slightly higher for those vets who received the treatment interventions as opposed to the comparison group. Case management contacts measured engagement significantly higher in veteran groups ( $B=230, p=.04$ ). The study concluded that despite modest MISSION-Vet reliability among staff who demonstrated a level of fidelity toward the MISSION-VET program treating veterans in the GTO group, slight differences were found in treatment engagement. However, the study failed to show any significant differences in substance abuse disorders, mental health hospitalizations, and negative housing exits over time among those veterans who received high-intensity MISSION-Vet services compared to those who received low-intensity services (Smelson et al., 2018).

## **Efficacy of Program Interventions**

Person centered approaches require interventions that are effective. The literature in the proposed study identifies the interventions HF, ACT, transitional housing with and without case management as component interventions for housing programs. This study aims to explore which interventions demonstrate a relationship with which treatment outcomes.

Baxter et al. (2019) systematically reviewed HF program components in randomized trials. Baxter et al. hypothesized that homelessness is associated with poor health and described HF in America as a model that provides rapid housing, not conditional on abstinence from substance use or adherence to any mental health treatment. The goal of the review was to gauge the effectiveness of HF programming. The method of the study searched databases for randomized controlled trials of HF interventions to assess the level of impact these interventions had on housing, stability, routine use of service resources, and substance abuse. The study assessed the risk of bias and calculated the standardized effect sizes. According to Baxter et al., the review results found that HF components had significant positive impacts on client health. The data of the study found intervention groups experienced fewer emergency department visits (incidence rate ratio [IRR]=0.63; 95%CI 0.48 to 0.82), fewer hospitalizations (IRR=0.76; 95%CI 0.70 to 0.83) and less time spent hospitalized (standardized mean difference [SMD]=-0.14; 95%CI -0.41 to 0.14) than control groups. In all studies, intervention participants spent more days housed (SMD=1.24; 95%CI 0.86 to 1.62) and were more

likely to be housed at 18–24 months (risk ratio=2.46; 95% CI 1.58 to 3.84; Baxter et al., 2019).

The review by Baxter and colleagues (2019) demonstrated that HF could positively impact clients when services are customized to the client's need instead of a blanket approach of one size fits all. Continued research focusing on synthesizing effective program design will positively impact the homeless and society and assist program developers in the future. This study aimed to enable programs to shape treatment and programs to address needs of the of the SMI client from a person-centered perspective.

A longitudinal secondary study was carried out by Urbanoski et al. (2018) to assess the effectiveness of interventions carried out in HF programming when there is a comorbid condition. The study's goal was to attempt to support the efficacy of HF interventions for those suffering from mental illnesses. According to Urbanoski et al., although there are several studies done on housing, the homeless questions remain about HF and its use in people with comorbid SUDs. Analysis indicated that there were no significant differences on these characteristics between SUD patients randomly assigned to HF or TAU.

The main goal of the study was to identify if there were modifying variables that would impact outcomes. This project aimed to test whether SUD modifies the effectiveness of an HF intervention (Urbanoski et al., 2018). The study's design used secondary data analysis from a randomized controlled trial of HF versus treatment-as-usual comparing those with and without SUD (Urbanoski, et al., 2018). The study used

2,154 participants and was randomized to HF versus TAU (67% male, mean age  $40.8 \pm 11.2$ , 25% ethnocultural minority). All were homeless and had a mental disorder, and reported symptoms identified with SUD.

Housing interventions were paired with intensive case management or ACT. Outcomes measures were days housed and community functioning. Secondary outcomes were general and health-related quality of life and mental health symptoms. Predictors were SUD status crossed with intervention group (HF versus TAU). People with SUD in both the HF and TAU groups were found to have spent less time in stable housing, but the effect of HF did not vary by SUD status (odds ratio [OR] = 1.17, 95% confidence interval [CI] = 0.77, 1.76). Similarly, there was no difference between those with and without SUD in the effect of HF (over TAU) on community functioning ( $b = 0.75$ , 95% CI = 0.36, 1.87), quality of life ( $b = 1.27$ , 95% CI = 4.17, 1.63), health-related quality of life ( $b = 0.01$ , 95% CI = 0.03, 0.02) or mental health symptoms ( $b = 0.43$ , 95% CI = 0.99, 1.86). The study concluded that HF programs are equally effective in people with and without comorbid (SUD). Overall, the intervention appears to be able to engage people with SUD and is reasonably successful at housing them without housing being contingent upon abstinence or treatment. The study was limited because the only mental health disorder was those individuals with a SUD. To have any level of reliability, future reviews should include multiple diagnoses. The study was limited because of the absence of specific mental health diagnosis. The proposed study will highlight both SMI diagnosis and interventions that focus on the SMI.



## Summary and Conclusions

The issue of housing and treating the SMI homeless client has been studied and reviewed in multiple peer-reviewed studies on housing and treating the homeless. A common trend in recent literature is the current strategy to manage homelessness in the United States with the HF approach which combines EBP interventions and approaches. These interventions include case management, ACT, motivational interviewing, TAU, and community resources (Baxter et al., 2019; Urbanoski et al., 2018). These community programs are funded and supported by the government but are not specifically targeted to address the unique individual needs of the homeless individual who has become homeless for many causes. Many homeless individuals have a mental health diagnosis, and programs are not tailored to address the specific needs of these individuals.

Program studies are not comprehensive enough to address individual factors that support significant, sustained housing. (Gutman & Raphael-Greenfield, 2017; Smelson et al., 2018). The literature reveals findings that many program interventions are effective in aiding homeless people to increase housing sustainability, obtain self-sufficiency and improve their overall well-being. Based on the results of these studies programs will require interventions that are developed based on individual case conceptualizations if programs will have better efficacy.

The reviewed studies encouraged researchers and program developers to expand on the data contributing to homelessness. The reviewed literature described interventions that assist the unhoused in becoming housed, remaining housed and integrate into society. The literature gave evidence that utilizing interventions to address the SMI individual

needs slows the cycle of recidivism and helps maintain significant housing periods.

Bassuk et al. (2014) noted that individuals experiencing homelessness and given housing mainly consist of low-income families, substance abusers, and the mentally ill. Still, they continue to skirt the edge of homelessness due to unresolved and reoccurring causes.

Several meta-analyses and systematic reviews were reviewed in this literature review and illustrated that housing programs clearly impact homelessness by utilizing several focused interventions. Studies showed that housing interventions, compared to TAU, result in sustained housing (Aubry et al., 2016). However, these studies failed to identify if these interventions are designed to address individuals' personal needs, nor do they explore if there is a statistically significant relationship between the intervention and outcomes affecting the well-being of the SMI individual.

This study gathered data from the current literature to explore if there is a statistically significant relationship between the interventions and the outcomes. The study USED synthesized information to target a person-centered approach to address the specific needs of the SMI client. The reviewed studies provided a census of interventions and outcomes for this proposed study to assist in the formulation of programs that address the specific needs of the SMI homeless population.

## Chapter 3: Methods

### **Introduction**

This quantitative study explored if there is a relationship between housing program interventions and outcomes through existing research. The study synthesized and weighed empirical data of the most current and effective program interventions for holistically improving outcomes for SMI individuals experiencing homelessness. The study's goal was to identify if there is a relationship between best practice interventions and the outcomes that have the best efficacy.

