

Antioch University

AURA - Antioch University Repository and Archive

Antioch University Full-Text Dissertations &
Theses

Antioch University Dissertations and Theses

2015

Loneliness and Perceived Stigmatization Among Older Adults Enrolled in Opiate Substitution Treatment Programs and the Utilization of Mental Health Services

Jennifer B. Armstrong
Antioch University - Seattle

Follow this and additional works at: <https://aura.antioch.edu/etds>



Part of the [Clinical Psychology Commons](#), [Cognitive Psychology Commons](#), [Family, Life Course, and Society Commons](#), and the [Substance Abuse and Addiction Commons](#)

Recommended Citation

Armstrong, J. B. (2015). Loneliness and Perceived Stigmatization Among Older Adults Enrolled in Opiate Substitution Treatment Programs and the Utilization of Mental Health Services. <https://aura.antioch.edu/etds/246>

This Dissertation is brought to you for free and open access by the Antioch University Dissertations and Theses at AURA - Antioch University Repository and Archive. It has been accepted for inclusion in Antioch University Full-Text Dissertations & Theses by an authorized administrator of AURA - Antioch University Repository and Archive. For more information, please contact hhale@antioch.edu.

LONELINESS AND PERCEIVED STIGMATIZATION AMONG OLDER ADULTS
ENROLLED IN OPIATE SUBSTITUTION TREATMENT PROGRAMS AND THE
UTILIZATION OF MENTAL HEALTH SERVICES

A Dissertation

Presented to the Faculty of
Antioch University Seattle
Seattle, WA

In Partial Fulfillment
of the Requirements of the Degree
Doctor of Psychology

By

Jennifer B. Armstrong

July 2015

LONELINESS AND PERCEIVED STIGMATIZATION AMONG OLDER ADULTS
ENROLLED IN OPIATE SUBSTITUTION TREATMENT PROGRAMS AND THE
UTILIZATION OF MENTAL HEALTH SERVICES

This dissertation, by Jennifer B. Armstrong, has
been approved by the committee members signed below
who recommend that it be accepted by the faculty of the
Antioch University Seattle at Seattle, WA in partial fulfillment
of requirements for the degree of

DOCTOR OF PSYCHOLOGY

Dissertation Committee:

Alejandra Suarez, Ph.D.
Chairperson

Bill Heusler, Psy.D.

Douglas M. Kerr, Ph.D.

Date

© Copyright by Jennifer Armstrong, 2015

All Rights Reserved

ABSTRACT

LONELINESS AND PERCEIVED STIGMATIZATION AMONG OLDER ADULTS
ENROLLED IN OPIATE SUBSTITUTION TREATMENT PROGRAMS AND THE
UTILIZATION OF MENTAL HEALTH SERVICES

JENNIFER B. ARMSTRONG

Antioch University Seattle

Seattle, WA

Little research has examined the role that loneliness and perceived stigmatization play in the decision to seek mental health services among older adults enrolled in opiate substitution treatment. Researchers studying this at-risk population have called for more studies to examine services that can be implemented within current opiate substitution treatment settings. This study advances research in the field by utilizing standardized self-report measures to examine the relationship between loneliness, perceived stigmatization, and the impact of said variables on the utilization of available mental health services among older adults enrolled in opiate substitution treatment programs. Ninety-four 50-71-year-old adults from an opiate substitution treatment program completed self-report measures querying age, degree of perceived stigmatization, perception of loneliness, and engagement in mental health services. Results indicated that participants who reported feeling greater loneliness and perceived stigmatization were more likely to utilize available mental health services, not supporting the primary hypothesis; however, identifying that participants' experiencing greater difficulty were willing to seek supportive services. A significant relationship was identified between

loneliness and perceived stigmatization, supporting a secondary hypothesis regarding the impact of compounding factors experienced by older adults in opiate substitution treatment. This study demonstrated the importance of the availability of mental health services for older adults in opiate substitution treatment settings, particularly targeting those experiencing a higher degree of loneliness and perceived stigmatization. Mental health services may help to alleviate the burden of the complex interaction of substance abuse and aging. The electronic version of this dissertation is at OhioLink ETD Center, www.ohiolink.edu/etd

