## Introduction:

Based on the literature reviewed, it is clear that individuals who experience both mild to moderate mental illness and housing insecurity need resources targeted to their specific needs. To address this need, there were five main categories that relate to this correlation. These categories include the Housing First model, mental health, substance abuse, childhood experiences, and veterans.

## Housing first services

The first aspect of addressing this issue is looking at evidence-based approaches. One evidence-based approach that has shown success is the Housing First model (HF.) A study by Durbin et al (2019) states that the Housing First model brings both human service programs and social policy about the treatment of people who are homeless and is in the process of a system of emergency shelter/transitional housing. Therefore, housing first has been able to show that housing for homeless people with mental illness is a direct link to their program. However, the effect of HF on housing stability for people with borderline or lower intellectual functioning has not been examined. This study conducted in Toronto, Ontario looks at homeless adults with mental illness in assessing whether the association between housing stability and HF differed for adults with borderline or lower intellectual functioning, compared to adults with above borderline intellectual functioning. Another study done by Durbin et al. (2018) was conducted over a 24-month trial. During this time Housing First explored: (a) changes in levels of resilience and perceived stress during the trial, and (b) the association between levels of resilience and perceived stress with measures of social support, social functioning, and percentage of days stably housed over the study period. The study shows that perceived stress has been associated with adverse health outcomes. Some homeless individuals often report multiple acute and chronic stressors. However, research on resilience and perceived stress on the general homeless population is limited.

# Mental health

There has also shown to be a correlation between mental health and homelessness. Benston (2015) presents a systematically reviewed research conducted in the United States on permanent supportive housing programs for homeless individuals with mental illness and the effect of these programs on housing status and mental health. The conclusion was that permanent supportive housing programs in the United States limit the ability of research to inform the policy goal of ending chronic homelessness and demonstrate a need for further experimental research upon which to make funding and policy decisions, especially in light of prioritized federal funds. Another study by (Crisanti et al 2017) consisted of 237 participants including those who were experiencing homelessness or at risk of homelessness. Individuals enrolled in the Health Homes program were also diagnosed with mental illness. Nearly 60% of participants received housing and it was found that housing affects overall health. The HH program had peerservice workers who were responsible for delivering case management services and all participants were given "screening and assessment, diagnostic determination, individual counseling, psychiatric consultations, medication management, crisis intervention, group counseling, educational programming, employment services, client advocacy, housing identification, and referral to community resources" (Crisanti et al, pg, 2017). Fitzpatrick, Myrstol, and Miller (2015) conducted a study of 264 homeless individuals in Birmingham, Alabama, and Northwest Arkansas, it was found through surveys including depression scales and interviews, that over 60% of the homeless population exhibited clinical depression, a number that is 5 - 6 times higher than that of the general population (Fitzpatrick, et. al 2015). This high rate of clinical depression combined with lack of access to housing and healthcare including mental health care makes it very difficult for the homeless population to secure housing as they are often facing debilitating mental health problems without resources or stability, and are often undiagnosed and untreated. This helps us to know that our program needs to have resources specifically designed for a population with high rates of depression.

Another important thing to understand and know is the necessity of homelessness and those who also have mental health issues. Holland (2017 states that about 13 to 15% of homeless people are mentally ill nationwide. Half of the country's homeless people are either physical or mentally disable or both. These people do not qualify for the federal disability payments that others might qualify for. Even still, these disability payments are oftentimes low that range from \$800 a month. This amount is supposed to cover rent, utilities, and other needs. There is a need to fight for those that struggle with certain mental health disorders and do not even qualify for a disability payment. About half of the homeless people with severe mental illness also have other problems that include alcohol and/or drugs. These homeless people with mental health issues often resort to these things to relieve some of their symptoms. It is important to not only address the issue at hand, but also know the benefits. Mitchell, et al. (2017), talks about a study that addresses the issue of health care services among the health population. They found that those with disabilities and mental health concerns were among the costliest groups and would therefore benefit from target interventions.

#### **Substance Abuse**

Substance abuse is another element to take into consideration among individuals experiencing both mild to moderate mental illness and homelessness. One study looked at the relationship between housing insecurity and substance use among those with mental health issues. In the housing insecure from Austin, TX, Los Angeles, CA, and Denver, CO, it was found that 24% of housing insecure individuals have co-occurring mental health and substance abuse disorders (Begun, et. al 2018). Overall, it was found that 67.6% of housing insecure individuals had a problem with substance abuse (Begum, et. al, 2018). This was the case across the board in individuals who were homeless and living on the street, or those who were in temporary housing such as a shelter (Begun, et. al 2018). It has also been found that rates of prior mental illness are positively related to substance use. This is according to a series of interviews conducted on 416 youth ages 13-14 who were experiencing homelessness in Houston, Texas. Roughly 27% of youth had extensive comorbidity. ADHD was positively related to marijuana use due to an unmet need for mental health treatment. (Narendorf et al., 2017). Conway, et al. (2017) states that there is also evidence found with the co-occurrence of tobacco use, substance use, and mental health problems among U.S. adults. This is the first study to comprehensively document tobacco use, substance use, and mental health issues that range on different tobacco