This chapter will discuss the methods used to synthesize the results of available research on housing programs for unhoused individuals with mental illness and the efficacy of program outcomes, including housing status and mental health stability. The chapter discusses interventions and outcomes, highlighting those where HF was offered as an intervention component, including transitional housing and community treatment programs. Restrictions are placed on the date of publication for the review with focus on publications from 2000 onwards except where theory, methods, and/or history are involved. Studies in these analyses include outcome processes from mental health-based case management programs and those that present quantitative data on clinical and or psychosocial outcomes.

### **Study Design and Rationale**

The literature was searched using multiple methods to assemble a non-biased representative sample of the relevant studies. The search started with databases which included PsycInfo, PubMed, and Dissertations and Thesis, using a combination and

variants of search terms intended to capture research on homelessness and treating the SMI client which was conducted with unhoused adults. The second part of the search targeted housing interventions and outcomes for housing programs.

The terms used in the literature search was *homeless, severely mentally ill, outcomes, housing, supported, and supportive housing, and efficacy of housing interventions.*

Searches also included studies that compare housing programs that give analysis of the differences in housing outcomes. Studies searched included those that examine the contribution or comparing of housing outcomes other than mental health, hospitalization, and social service use.

In addition, the search plan included grey literature through Google Scholar and reference lists of identified and included studies using terms related to homelessness, treatment intervention, outcomes, and housing programs for the SMI in order to answer the RQ: Is there a relationship between HF program interventions and outcomes for the SMI client in housing programs for the unhoused?

The purpose of this study was to explore whether there is a relationship between program interventions and outcomes. The interventions identified are HF, transitional housing with and without case management and TAU, possible a control comparison. The outcomes identified are mental health symptoms, measured by symptom scales, emergency use, quality of life scales, hospitalizations, and length of time to be housed. A quantitative approach was selected as the best option to answer the research question: “Is there a relationship between HF program interventions and outcomes for the SMI client in housing programs for the unhoused?”

A review and analysis of existing literature is used in this study to explore housing program interventions and whether a relationship exists between the intervention and the outcomes for people with an SMI diagnosis. The meta-analysis was chosen to perform a systematic review using statistical methods to pool the results of the research context quantitatively. This process has the highest degree of evidence when combining high-quality randomized controlled trials, as it is a robust way of combining analysis (Crocetti, 2015).

## **Methodology**

### **Populations**

The population of interest is people who are homeless or at risk of becoming homeless. A homeless person is defined as a person living on the streets without shelter that could be classified as having no place of residence (Philippot et al., 2007). A person at risk can also be a person who lives temporarily with relatives or friends. There were no population restrictions regarding mental illness, age, gender, ethnicity, race, and national contexts. The populations were composed of those who reside in the housing program's location. All study populations consisted of individuals with severe mental illness.

### **Sampling and Sampling Procedures**

A review of the literature was conducted following the Joanna Briggs Institute (JBI) guidelines. JBI guidelines are used to capture existing literature. The method used in assessing interventions for homeless individuals and measured outcomes. JBI guidelines are used to capture existing empirical literature and evaluate interventions and their outcomes for housing the homeless. The JBI approach involves developing a search

strategy, conducting a title and abstract screen and full-text review, extracting data and using a standardized critical appraisal process to evaluate the quality of included studies (Aromataris & Munn, 2017).

Housing programs use several interventions when housing and treating the unhoused mentally ill individual. HF is the most prevalent intervention for housing programs. Housing programs use HF in combination with ACT, with and without case management, transitional housing, medication management, and TAU. Programs met this standard through a comprehensive explanation of the programs. The description of programs included a strong account of the population for which the program served, the theoretical basis and a detailed description of the interventions, their duration, and intervention procedures. Programs were also chosen for comparison with TAU.

### **Instrumentation and Operationalization of Concepts**

*Primary outcomes:* These are the main factors the study is looking to measure. In this case, it is the scores on the BSI-18 symptom scales.

*Mental health outcomes:* This refers to the overall impact on a person's mental well-being.

*Pre and post:* This means the BSI-18 is administered to participants both before the intervention and afterwards, allowing researchers to see if there is a change in their scores.

*BSI-18:* The Brief Symptom Inventory 18 is a short questionnaire used to assess psychological distress and potential psychiatric disorders.

*Subscales:* The BSI-18 is divided into three sections, each with six items, focusing on specific areas.

*Somatization (SOM):* This subscale measures physical symptoms that may be related to emotional distress.

*Depression (DEP):* This subscale assesses symptoms of depression, such as feelings of sadness, hopelessness, and worthlessness.

*Anxiety (ANX):* This subscale focuses on symptoms of anxiety, like nervousness, restlessness, and fear.

*Global Severity Index (GSI):* This is a total score obtained by adding up the scores from all 18 items on the BSI-18. It provides a general indication of overall psychological distress. Emergency room use is a pre- and post-measurement of emergency service use prior to and post-intervention periods. Emergency use is one of the most repeated measurements for outcomes in many of the articles reviewed.

All housing programs record the length of stay in transitional housing as a standardized readiness measurement. The housing situation reviewed should be at least one of the following: homeless, unstable, or stable.

This study aimed to use uniform definitions that demonstrate homogeneity. For an outcome to be included in this proposed meta-analysis, statistical information for calculating effect sizes or relative risks must be available. Other possible outcomes would be health-related outcomes, including quality of life scales.

### **Plan for Analysis**

The research question for this study was: Is there a relationship between HF program interventions and outcomes for SMI clients in housing programs for the unhoused? The hypothesis: There is a relationship between the intervention and outcomes. The null hypothesis: There is no relationship between the intervention and outcomes.

For each comparison with the usual treatment, the results for the primary outcomes, number of days spent in stable housing, quality of life, and symptom reduction are presented. I did not use secondary outcome results, and the outcomes with the most frequencies are presented in Figure 4.

I summarized the presented data narratively in the text and table for each outcome and intervention. I conducted a meta-analysis with a random effects model and presented the effect estimate and the corresponding 95% confidence interval (CI). For continuous outcomes, I will analyze the data using standardized mean differences.

I conducted a meta-analysis using SPSS and a random-effects model. This method allowed the weighting of each study according to the degree of variation in the confidence in the effect estimate. In cases where the means, number of participants, and test statistics for the t-test were reported but not the standard deviations. There was the opportunity to include results in a meta-analysis, the standard deviations, assuming the same standard deviation for each of the two groups, intervention, and control.



### **Threats to Validity**

Threats to validity result from study and researcher bias. The selected studies were conducted in different states, with many subjects and populations. Studies also used different outcomes and comparison groups, thus having different outcomes which may not be compared. This study included only selected outcomes and interventions according to specific criteria.

### **Criteria for Inclusion and Exclusion**

The articles were critically and thoroughly read, and I assessed references for inclusion according to pre-defined inclusion criteria. When the article or study was relevant, the referenced study was accepted or excluded according to a pre-defined inclusion criterion.

The methodological limitations of a meta-analysis design will not negatively impact the review results. Crocetti (2015) noted that even with a small, medium, or large number of papers, a systematic review with meta-analysis can be carried out to compile and critically assess both inconsistent and consistent literature. Combining data from two or more research studies improves the accuracy of estimations and the certainty surrounding the effect under investigation. A systematic review with meta-analysis can be used to answer several research problems.

Excluded studies were those that assessed housing as an outcome, such as the effect of SUDs or mental illness on housing stability, as well as those including homeless individuals who were not mentally ill or those with mental illness who were not homeless.