<u>Table of Contents</u>	<u>Page</u>
List of Tables.....	v
List of Figures.....	vi
I. Background.....	1
II. Methods.....	38
III. Results.....	48
IV. Discussion.....	54
References.....	66

<u>List of Tables</u>	<u>Page</u>
1. Correlations Between Number of Services and Scores on UCLA & PSAS.....	48
2. Coefficients of a Model With UCLA & PSAS as Predictors for Number of Services.....	52

<u>List of Figures</u>	<u>Page</u>
1. Correlation Between Number of Services & UCLA Score	49
2. Correlation Between Number of Services and PSAS Score.....	50
3. Correlation Between UCLA and PSAS Scores	51
4. Scatterplot of Standardized Residuals & Standardized Predicted Values for the Number of Services.....	53

Introduction

The population of adults 50 years and older who are enrolled in opiate substitution treatment programs is on the rise. This is, at least in part, due to the aging of the baby boomers whose rates of illicit drug use have historically been higher than those of previous cohorts (Doukas, 2014). The epidemic of heroin use in the late 1960s and early 1970s led to the opening of methadone maintenance treatment centers nationwide (Doukas, 2014). Today, these centers continue to serve a growing population of those facing opiate addiction. Opiate substitution treatment centers have advanced from primarily dispensing methadone to providing an array of mental health services (Doukas, 2014). These services have been created to target at-risk populations and to promote recovery and relapse prevention (Doukas, 2014; Rosen, Smith, & Reynolds, 2008). As the older adult population enrolled in opiate substitution treatment centers increases, it is important to acknowledge potential barriers to the use of available services.

It is well documented in the literature that stigmatization accompanies both substance abuse and aging. Stigmatization resulting from the enrollment in opiate substitution treatment has the propensity to lead to social isolation and loneliness (Conner & Rosen, 2008; Conner, Rosen, Wexler, & Brown, 2010). Loneliness and the link to early mortality has been predicated in a meta-analysis examining 148 longitudinal studies that addressed the effects of perceived social isolation on physical and mental health among older adults (Hawkley & Cacioppo, 2010). Reducing health care costs and the number of emergency room visits is a goal across opiate substitution treatment programs with the recent trend toward integrating primary care services onsite (Valtorta & Hanratty, 2012). Valtorta and Hanratty acknowledged that addressing the variables of

loneliness and isolation “could prove to be one of the most cost-effective strategies that a health system could adopt, and a counter to rising costs for an ageing population” (p. 521). The authors further proposed that research should now focus on establishing interventions that target this at-risk population of older adults who are experiencing loneliness and isolation. The complex impact of the variables of stigmatization of substance abuse and loneliness on an older adult population are critical to address as the baby boom population increases in size.

The present study explored the relationship between loneliness, perceived stigmatization, and the use of available mental health services among older adults enrolled in an opiate substitution treatment program. The following research questions were addressed in this study: (a) Do older adults enrolled in opiate substitution treatment experience loneliness and/or perceived stigmatization? (b) Is there a relationship between loneliness and/or perceived stigmatization and the use of mental health services by older adults enrolled in opiate substitution treatment?

In examining these questions, the following hypotheses were identified:

1. Older adults currently enrolled in opiate substitution treatment experience loneliness.
2. Older adults currently enrolled in opiate substitution treatment experience perceived stigmatization.
3. There is a positive correlation between loneliness and perceived stigmatization.
4. Older adults enrolled in opiate substitution treatment who experience loneliness and/or perceived stigmatization underutilize available mental health services.

The goals of the study were to identify if there was a verifiable relationship between loneliness, perceived stigmatization, and the utilization of available mental health services among older adults who were enrolled in opiate substitution treatment at the time of data collection. The ultimate objective of this study was to determine whether there is a need for modifications that can be implemented to better serve this growing population of older adults. Additionally, the information acquired from this study can be shared with the staff who work most closely with this group.