products and show how female tobacco users may be at a higher risk for substance use and mental health problems. This study demonstrates that it is important to suggest interventions that are gender-specific when it comes to substance use and mental health. There is a problem with the lack of these interventions and to be more specific these gender-specific interventions need to be addressed. Policin (2016) states that there has been an increasing problem in homelessness and the solutions for it. A few problems as the result of homelessness may be alcohol and drug use. These two things can make it difficult to find stable housing. Homelessness can be associated with exacerbating substance abuse, health problems, and mental health issues. Research indicates that individuals that are homeless often have alcohol and drug problems. Access to services for homeless individuals to get help is also lacking, so they find themselves in a cycle.

### **Childhood Experiences**

Another aspect relating to this topic is childhood and youth experiences. In a study of 565 housing insecure adults participating in a housing-first intervention in Toronto, it was found that the average number of Adverse Childhood Experiences in this population was 4.1(Lin, et. al. 2020.) This study was conducted using surveys on homelessness and housing information, diagnostic criteria for 11 mental health or substance abuse disorders, the Colorado Symptom Index, the ACE scale, and the Connor-Davidson resilience scale were all used. It was also found that in individuals experiencing homelessness for longer than 36 months in their lifetime, the mean scores for ACEs were higher. A higher ACE score was associated with more severe mental illness and negative housing outcomes. This study tells us that the problem of housing insecurity is highly correlated with mental illness and Adverse Childhood Experiences, which in itself also leads to a higher rate of mental illness. It establishes the link between trauma, mental illness, and housing insecurity. Another study showed that the participants experiencing homelessness were recruited from the homeless shelter network located in Chicago, IL. A mobile phone-based intervention was used to improve mental health among these young adults. CBT based coping strategies were implemented to help reduce symptoms of PTSD, depression, and emotional regulation (Schueller et al., 2007.) Of the 35 participants enrolled in the trial program, less than half of the participants found that their mental health symptoms improved. In addition, in terms of feasibility and acceptability, the intervention was promising. The study presented a potential way for technology to play a role in mental health care access for this population.

This study shows the variants between homeless, runaway, and stably housed youth and mental health impacts. When they surveyed ninth and eleventh graders, they found that unstably housed youth had worse mental health outcomes than those who were stably housed. One example was the attempted suicide rate in the past year was 11% for homeless youth, 20% for runaway youth, and 33% for those who had experienced both while only 2% of stable-housed youth (O'Brien, Edinburgh, Barnes, & McRee, 2020.) Another evidence-based practice for this issue is the Homelessness Prevention and Rapid Rehousing Program. This approach has shown to be successful in creating high volumes of permanent housing placements for participants (Tsai, et al. 2017.)

#### Veterans

The last element that should be addressed is the specific population of veterans. There is a need for program assistance with veterans and to prevent future housing loss. There is a specialized intervention that is called "Maintaining Independence and Sobriety Through Systems Integration, Outreach and Networking-Veterans Edition." There is a need for programs for veterans because about 80% of which is about 48,000 of homeless Veterans suffer from mental health and/ or substance use disorder (Smelson et al, 2018). Also, when both mental health and substance use problems exist together it creates this housing instability and treatment discontinuation. There have been many treatment approaches created and developed to address these mental health and substance use disorders, however, there are only a few to help homeless Veterans. More research is needed to test strategies for homeless Veterans.

This study looked at the permanent supportive housing programs also known as P.S.H (Cusack, et. al 2016). This housing program was shown to increase housing retention for 'hard to house' individuals and have been used to address veteran homelessness. A result of this study was that departures from PSH can represent a positive outcome for some veterans, while others may return to homelessness. Also, findings suggest that a number of factors increase the risk of a return to homelessness, including admissions to inpatient substance abuse and behavioral health treatment programs and emergency department visits both pre- and post-exit. Targeted interventions may reduce the likelihood of subsequent homelessness

This study looked at the results of a low-intensity wraparound intervention.Using a quasiexperimental design, the study shows the results of being able to maintain independence and sobriety through Systems Integration, Outreach, and Networking (MISSION), to augment Treatment as Usual (TAU) and engage and retain homeless veterans with a co-occurring disorder (COD) in care. In the study, 333 homeless veterans were enrolled, 218 who received MISSION along with TAU and 115 who received TAU alone (Smelson, et. al 2013). The group's assignment was based on MISSION treatment slot availability at time of enrollment. The results were that compared with TAU alone, individuals receiving MISSION demonstrated greater outpatient session attendance within the 30 days before the 12-month follow up assessment and a larger decline from baseline in the number of psychiatric hospitalization nights.Also, individuals in the MISSION and TAU-only groups both showed statistically significant improvements in substance use and related problems at 12 months, with those in MISSION less likely to drink to intoxication and experience serious tension or anxiety.