### **Ethical Procedures/ Concerns**

There were no concerns of harm or breaches of confidentiality due to studies conducted utilizing existing peer-reviewed studies. The IRB for Walden University was consulted. However, there is a concern for publication bias. Publication bias is a significant issue in meta-analysis since studies with inconsequential or unfavorable results are less likely to be published. The funnel plot was used to determine whether publication bias was present. The studies that made up this meta-analysis are shown in a plot of effect magnitude versus sample size to address this concern in the results presented in the next chapter. All research process data for this study will be securely retained for at least five years.

### **Summary**

I performed a title and abstract screening and full-text review. At the title and abstract review and full-text review phases, studies were included only if they involved reviews of programs addressing SMI and with a history of homelessness. Studies and reviews were used to evaluate program interventions, which included HF as an intervention, and measured outcomes, which were included as target outcomes in this study. The studies selected were from the homeless population because the proposed meta-analysis is a fixed model. Reviews were published from the inception date of each database through 2022. Articles not subjected to peer review or written in languages other than English were excluded to increase reliability. The study did not include grey literature as capturing only peer-reviewed empirical studies and dissertations increased the chance of enlightening future research on the topic. Some identified articles reported

on the same studies or programs, and when this occurred the articles that reported on longer intervention periods were selected.

## Chapter 4: Results

### **Introduction**

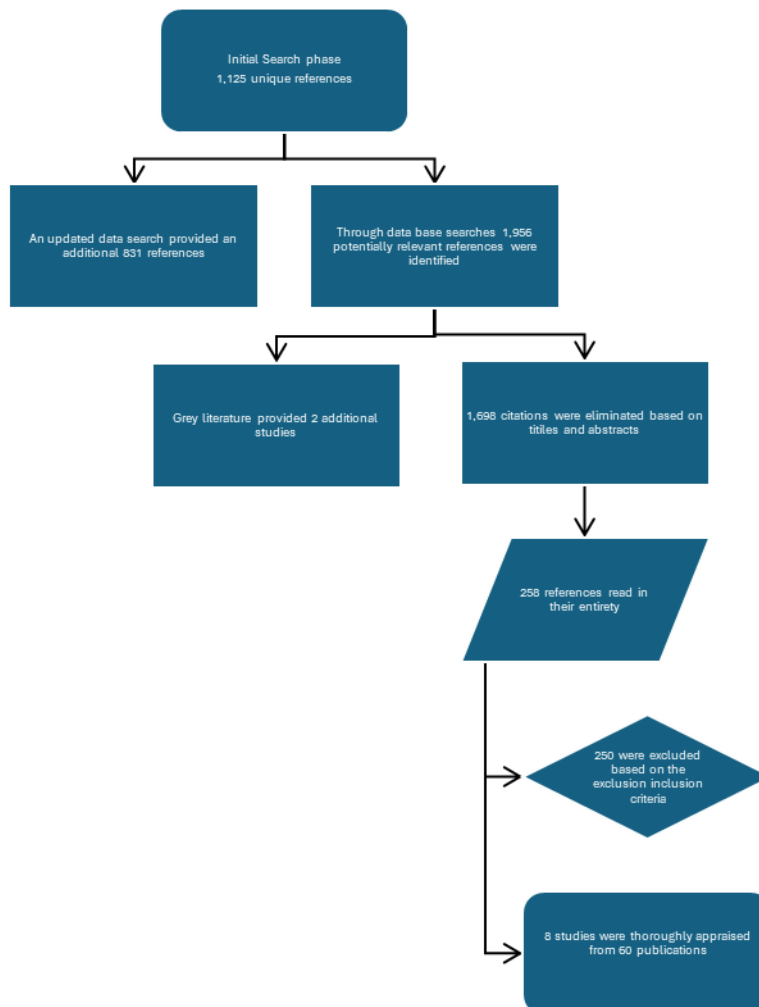
The purpose of this study is to analyze the literature for a relationship between the interventions and outcomes for housing and treating the SMI individual. There was only one research question to explore. Is there a relationship between HF program interventions and outcomes for SMI clients in housing programs for the unhoused? A review of existing studies was used to identify program interventions and their outcomes for the SMI unhoused person. Identifying outcomes that specifically address the specialized needs of the SMI individual will assist program developers to shape programs that address the needs of this growing homeless population.

This chapter presents the results of the inquiry to answer if there is a significant relationship between interventions and their outcomes, as well as the procedures for data collection and the findings included in this meta-analysis.

### **Data Collection**

The search was carried out in three phases. The initial database search in 2023 yielded 1,125 unique references (Figure 1). In June and July of 2023, I discovered an additional 831 references via a search update. Through database queries, I identified 1,956 potentially relevant references in total. In addition, a search of grey literature revealed two additional relevant studies. I eliminated 1,698 citations based on their titles and abstracts. The eliminated articles failed to meet the inclusion criteria based on population, focus of the planned study, and lack of information on SMI individuals. I read 258 references in their entirety and excluded 250 based on the predefined inclusion

and exclusion criteria. Studies had to include statistical findings of outcomes of interventions and outcomes that were implemented on housing the unhoused SMI adults. Homeless families and or children were excluded. Program studies that focused on individuals for whom substance abuse was a variable were also excluded. I evaluated and selected eight investigations from 60 publications and databases for this review. The flowchart appearing below depicts the literature selection process.

**Figure 1***Flowchart of the Literature Selection Process*

*Note.* Flow charts depict the process of study selection to be included for analysis.

### Description of the Included Studies

I identified eight studies consisting of randomized, controlled peer-reviewed studies found in databases that met the inclusion criteria. All the included studies were published after 2013, between 2014 and 2020. Most of the studies were conducted in the United States, and other studies came from high-income countries, including the United

Kingdom. All the studies were conducted at multiple programs and cities where the study population consisted of the SMI homeless population. The length of intervention periods was not recorded in all the included studies. There were also some discrepancies between the number of participants randomized and the number of participants included in analyses in some cases.

The studies that were included consisted of interventions and outcomes that quantified their results. The table below describes authors, analysis, conclusions, IV/interventions, and DV/outcomes (see Table 1).

**Table 1**

*Descriptions of Included Studies*

| Authors                | Analysis/results   | Interventions      | Outcomes          |
|------------------------|--|--------------------|-------------------|
| 1. Adair et al. (2016) | Overall mean HQ scores were higher for the HF group (91.2 (95 % CI = 89.6–92.9) vs. 88.3 (95 % CI = 86.1–90.5)), and the difference was significant ( $t = 2.11, p = .036$ ).  | HF and TAU         | Housing stability |
| 2. Aubry et al. (2015) | Findings from the AH–CS demonstration project reveal that HF can be successfully adapted to different contexts and for different populations without losing its fidelity.  | Housing First (HF) | QOL outcomes      |
| 3. Aubry et al. (2016) | Housing First participants spent more time in stable housing than participants in treatment as usual (71% versus 29%, adjusted absolute difference [AAD]=42%, $p,.01$ ). Compared with treatment-as-usual participants, Housing First participants who entered housing did so more quickly (73 versus 220 days, AAD=146.4, | HF and ACT         | Housing stability |