Literature Review

Opiate Substitution Treatment

Post-World War II, the epidemic of heroin use was first realized in New York City. Heroin related deaths were skyrocketing equally among men and women in their late 20's (Herman, Stancliff, & Langrod, 2000). Recommendations were made as early as 1958 to establish an outpatient clinic that could administer narcotics. The recommendation, made by the American Medical Association and the American Bar Association, was considered experimental. Morphine was injected into several heroin addicted patients several times a day and was deemed unsuccessful due to the increasing tolerance of the patients, the short-term effectiveness of the injection, and the high level of sedation caused. It was evident that short-acting narcotics would only serve as a temporary solution. Once treatment concluded, patients would undoubtedly resume daily heroin use (Herman et al., 2000).

Herman et al. (2000) reported that methadone has been used as a treatment for the symptoms of heroin withdrawal as far back as 1949. Implemented in hospitals, it was a temporary fix with a relapse to heroin use in approximately 90% of those released from the hospital. The exploration of methadone maintenance treatment, the process of stabilizing an individual on an effective dose of methadone, began in 1964 among a small cohort of heroin addicts. The research was experimental in nature as the participants were closely supervised to examine the effects of the methadone on their behavior, cognition, and affect. As tolerance to the methadone increased, the dose was slowly increased until the individual no longer experienced withdrawal symptoms from heroin and was able to reach a state of normal functioning. Research continued for the purpose of narrowing

down an effective dose by administering heroin, morphine, dilaudid, methadone, and saline to patients already on methadone through rigorous double blind studies. It was concluded that the narcotic effects of the opiates administered were eliminated when an individual was maintained on a daily methadone dose between 80 and 120 milligrams (Herman et al., 2000).

It is important to note that the dose required to relieve cravings for narcotics, suppress opiate withdrawal symptoms, and develop tolerance to the methadone in order to engage in activities of daily living depends on the level of the heroin addict's addiction (Herman et al., 2000). Controversial across the literature is what a daily adequate dose of methadone should be and, in 1990, the Government Accounting Office confirmed that 60mg/day was the lowest effective dose. With the establishment of effective dosing guidelines, methadone maintenance treatment centers became commonplace nationwide. Methadone maintenance treatment has now been in place for nearly six decades and it is commonplace to see older adults who have been enrolled in treatment for years, if not decades (Doukas, 2014). Dole and Joseph (1978) acknowledged that methadone is not a curative treatment, but rather a substitution treatment. This is evident in the fact that the majority of those who discontinue methadone treatment relapse on heroin. Patients currently enrolled in methadone treatment may need to remain in such treatment for the duration of their lives. If a patient is abstinent from drugs and alcohol, she can live a productive life and function productively alongside her non-methadone peers (Herman et al., 2000).

Older Adults and Opiate Substitution Treatment

Opiate substitution treatment is now entering its sixth decade and, accordingly, the population of those enrolled in treatment is aging. In an exploratory study proposal, Sivesind et al. (2005) sought out to develop an understanding of the effects of long-term methadone treatment. Specifically, the authors focused on acquiring information regarding the physical, psychological, and psychosocial aspects of aging while enrolled in long-term methadone maintenance treatment. The purpose of the study was to compare the aforementioned aspects in older adult methadone patients, aged 55 and older, with a comparable younger cohort, aged 18–54 years. The participants under study would be recruited from Beth Israel Medical Center which has a vast network of methadone maintenance treatment clinics. Beth Israel Medical Center was the first center to pilot a research project on the effectiveness of methadone treatment in 1965 and, resultantly, has one of highest demographics of older adult methadone patients nationwide (Herman et al., 2000).

Sivesind et al. (2005) proposed that the participant sample would be comprised of 200 participants. One hundred participants representing the older adult group and 100 participants representing the comparison group. Inclusion criteria for the study entailed a history of opioid abuse and enrollment in methadone treatment for a minimum of one year prior to the study. Exclusion criteria included active psychosis and cognitive impairments that would impair the participants' capability of providing valid responses to questions and informed consent; furthermore, participants could not be actively under medically supervised discharge from methadone treatment. Sivesind et al. proposed to conduct 90-minute interviews wherein demographic variables would be collected

followed by an array of assessments including the Mini Mental State Exam, Addiction Severity Index-lite, Brief Symptom Inventory, Barratt Impulsivity Scale, Brief Pain Inventory-short form, Sexual Desire Inventory, Strauss-Carpenter Levels of Functioning Scale/Personal and Social Performance Scale, Duke Social Support Inventory, Satisfaction with Life Scale, and the Personal Well-Being Inventory. These assessments were selected specifically with the goal of exploring psychiatric symptoms, physical health, and co-morbid diagnoses in older adult methadone patients.