According to a study of 168 homeless individuals in Arkansas, protective factors for mental health issues in the housing insecure population include optimism and social support (Fitzpatrick, 2017). This study was conducted through intensive interviews with these 168 individuals experiencing homelessness on their mental health symptoms, the negative impacts of homelessness, and how social support and optimism helped to reduce some of these negative experiences (Fitzpatrick, 2017). Despite the challenges faced due to housing insecurity, the individuals with higher levels of optimism and social support also had lower levels of anxiety and depression (Fitzpatrick, 2017). These protective factors helped to foster resilience in individuals facing the extraordinarily difficult circumstances of homelessness. This is relevant to us in knowing what to emphasize in our program to effectively intervene with this population. In particular, social support and optimism were especially protective against depression and anxiety

in homeless individuals who experienced childhood trauma. This is very helpful information in designing our program as housing insecure individuals are more likely than the average person to experience trauma or come from traumatic childhood backgrounds.

In a study of 601 housing insecure individuals from Austin, TX, Los Angeles, CA, and Denver, CO, it was found that self-efficacy and social connectedness were both protective factors against co-occurring substance abuse disorders and mental health disorders (Begun, et. al 2018). The hierarchical logistic regressions from this complex study show that both are helpful, but social connectedness seemed to offer more of a benefit (Begun, et. al 2018). This was also the result found in interviewing individuals, that self-efficacy was good but social connectedness ultimately is a more protective factor against negative outcomes for those struggling with mental health issues, co-occurring substance abuse disorders, and housing insecurity (Begun, et. al 2018). This is significant as it shows the importance of having part of our program address the need or social connectedness in this population. It also aligns with the findings of other studies showing that social support was correlated with reduced symptoms of depression in homeless individuals.

The study consisted of 237 participants including those who were experiencing homelessness or at risk of homelessness. Individuals enrolled in the Health Homes program were also diagnosed with mental illness. Nearly 60% of participants received housing and it was found that housing affects overall health (Crisanti, et. al 2017). The HH program had peer-service workers who were responsible for delivering case management services and all participants were given "screening and assessment, diagnostic determination, individual counseling, psychiatric consultations, medication management, crisis intervention, group counseling, educational programming, employment services, client advocacy, housing identification, and referral to community resources.

Findings showed that health and community predictors were most strongly associated with mental health recovery. Receipt of HF did not have any e ect on changes in recovery scores at follow-up. Overall, the findings suggest that interventions aimed at preventing chronic homelessness, strengthening social networks and community involvement, and providing case management services will facilitate mental health recovery (Kerman, et. al 2019).

The study contained a hybrid Type III trial that compares 81 Veterans in a GTO group to another set of 87 Veterans that have disorders such as in mental health and substance use. The comparisons that are made are based on : treatment engagement, drug and alcohol abuse, inpatient hospitalizations, emergency department visits, income over time, and negative housing exits. They evaluate this by using mixed-effect or Cox regression models. In result, differences were found mostly in treatment engagement. In other results, there was failure in seeing differences in alcohol use, drug use, and other factors. This study has shown that it is important to have treatment engagement when it comes to Veterans (Smelson, et. al 2018). It helps them become better and helps them deal with homelessness better as well.

This study searched on different databases that included: MEDLINE, Embase, CINAHL, PsycINFO, Epistemonikos, NIHR-HTA, NHS,EED DARE, and the Cochrane Central Register of Controlled Trials. These searches were looking for permanent supportive housing and income interventions for the homeless population. Randomised controlled trials, quasi-experimental

studies, and cost-effectiveness studies were included. The studies were also screened and assessed on certainty by using the Grading of Recommendations Assessment, Development, and Evaluation approach." There were a total of 15,908 citations identified which 72 were based on analysis. In result, when permanent supportive housing interventions were set in place it would increase long-term housing stability for individuals for about six years and with moderate support (Aubry et. al, 2020). However Income interventions also helped with long-term improvements in housing stability. However, the effects on mental health and employment outcome was not clear and failed to show.

This article reviews the Housing First model and the outcomes for individuals experiencing both homelessness and addictive behaviors. The study found that Housing First has proven to have successful housing retention (Kertesz, et. al 2009). However, there is limited data that specifically pertains to homeless clients with active addictions. For these clients, the Housing First model typically provides less. This study shows the importance of not generalizing individuals experiencing homelessness. Instead, they should target services to clients' needs. severity in their addictive behaviors but they are not as successful in attaining long-term housing.

This study assesses the likelihood of leaving homelessness when individuals receive healthcare. The study was made up of randomized control trial of homeless veterans that were not receiving primary care. The veteran population showed a significantly greater likelihood of attaining long-term housing quicker if they had access to primary care (Johnson, et. al 2017). Within one month of these homeless veterans utilized primary care, their average time from transitioning to stable housing was 84.8 days compared to 165.9 days for those without access to primary care.

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