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|                                 |  |                                 |  |
|---------------------------------|--|---------------------------------|--|
| 4. Aubry et al. (2019)          | <p>p,.001), had longer housing tenures at the study endpoint (281 versus 115 days, AAD=161.8, p,.01). HF participants entered housing more quickly (23.30 versus 88.25 days, <math>d = 1.02</math>, 95% CI [0.50–1.53], <math>p &lt; 0.001</math>), spent greater time stably housed (<math>Z = 5.30</math>, <math>p &lt; 0.001</math>, OR = 3.12, 95% CI [1.96–4.27] HF participants were also more likely to be housed continually in the final 6 months (i.e., 79.57% vs. 55.47%), <math>\chi^2 (2, n = 170) = 11.46</math>, <math>p = .003</math>, Cramer's V = 0.26, 95% CI [0.14–0.42]).</p> | HF and ACT                      | Housing stability                                    |
| 5. Brown et al. (2016)          | <p>Those in HF spent significantly less time homeless and psychiatrically hospitalized compared to usual care. Ninety percent of HF residents were housed after 1 year compared to 35% of the comparison group. Homelessness and hospitalization outcomes were unrelated to homelessness history.</p>  | HF                              | Homeless periods<br><br>Reduced # of ER visits       |
| 6. Clark et al. (2016)          | <p>One program used Critical Time Intervention (<math>n = 144</math>) and the other used Assertive Community Treatment (<math>n = 90</math>). 88.6% of Assertive Community Treatment participants were homeless at baseline, while at 6 months 30% were homeless (<math>p &lt; .001</math>), and 91.3% of those in the Critical Time Intervention were homeless at baseline, while 44.3% were homeless at 6 months (<math>p &lt; .001</math>).</p>   | Assertive Community Treatment   | Housing stability                                    |
| 7. Gutman and Greenfield (2017) | <p>Statistically significant difference existed between intervention and control group goal attainment scaling scores (<math>U = 9.50</math>, <math>p &lt; .03</math>, <math>d = 1.34</math>), and on quality-of-life</p>  | Transitional supportive housing | Time taken for clients to transition from shelter to |

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|                          |  |            |                      |
|--------------------------|--|------------|----------------------|
|                          | scores ( $U = 10.50$ , $p < .04$ , $d = 1.30$ ) at post-intervention. Findings suggest that intervention participants made greater progress toward desired housing goals and reported higher quality of life ratings than controls at post-intervention. |            | transitional housing |
| 8. O'Campo et al. (2016) | The HF+ACT group spent more time stably housed compared to the TAU group, with the mean difference between the groups of 45.8% (95% CI 37.1% to 54.4%, $p < 0.0001$ ).   | HF and ACT | Housing stability    |

*Note.* The table displays selected studies used that illustrate results and a description of the interventions and outcomes. The listing of description also highlighted the frequency of intervention and outcome.

### Critical Appraisal

The JBI Critical Appraisal Checklists for Randomized Controlled Trials and Quasi-Experimental Studies (Aromataris & Munn, 2017) were used. Critical appraisal is used when performing meta-analysis to ensure the efficacy of inclusion and exclusion of random controlled studies. According to Ekkekakis (2015), critical appraisal is to assist readers in developing a strategy for evaluating pertinent research evidence; the present analysis offers a critical appraisal of the systematic review and meta-analysis. An assigned score of one to each criterion rated "yes," and assignment of zero to items rated as "no." The study had to have a relative conclusion and result criterion of an outcome or intervention related to housing programs. After rating each study independently, I compared the ratings and arrived at a score. Scores on each rating were converted to a percentage score between 0 and 100 to facilitate the total criteria scored on each based on the study appraised. I used two ranges for scoring: moderate and high quality. A

moderate score was defined as having the explored intervention and outcomes in the included study but did not quantify the results and findings. Studies were rated high quality if they included all the explored variables and provided quantified results in their measurements. Studies with scores reaching a minimum of 50/100 were included in this analysis. Studies were identified as “moderate quality” if assigned a score of 50–74 and “high quality” if assigned a score of 75–100. See Table 2 below.

**Table 2**

*Critical Appraisal Scores*

| Author/score                          | Relevancy-Y/N | Results/analysis   | Intervention       | Outcomes           |
|---------------------------------------|---------------|--|--------------------|--------------------|
| Adair et al.<br>(2016)<br>90%<br>(1)  | Y             | Overall mean HQ scores were higher for the HF group (91.2 (95 % CI = 89.6–92.9) vs. 88.3 (95 % CI = 86.1–90.5)), and the difference was significant (t = 2.11, p = .036) | HF/TAU             | Housing stability  |
| Aubry et al.<br>(2015)<br>50%<br>(2)  | Y             |  | Housing First (HF) | QOL                |
| Aubry et al.<br>(2016)<br>100%<br>(3) | Y             | housing First with ACT is an effective approach in various contexts for assisting individuals with serious mental illness to exit homelessness rapidly.                  | HF/ACT             | Time stably housed |
| Aubry et al.<br>(2019)<br>100%<br>(4) | Y             | HF participants entered housing more quickly (23.30 versus   | HF/ACT             | Housing stability  |

|                                    |   |  |                               |   |
|------------------------------------|---|--|-------------------------------|---|
|                                    |   | 88.25 days, $d = 1.02$ , 95% CI [0.50–1.53], $p < 0.001$ ), spent greater time stably housed ( $Z = 5.30$ , $p < 0.001$ , OR = 3.12, 95% CI [1.96–4.27HF participants were also more likely to be housed continually in the final 6 months (i.e., 79.57% vs. 55.47%), $\chi^2(2, n = 170) = 11.46$ , $p = .003$ , Cramer's $V = 0.26$ , 95% CI [0.14–0.42]). |                               | Time to be housed   |
| Brown et al. (2016)<br>100%<br>(5) | Y | Those in HF spent significantly less time homeless and psychiatrically hospitalized compared to usual care. Ninety percent of HF residents were housed after 1 year compared to 35% of the comparison group. Homelessness and hospitalization outcomes were unrelated to homelessness history  | Housing First program         | homelessness periods after a year and reduced psychiatric hospitalization |
| Clark et al. (2016)<br>100%<br>(6) | Y | One program used Critical Time Intervention ( $n = 144$ ) and the other used Assertive   | Assertive Community Treatment | Stable housing periods  |

|  |   |  |  |  |
|--|---|--|--|--|
| Gutman and Greenfield (2017)<br>60%<br>(7) | Y | <p>Community Treatment (<math>n = 90</math>). 88.6% of Assertive Community Treatment participants were homeless at baseline, while at 6 months 30% were homeless (<math>p &lt; .001</math>), and 91.3% of those in the Critical Time Intervention were homeless at baseline, while 44.3% were homeless at 6 months (<math>p &lt; .001</math>).</p> <p>statistically significant difference existed between intervention and control group goal attainment scaling scores (<math>U = 9.50</math>, <math>p &lt; .03</math>, <math>d = 1.34</math>), and on quality-of-life scores (<math>U = 10.50</math>, <math>p &lt; .04</math>, <math>d = 1.30</math>) at post-intervention. Findings suggest that intervention participants made greater progress toward desired housing goals and reported higher quality of life ratings than</p> | <p>case management model</p> <p>Permanent supported housing</p> <p>Transitional supportive housing</p> | <p>Clients transitioning from shelter to transitional housing.</p> |
|--|---|--|--|--|

|                                      |   |  |        |                    |
|--------------------------------------|---|--|--------|--------------------|
| O'Campo et al. (2016)<br>100%<br>(8) | Y | controls at post-intervention<br>The HF+ACT group spent more time stably housed compared to the TAU group, with the mean difference between the groups of 45.8% (95% CI 37.1% to 54.4%, p<0.0001). | HF/ACT | time stably housed |
|--------------------------------------|---|--|--------|--------------------|

### **Homogeneity/Heterogeneity**

This study's goal was to identify whether a relationship existed between the interventions and the outcomes for SMI individuals who were homeless. All the included studies consisted of programs that housed mentally ill clients. The included studies exhibited homogeneity of referenced interventions and outcomes. All interventions were compared to TAU, and the outcomes were similar in all included studies, if not the same. Tables 5 and 6 illustrate the frequencies of interventions and outcomes identified in the studies that fit the inclusion criteria compared to all others, which appear as combined sets in the tables.