Following the initial proposed study as described above, Rajaratnam, Sivesind, Todman, Roane, and Seewald (2009) investigated aging methadone patients at Beth Israel Medical Center by comparing them with a younger cohort of patients. One hundred and fifty-six methadone maintenance patients aged 24–68 participated in the study, including 29% participants 55 and older. Similar to the authors' earlier proposed study, the participants were interviewed for the purpose of acquiring demographic characteristics and were administered the Mini Mental State Exam, Addiction Severity Index-lite, Brief Symptom Inventory, Barratt Impulsiveness Scale, Duke Social Support Inventory, Personal Well-Being Index, and the Satisfaction with Life Scale. Results of the study indicated that older adults, aged 55+, were more likely to have been in treatment longer and were less likely to report overall drug use. A history of comorbid alcohol misuse, however, was significantly more likely among the older sample. The authors attributed this finding to the higher licit drug use among the 55+ group, including alcohol and prescription drugs. Importantly, there were no significant differences found among the quality of life measures in both the older and younger samples, suggesting that

a lower level of quality of life remains consistent across time among methadone maintenance patients.

Rajaratnam et al. (2009) additionally found that despite medical and psychiatric complaints among both groups of participants, the lack of contact with primary care providers remained consistent across the younger and older cohorts. Of the 55+ plus group, only 7.3% reported having a primary care provider. Nearly five percent reported having an outside therapist and 7.3% reported having an outside psychiatrist. Given the high percentage of individuals reporting a chronic medical condition (89.1%) it is staggering to see how few are linked with a primary care provider; furthermore, 71.7% reported that they were taking medication for their chronic health problems. The origin of these prescriptions remains curious. This poses a problem given that certain prescription medications can have fatal interactions with methadone, specifically benzodiazepines, and often a prescriber is not aware of a patient's methadone treatment due to non-disclosure. As the population of older adult methadone patients continues to grow, it will be important to acknowledge this under-utilization of primary care services and develop appropriate interventions to encourage routine care and reduce emergency room visits. The authors noted that the experience of stigma is often a barrier to self-report and limits communication among providers. Awareness of the stigmatization felt by older adult methadone patients is critical to effective treatment and intervention.

Rosen (2004) acknowledged that there is little literature addressing the stressors experienced by older adults enrolled in methadone maintenance treatment. Acknowledgement of these stressors is critical to implementing adequate interventions for this growing population and, at the same time, recognizing how current service

systems may need to adapt changes from within. The author also pointed to a lack of literature examining gender and racial differences among this population, particularly regarding response to life stressors. In addressing the above factors, Rosen recruited 143 African American and White clients aged 50+ from various methadone clinics across a small industrial city in the Midwest. Eighty-five percent of the participants were 50–60 years old and slightly more than half of the participants were African American. Archival data, collected in 2002 as part of a monthly interview process required of all caseworkers and methadone clients, was analyzed for the purpose of identifying demographic variables, life stressors, exposure to drug use in social networks and neighborhoods, and illegal drug use in the previous month. Age, race, and gender were used as socio-demographic control variables for the data analysis. Life stressors were identified through participants' self-report of economic well-being, defined by employment status and the use of public assistance, and living situation, defined as living in temporary unassisted housing, couch surfing, halfway houses, or residential treatment programs. Exposure to drug use was determined based on whether the participants had an actively using romantic partner or resided among active users; furthermore, the participants were asked whether they lived in high traffic drug neighborhoods. Drug use was measured by the prior month's urine analyses results for all participants.