### **Explanation of Interventions and Outcomes**

I included and extracted data from eight RCTs. Several studies compared interventions with TAU. Details of all the included comparisons are described below. Case management interventions in the included studies varied in terms of approach. Case management interventions were either with or without mandated treatments and / or compared to TAU and ACT or Intensive Case Management and Critical Time (CT)

which was not a planned intervention explored but an identified intervention. CT is intensive case management for a shorter defined period. CT is utilized in housing programs in conjunction with case management. CT sets limits to the periods clients are exposed to housing interventions. Furthermore, many of the interventions evaluated in studies reported relevant comparisons with other interventions. The comparison groups varied considerably; in many cases, ACT and HF interventions rated significant differences in outcomes compared to TAU and CT interventions. Studies showed that while the interventions were homogeneous, the interventions they were measured against were found to be heterogeneous and not utilized as a variable in this study.

### **Interventions**

HF was indicated as the primary intervention for housing the unhoused in America and other high-income countries. The HF approach is the right to be housed without a mandate to be compliant with treatment and or other intervention services. When HF is used a client is not required to be medication adherent and if they had a SUD, abstinence would not be a requirement for housing. With HF an individual is housed regardless of condition or diagnosis as the intervention and housing is not contingent on participation in any other intervention or treatment.

Supportive housing had two separate components. These are transitional housing and permanent supportive and supported housing. No study analyzed and reviewed reported utilizing supported housing, the main function of which is the housing of individuals requiring added supportive services. All studies that used supported housing as an intervention utilized it with case management or non-case management. Supported

housing interventions were those programs that provided treatment interventions and other services to the unhoused that function at a level where they could benefit, unlike those in supportive housing who required a higher level of care.

The populations that were served in these housing programs were those with SMI and other comorbid diagnoses. These programs also use ACT interventions. ACT is assigned when a client has had at least four consecutive mental health hospitalizations. An ACT worker is assigned to the client after they are placed in a housing program. The client is assigned a team that includes a psychiatrist, case worker, and nurse. Individuals who receive an ACT team must have an SMI diagnosis. Figure 3 illustrates the interventions with the highest frequency. Critical Time Intervention (CTI), contingency, and non-contingent housing were other interventions.

CTI is a targeted intervention aimed at mitigating the likelihood of homelessness and other negative consequences in persons with mental illness when they are discharged from institutions and transition to community living.

Contingent and non-contingent housing are still used as housing options that mandate adherence to treatment, whether substance treatment or compliance with mental health treatment before permanent housing is provided; in short, it is contingency management.

## **Outcomes**

The outcomes described here are those that were identified as the outcomes the RQ explored for relationship with the intervention and are the most identified outcomes in the included studies that met the inclusion criteria of reporting quantifiable results.

Housing stability was measured by the length of time the unhoused individual remained housed based on a time baseline before housed. Quality of life scales were used from self-reporting surveys to measure the wellbeing of the client after receiving interventions. The time taken to be transitioned to housing, or time taken to be housed after intervention was measured from the point of admission and receiving program interventions through longitudinal study results. Symptom reduction was the third most noted outcome for program interventions. Symptoms were measured from baseline using symptom scales of negative symptoms based on diagnosis. The last measured outcome noted was the number of ER visits compared to ER visits prior to being housed in homeless programs. See Figure 3 for intervention frequencies in reviewed studies.

### **Risk of Bias**

A meta-analysis was performed with SPSS using the raw data from the selected studies. Table 3 illustrates the meta-analysis summary. The funnel plots data is not utilized in these analyses because of the high chance of study bias based on the small number of trials used in the study. The selected randomized controlled trials (RCTs) were evaluated as having a significant risk of bias. Often, this occurred because the procedures were not reported enough. Most studies were prone to selection bias due to their reliance on specific interventions and outcomes, resulting in unclear or high risk. A forest plot was used to gage the effect size of the selected study's that explored the relationship of interventions compared to TAU.



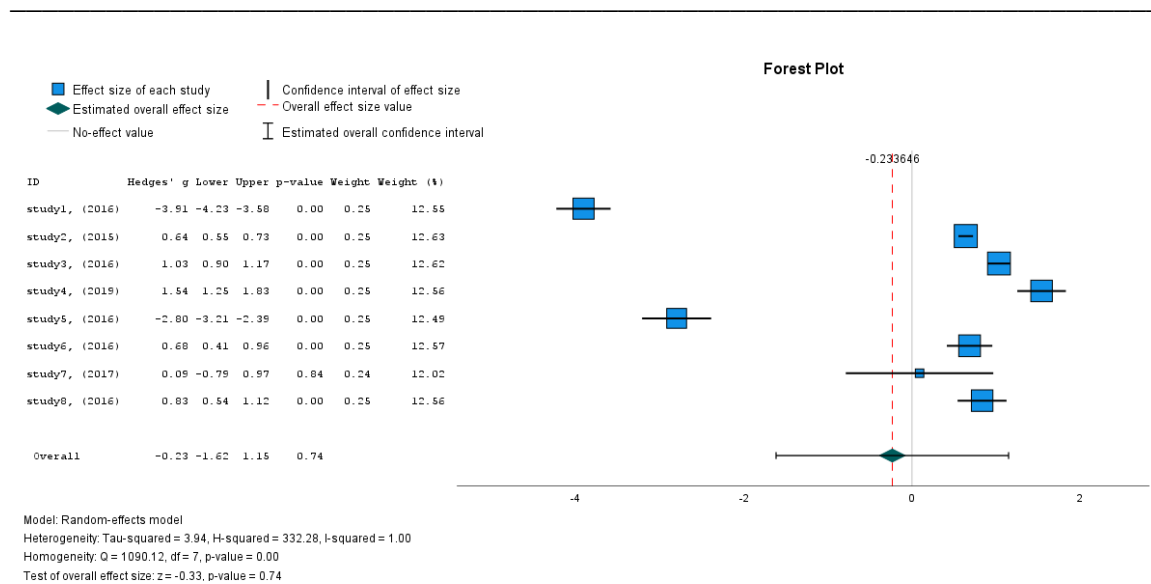
### Analysis Process

A random effects model meta-analysis was performed. See Figure 3 for meta-analysis summary, Table 3 and Figure 2, and the forest plot. Eight studies were used to explore whether there was a relationship existing between interventions and outcomes for the unhoused SMI client. The pooled estimate for program interventions and outcomes was -0.23 (95% CI, -1.62 – 1.15,  $p = 0.74$ ; Figure 2). All studies held approximately equal weight of 12.51%. Gutman and Greenfield (2017) reported the lowest SMD of 0.09 (95% CI, -0.79- 0.97,  $p = 0.84$ ), while Aubry et al. (2019) reported the highest SMD of 1.54 (95% CI, 1.26-1.83,  $p = 0.00$ ). The lowest relative weight for a single study was 12.02% (Gutman & Greenfield, 2017) while the highest relative weight was 12.63% (Aubry et al., 2015). The Q statistic was not significant ( $Q = 1090.12$ ,  $df = 7$ ,  $p = 0.00$ ) and there was no significant variance in effect sizes

**Table 3**

*Meta-Analysis Summary*

|  |                               |
|--|-------------------------------|
| Data type  | Raw                           |
| Outcome type   | Continuous                    |
| Effect size measure  | Hedges' g                     |
| Model  | Random-effects                |
| Weight   | Inverse-variance <sup>a</sup> |
| Estimation method  | REML                          |
| Standard error adjustment  | None                          |
| Random-effects weights including both within- and between-study variance. <sup>a</sup> |                               |

**Figure 2***Forest Plot*

*Note:* Forest plot results from raw data illustrating effect size, overall effect size for the study  $d=0.23$

### Review of Findings

The forest plot results confirmed that the null hypothesis could be rejected. The pool effect favors the intervention with a very small effect. However, the pooled summary results were significant enough to allow rejection of the null hypothesis in this study. There was a relationship between intervention and outcomes in the treatment and housing of the SMI client.