Data was analyzed to determine if demographic factors, life stressors, and exposure to illegal drugs were related to an older methadone client's ability to remain clean from drugs, assessed by his or her urine analysis results. Results indicated that one third of the participants had a positive drug screen in the prior month and exposure to drugs was significantly associated with illegal drug use. Financial stressors and unstable

housing were not associated with illegal drug use, race, or gender. In terms of race and gender, White respondents were more likely to have both exposure to drug and relations with active drug users than African Americans. Interestingly, women were significantly more likely than men to be on public assistance and were three times more likely to have an actively using adult living in their home. Despite these gender differences, Rosen (2004) cautions that the results may not be generalized to a larger population given that over two-thirds of the participants were men.

The findings in the above study highlight some of the less addressed challenges faced by older adult methadone patients, specifically, exposure to illegal drugs in their home environments and neighborhoods. Frequently neglected, when working from an individualized approach in methadone treatment, is the patient's spouse, children, and social network. Based on the results of Rosen's (2004) study, drug use is a family problem and addressing it at the individual level may neglect to consider all facets playing a role in the individual's addiction. This particular study focuses primarily on deficiencies and fails to acknowledge the supportive resources of the participants. It would be further enlightening to address what positive social supports the participants have, particularly those who abstain from drugs while living in close proximity to an active user. The method in which the data was collected provides a snapshot of the participant based on a monthly interview with his or her caseworker. The content of the information acquired could depend greatly on the relationship between the participant and the caseworker, the participant's life stressors at the time of the interview, and an array of other extraneous variables that would be important to address in future research using a similar methodology.

Grella and Lovinger (2012) investigated physical and mental health among an aging population with a history of heroin addiction, with a particular emphasis on gender differences. The researchers took a unique longitudinal approach by examining a sample of methadone patients who had first been under study in the late 1970s. This approach allowed the authors to compare the health of participants who had remained abstinent to those who had continued active use over the 25 year period. In this follow-up study, the authors discovered that 46.8% (n = 428) of the original study participants were deceased. Of the living participants, 191 males and 152 females agreed to participate in a three hour follow up interview. The researchers acquired demographic information and used surveys to determine current physical health and functioning (36-item MOS Short-Form Health Survey), psychiatric and somatic problems related to mental distress within the prior seven days (Symptom Checklist-56), and the participant's current level of depression (Beck Depression Inventory). Additionally, the participants were asked to self-report incidence of 16 chronic health problems and whether they had used any of 15 identified substances within the prior 12 months.

Results indicated that women scored significantly higher on the Beck Depression Inventory and were more likely to endorse suicidal thoughts and attempts than men; furthermore, women had significantly higher scores on their levels of mental distress. Women endorsed adverse health conditions including heart disease, asthma, bladder and bowel problems, arthritis, and chronic headaches at a much higher rate than their male counterparts. Gender differences were not identified in the use of illicit substances during the previous 12 months, although 37.9% of the total sample reporting use of one or more of the 15 substances identified. When the results were compared against the general

population, both men and women had overall worse functioning in their physical and mental health. Grella and Lovinger identified survivor bias as an important limitation in the present study. Given that nearly half of the original sample was deceased, it is possible that the mental and physical health issues endorsed were less than that of those who were deceased. Identifying the cause of death of those deceased would likely add significance to the results of this study. An additional and somewhat blaring limitation of the study is that the authors did not ask the participants if they were currently enrolled in methadone maintenance treatment. The baseline sample consisted of participants in methadone maintenance treatment in the 1970s; therefore, it appears that this would be an important variable to consider in the results. Two-fifths of the participants self-reported using illicit substances in the prior year and the results acquired could shed light on the effect of methadone maintenance on abstinence.

In a literature review of the experiences of older adults in methadone maintenance treatment, Doukas (2011a) identified a need to better address this cohort due to the fact that 10% of those reporting daily to methadone clinics worldwide are 50 years and older. Across the literature, the author found that studies point to a higher prevalence of mental health disorders and physical health problems that will require special adaptation of the current methadone maintenance treatment system. Diabetes, coronary artery disease, chronic obstructive pulmonary disease, and hypertension are just a few of the health conditions identified following a long history of poly-substance abuse, lack of exercise, smoking, and obesity. Depression, social isolation, loneliness, marginalization, and varying levels and types of stigmatization are just a few of the factors that impact older adults' adherence to methadone maintenance treatment. These factors should be brought

into awareness, particularly with the inevitable growth of this population. Settings will need to be adapted, beginning with the incorporation of services that minimize the challenges faced by these older adults and the training of current staff in opiate substitution treatment centers (Doukas, 2011a).