A review of the findings resulted in the identification of homogeneous interventions and outcomes in all analyzed studies. The only significant differences in the studies were the programs and their locations. With a heterogeneity of  $I = 1.00$  there was

a high probability that the pooled estimates reflected that all the studies are homogenous. All studies utilized the same interventions and measured outcomes for treating and housing unhoused clients regardless of individual circumstances or diagnoses and were indicated by a statistically significant p-value of 0.00 for homogeneity.

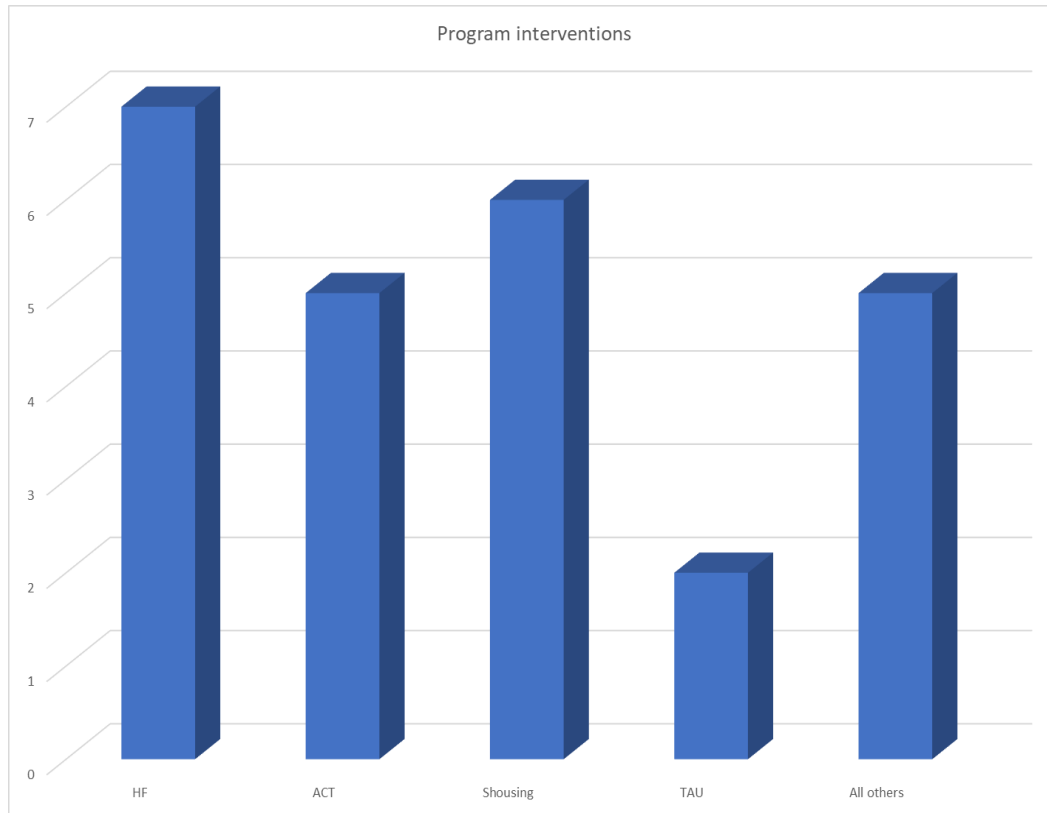
Housing programs for the SMI individual utilized a homogenous array of interventions and resulting outcomes. The interventions were homogenous across the programs in the United States and other wealthy countries, with HF receiving the highest number of uses followed by ACT, and supportive housing. Outcomes were found throughout programs reviewed and selected to also have homogeneity in outcomes measured. Housing stability was the most used outcome across all programs followed by symptom reduction scales and QOL scales.

O'Campo et al. (2016) performed research in Toronto where the interventions HF and Act were applied and compared to TAU. High-needs mentally ill clients were those who experienced HF and ACT in this study. This study demonstrated a strong indication that the most common use of intervention related to outcomes in other high economies. According to the researchers the HF+ACT group spent more time stably housed compared to the TAU group with a mean difference between the groups of 45.8% (95% CI 37.1% to 54.4%,  $p < 0.0001$ ) extending the periods of stable housing. The Brown et al. (2016) study found that HF combined with ACT provided a significant difference on time in stable housing compared with TAU. The sample explored in the study was 75% SMI chronic homeless individuals. Adair et al. (2016) performed their study to compare TAU with HF in several housing settings and environments. The study results demonstrated a

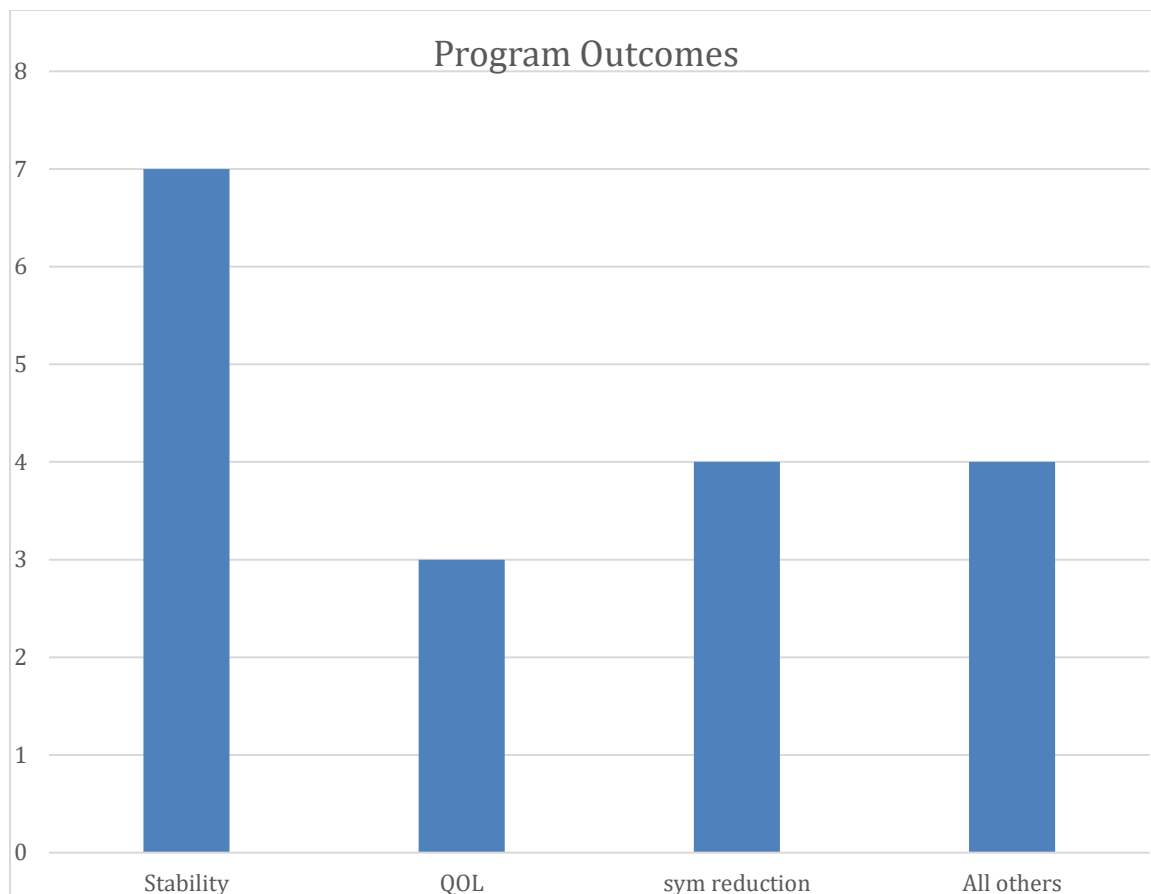
significant difference in positive outcomes in the quality housing of mentally ill-housed individuals. This study demonstrated that HF compared to TAU could be effective in a variety of neighborhoods and housing settings.

HF and ACT were clearly the most chosen and apparently most effective interventions used for the unhoused mentally ill individuals. Although the studies done on housing and treating the SMI client demonstrated no clear indicator that there was a clear relationship between interventions and outcomes for the SMI, when these interventions were used a direct positive impact was seen on the reviewed outcomes. Aubry et al. (2019) showed that HF and ACT correlated with positive housing stability outcomes and the time taken to secure housing for those exposed to the interventions. The study results found that HF participants entered housing more quickly (23.30 versus 88.25 days,  $d = 1.02$ , 95% CI [0.50–1.53],  $p < 0.001$ ), and spent greater time stably housed ( $Z = 5.30$ ,  $p < 0.001$ , OR = 3.12, 95% CI [1.96–4.27]). HF participants were also more likely to be housed continually in the final 6 months (i.e., 79.57% vs. 55.47%),  $\chi^2(2, n = 170) = 11.46$ ,  $p = .003$ , Cramer's V = 0.26, 95% CI [0.14–0.42]).

Tables 5 and 6 illustrate the frequency of interventions and outcomes utilized in the eight selected studies and the difference between the most used intervention and all other outcomes combined. HF, Act, and supportive housing were indicated as the chosen interventions for housing programs treating the SMI unhoused client. There was no indication that the outcomes had a statistically significant relationship for the population explored in this study.

**Figure 3***Program Interventions*

*Note.* The chart represents the frequency of interventions chosen from the 8 studies that met the inclusion criteria including HF, housing first, ACT, assertive community treatment, SHousing, supportive housing, TAU, treatment as usual. All others are the remaining interventions used within the studies that met the inclusion criteria.

**Figure 4***Program Outcomes*

*Note.* The chart represents the frequency of outcomes chosen from the 8 studies that met the inclusion criteria. Stability, how long individual remained housed, QOL quality of life, scales that measure wellbeing, symptom reduction which is also used before and after the intervention for those individuals who have a mental illness. All others are the remaining interventions used within the studies that met the inclusion criteria.

### Summary

The results of the meta-analysis were described in this chapter. The document encompassed a concise overview of the research inquiries and conjectures, comprehensive explanations of the literature exploration and data accumulation methodologies, evaluation of the studies' quality, extraction of data, characteristics of the

studies incorporated in the meta-analysis, and revelations derived from the meta-analysis. The meta-analysis encompassed analytical techniques, heterogeneity, homogeneity, forest plot, and assessments for publication bias.

The synthesis of pertinent primary studies involved the utilization of scientific literature search methodologies. A thorough and systematic approach was employed to develop a search strategy that included specific criteria for selecting and excluding relevant studies. The articles utilized were chosen based on satisfying the specified criteria. The present study adhered to the JBI guidelines' recommendations (Aromataris & Munn, 2017) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines for reporting the meta-analysis.

The search strategy retrieved 1,956 records. On title review, 258 abstracts were eligible for review. On examining the full-text journals, eight articles fulfilled the inclusion criteria and were included in the meta-analysis. Out of the total eight studies utilized in this meta-analysis, all included housing programs. There were no specifications on gender designations for inclusion. All eight studies included were for unhoused adults.

Chapter 5 of this study will encompass the comprehensive analysis and interpretation of the data obtained from the meta-analysis. Additionally, it will address the inherent limitations of this meta-analysis. Furthermore, this chapter will provide recommendations and discuss the potential implications for positive social change that may be derived from the findings of this study.

## Chapter 5: Results

### Introduction

In this meta-analysis, I aimed to explore empirical research assessing the relationship between interventions and outcomes for the treatment and housing of the SMI client. The theoretical perspective from the analysis was humanism. Interventions were seen as more effective when individualized and centered on the needs of the individual. The RQ was: Is there a relationship between interventions and outcomes? The results made it possible to reject the null hypothesis. Results from the forest plot illustrated a small effect, with a relationship between intervention and outcomes that provided positive outcomes for those individuals who were SMI and unhoused.

The interventions that held the greatest frequency showed statistically significant effects of housing programs and improved housing stability for individuals who were homeless. There were eight randomized controlled trials with a total of 4,411 participants included in this study. All the studies included adult participants with mental illness. However, no study indicated that the populations were only SMI clients; these studies did include other mental health issues, including substance abuse. All the studies were assessed as having a high risk of bias. The main groups of interventions were identified: HF, ACT, and supportive housing. The interventions were compared to TAU or other interventions. All clients had access to some intervention. Within these groups, comparisons assessed housing stability and/or homelessness. The findings suggested that HF, ACT, and housing programs were consistently more effective than other usual approaches such as reducing the time frames of homelessness and increasing the time



spent in stable housing (Baxter et al., 2019; Urbanoski et al., 2018). It was difficult to conclude whether interventions specifically were more effective for those who did not have an SMI. Future research could focus only on those who have SMI.

### **Interpretation of the Findings**

I included eight studies that evaluated the relationship of homeless housing program interventions on the outcomes of housing stability and well-being of the SMI individual. The reviewed studies provided effect sizes, relevant interventions, and outcomes. Eligible studies were required to have SMI clients as the primary population in the programs reviewed. The eligibility criteria in many of the studies included homeless adults or those at risk of becoming homeless with mental illness. Studies that did not meet the criteria were excluded, thus creating a bias against other programs which did not focus on RQ. This exclusion criteria created a limitation on the results. HF is a broad term and the primary intervention for housing the homeless and included interventions that could be found in all the examined studies. Munthe-Kaas et al. (2018) claimed that HF has emerged as the top program strategy for dealing with the issue of homelessness.

The most used intervention in conjunction with HF is ACT used in conjunction with intensive case management. ACT is delivered by a team which includes a case manager, psychiatrist and traveling nurse. This treatment approach and intervention is delivered to all clients regardless of their diagnoses making the intervention less individualized compromising effectiveness.