Stigma and Substance Abuse Treatment

It is well versed in the literature that seeking treatment for a substance abuse problem is often accompanied by feelings of shame and guilt. There is a reason why 12-step groups are anonymous. Cunningham, Sobell, Sobell, Agrawal, and Toneatto (1993) identified three specific reasons for why alcoholics don't seek treatment. First, there is a general perception that one's drinking problem is not serious enough to seek help. Second, alcoholics feel that they can handle the problem on their own and third, alcoholics struggle with admitting that they have a problem. The authors noted that heroin addicts admit similar reasons for not seeking treatment with the additional reason of enjoying the high and not wanting to abandon the experience. Cunningham et al. investigated the question as to whether alcoholics who sought treatment experienced different barriers than those who chose not to seek treatment; moreover, the authors sought to uncover if there were differing reasons for why alcohol and drug abusers delayed seeking treatment.

Three groups of participants identified in the study included self-change alcoholics who resolved their drinking problem without treatment, alcoholics who never sought treatment and still endorsed a drinking problem, and drug and alcohol abusers who were engaged in outpatient treatment and admittedly reported that they had delayed seeking treatment. The investigators recruited the former two groups through radio and

newspaper advertisements and the participants were interviewed in a structured format. The authors developed a five point scale (“1” not at all affected to “5” very much affected) measuring specific reasons for not seeking treatment including embarrassment/pride, unable to share problems, stigma, negative attitude towards treatment, and financial cost. Results indicated that those who chose not to seek treatment and continued to abuse alcohol did not perceive themselves as problem drinkers. This confirmed the authors’ hypothesis that admitted alcoholics felt that they could handle their problem on their own. Additionally, this group reported the stigma attached to the term “alcoholic” as highly influential in their decision to not seek treatment. Those who had reached abstinence on their own endorsed embarrassment and pride as reasons for avoiding treatment significantly more than those enrolled in outpatient drug and alcohol treatment. Interestingly, alcohol abusers rated their desire to handle the problem on their own as a reason for delaying treatment significantly more often than drug abusers (Cunningham et al., 1993). This somewhat historical account of barriers to seeking alcohol and drug treatment is important in that it identifies common reasons why problems remain unaddressed. These reasons, primarily stigmas attached to treatment, embarrassment, and pride, are very much present today and continue to deter those experiencing problems with substance abuse.

Luoma et al. (2007) looked specifically at the experience of stigma and the influence of stigma on those in substance abuse treatment. The researchers wanted to examine whether the concept of stigma in its various forms (self, perceived, and experienced stigma) were distinctive from one another. Additionally, the authors investigated the degree of stigma experienced by those in substance abuse treatment,

whether that stigma was influenced by the number of episodes an individual had previously had in treatment, if secrecy was a means of dealing with stigma, and whether the use of intravenous (IV) drugs and/or involvement with the legal system increased the level of stigma experienced. Participants were recruited from 15 substance abuse treatment sites in Nevada, including inpatient treatment sites, outpatient treatment sites, and residential services. Flyers were posted at their treatment facilities for the purpose of recruitment. One hundred and ninety-seven patients completed a questionnaire packet including eight surveys addressing the above questions. The demographic questionnaire included 34 questions regarding personal characteristics and five additional yes or no questions regarding experience with enacted stigma. Enacted stigma was defined as having direct experience with discrimination. Questionnaires additionally addressed mental health, quality of life, perceived stigma, secrecy coping, interpersonal rejection as the result of stigma, internalized shame, experiential avoidance, and psychological flexibility. The last questionnaire was a unique addition in that it addressed the participants' ability and willingness to accept undesirable thoughts and feelings, while still maintaining their values and goals. This survey speaks to the challenge that addicts experience when their thoughts and feelings are incongruent with their goals and identifies the need to alter their cognition as a step in recovery.