Research findings reported that a humanistic client centered approach would have better outcomes based on addressing the needs of the individual holistically according to

Hummelvoll et al. (2015) and Resnick et al. (2001). The effectiveness of these interventions was compared with the services provided under TAU. HF and ACT were utilized in the third most identified intervention, supported housing programs. The housing programs were transitional and permanent.

While HF, supportive housing, and ACT have shown results, the inquiry persists over which technique is the most effective in enhancing outcomes. This analysis unequivocally demonstrated that supportive housing combined with ACT as a critical intervention for SMI individuals experiencing homelessness yielded substantial improvements in their housing situation (Baxter et al., 2019). However, these studies did not infer that these interventions significantly impacted the specific needs of the SMI client. Studies also found superior housing outcomes for ACT clients relative to TAU. Regarding the most effective approach to reducing homelessness, it appeared that providing supportive housing and community assistance such as ACT supports was the most successful approach in maintaining stable housing periods (Urbanoski et al., 2018).

### **Limitations of the Study**

The conclusions of this review were derived from a comprehensive and methodical examination of both published and unpublished material. In addition, the process of identifying and selecting pertinent studies and publications was conducted according to predetermined criteria. The same applied to the extraction of data, assessment of bias risk in the studies included, and evaluation of the evidence quality for all outcomes.

Randomized controlled trials encompassing evidence solely from the most suitable study designs to address this review of effectiveness were used. The studies included in the analysis provided sufficient data to allow for statistical estimation of the impact of interventions or housing programs on housing stability and homelessness among individuals with mental illness.

By evaluating the methodological rigor of the studies presented and assigning a grade to the evidence, specific areas of improvement in terms of design, implementation, and reporting were identified for future research.

In conclusion, my analysis encompassed a thorough examination of various housing programs and HF interventions, offering a comprehensive understanding of the impact they had on reducing homelessness and addressing the needs of homeless individuals. Additionally, I conducted a comparative assessment of their relative effectiveness. A focus was maintained on SMI clients.

Nevertheless, this review does have certain limitations. To begin with, the intricate character of the interventions examined in this research had three notable implications. Initially, I overlooked pertinent interventions throughout the literature search that were categorized differently yet shared similar elements to the interventions that were included to minimize too wide a range of variables. Furthermore, I categorized interventions that had the highest frequency to present a more concise summary of effective interventions. This alteration inevitably resulted in a reduction of specific information regarding individual interventions. It is also probable that the interventions included in the study exhibited significant variation in their implementation across

different study locations and throughout many investigations, despite claims of adherence to the HF model.

I did not establish an assessment of the adherence to treatment protocols for the programs that were included. Thus, this study's limitations may include lack of reliability due to the studies utilizing several methodologies producing varied outcomes. The included studies did not provide systematic reporting of treatment fidelity, so this was not included in the analysis. In addition, my own experience and involvement in housing services creates the question of researcher bias. To mitigate this bias, I reflected regularly upon my approaches during the review and analysis and sought feedback from the committee and colleagues for the methods I used.

Due to different data collection methods in studies reviewed, establishment of reliability and validity cannot rule out the need for future targeted research. I also refrained from attempting to combine and analyze the data of secondary outcomes in other meta-analyses due to the above-mentioned limitations. Excluded from my analysis were qualitative research studies that investigated such things as individuals' perceptions, preferences, and/or experiences with interventions.

### **Conclusion/Recommendations**

This meta-analysis included eight randomized controlled trials with the objective of assessing the impact of interventions for improving housing stability and treating individuals experiencing homelessness and who were SMI. This research indicated that housing programs and HF interventions had a positive impact on housing stability, leading to a decrease in homelessness when compared to standard services. There was no

evidence to suggest that housing programs or therapies primarily using ACT had worse outcomes for homeless adults with an SMI diagnosis compared to standard services. Nevertheless, there was little evidence suggesting that the services were tailored to meet the specific need of individuals with severe mental illness SMI. The improvement of symptoms and overall quality of life encompassed a range of criteria that were not limited to an SMI diagnosis.

The abundance of research on interventions aimed at enhancing housing stability and mitigating homelessness was evident from the extensive number of randomized controlled trials documented in the literature (Aubry et al., 2020; Montgomery et al., 2013). Nevertheless, a significant portion of the current research was deemed to possess a substantial risk of bias, primarily due to inadequate documentation of methodologies and the absence of blinding among participants, workers, and outcome assessors. While it is not feasible to deprive personnel and participants of their sight in the work due to the nature of the interventions, it is viable to blind the outcome assessors. In addition, there was no discernible enhancement in reporting from the initial study's publication in 2015 (Aubry et al., 2015) to the most current publication occurring in 2020 (Tsai, 2020). More specifically, was a paucity of information about the conditions of comparison groups, and the original studies did not provide sufficient reporting of effect estimates. In addition to needing more robust and well-documented research, there were deficiencies in demographic data. The research lacked a detailed breakdown of the participants, particularly regarding individuals with severe mental illness and those experiencing chronic homelessness.

There was limited exploration of specific housing models. The research focused solely on residential facilities with mandatory abstinence from substance use requirements alongside support services. It did not examine the effectiveness of non-abstinence supportive housing, which encompasses various living arrangements like group homes and independent living, where residents are not required to abstain from drug and alcohol use. Lastly, there was a restricted scope of comparison. The research only compared HF to standard services rather than evaluating its outcomes against alternative interventions beyond the basic support system.

### **Recommendations**

Further investigation into the impact of housing interventions on mental health is necessary to assess the efficacy of these programs. To comprehensively assess the effectiveness of housing interventions for individuals with mental illness experiencing homelessness, further research is crucial on multiple fronts. This should start with quantifying mental health outcomes through rigorous studies employing longitudinal designs to track the impact of housing interventions on mental health over time. This would involve measuring factors like reduction in symptoms of illness defined by an SMI and improved overall well-being measured through metrics such as quality-of-life assessments.

Building a strong economic rationale necessitates research that quantifies cost savings associated with reduced hospitalizations, emergency room visits, and incarceration due to improved mental health. Increased productivity stemming from a

stable living environment and improved mental well-being might also be further quantified in research.

Qualitative exploration could include in-depth qualitative studies, focusing specifically on clients with severe mental illness experiencing homelessness. These are essential to understanding individual needs and experiences and would involve gathering personal narratives and exploring the unique challenges faced by this population. Mixed methods study is also important with exploration of factors contributing to homelessness and its root causes like trauma, lack of social support, and limited access to mental health services.

### **Implications and Conclusion**

These investments are crucial to fulfill society's moral obligation. The moral imperative is that every society has a responsibility to ensure the basic needs of its members are met. Shelter is fundamental, and without it, individuals face a multitude of dangers and hardships. Viewing the task as an investment rather than an expense is an appropriate frame for providing housing. Stable housing can lead to improved mental health, increased economic opportunities through the ability to hold jobs, and reduced strain on social services. A holistic approach is the passage that highlights the need to understand the complex relationship between housing, mental health, and economic factors that contribute to homelessness.

### **Conclusion**

In conclusion, despite the positive impact of current housing programs on reducing homelessness, especially among the SMI population, chronically homeless

retention remains a challenge. This meta-analysis highlights the need for future programs to move beyond currently identified best practices and incorporate a more nuanced approach that addresses the specific needs of individuals. By tailoring interventions and support services, we can maximize program effectiveness and ensure long-term housing stability for this vulnerable population. This not only fulfills our moral responsibility but also fosters a healthier and more productive society.



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