The recruited sample was demographically diverse with an average age of 35 years (range 14–73) and a wide range of drug use and preferred substance. On average, participants reported 1.9 previous episodes of treatment (SD = 2.4). Results regarding the authors' first question, the degree to which the participants experienced stigma, revealed that most participants believed that people treated them unfairly upon learning about their

substance use. Regarding perceived stigma, defined as “the beliefs members of a stigmatized group have about the prevalence of stigmatizing attitudes and actions in society,” (Luoma et al., 2007, p. 1332) participants had a significantly higher score than the neutral score on the scale indicating a common feeling that substance abuse is both devalued and discriminated against in society. The authors addressed various concepts of stigma with the goal of determining if they were indeed distinct. Results indicated that perceived stigma was only moderately correlated with experienced stigma-related rejection, but even less correlated with internalized stigma. The authors concluded from their results that various concepts of stigma were generally distinct. Luoma et al. (2007) were able to confidently determine that the number of drugs used and stints in treatment predicted the number of experiences with stigma-related rejection. When looking at secrecy as a means of coping with stigma, results indicated that higher levels of secrecy were associated with lower psychological flexibility, poorer mental health overall, higher internalized shame, and lower quality of life. Secrecy was most strongly associated with perceived stigmatization. The authors hypothesized that IV drugs users and those involved in the legal system would experience greater stigma. IV drug users experienced a significantly higher degree of stigma-related rejection, however, no significant differences were found across the other measures. Interestingly, those involved with the legal system did not experience significant differences on any of the variables under study when compared to those who had no prior criminal involvement.

Luoma et al. (2007) identified a number of limitations, including that due to the adaptation of the perceived stigma scale from an original scale that measured perceived stigma in mental illness, the scale potentially lacked content validity. Additionally,

because there are no distinct scales measuring self-stigma, the authors used a scale measuring internalized shame to address this specific type of stigma. Admittedly, the authors felt that while many of the factors measured overlapped, the measure was originally developed to measure internalized shame and not self-stigma. Self-report by substance abusers will always impact the results of a study, just as self-report on any measure in any study will always have a reduced level of reliability. The authors acknowledged this limitation regarding substance abuse, but did not specifically address the finding that those involved in the legal system did not experience stigma on a greater level than their non-involved counterparts; in fact, they reported less internalized shame, higher psychological flexibility, and less-stigma related rejection. The authors were admittedly surprised by that finding and suggested that those involved with the legal system were less likely to self-report, however, it would be curious for the authors to have further explained how they measured involvement with the legal system beyond the demographic questionnaire, if at all. It may have been beneficial to run an analysis on involvement with the legal system and personality traits to determine if specific personality traits were correlated with the manner in which the questions were answered.

The methodology used in the present study leaves questions as to the validity of the responses. The authors reported that the questionnaire packets were handed out to the participants who then completed them and anonymously placed them in a box, however, they did not elucidate whether the participants were monitored while completing the questionnaires or what the specific conditions were. The results could be impacted significantly if respondents were able to talk amongst themselves or with others while completing the questionnaires. Knowing the protocol used across the 15 treatment centers

would help to further validate the results and allow for duplication of the study method in future research.

Stigma and Opiate Substitution Treatment

Employing a qualitative approach, Gourlay, Ricciardelli, and Ridge (2005) conducted a study exploring the experience of methadone treatment as it related to participants' identities. The authors investigated identity in terms of personal and social resources and experiences of stigma within methadone program regulation. Additionally, the authors were interested in the participants' evaluations of methadone treatment on a more general basis. Ten participants, five men and five women, were purposefully sampled from a wide range of socioeconomic backgrounds with diverse experiences of using heroin and methadone over differing durations of time. Through structured interviews, the authors explored the participants' experiences of growing up, relationships, heroin use and involvement, and their values. Secondly, the authors asked the participants about their experiences with methadone. The interviews were analyzed using what the authors termed an "upgraded" grounded theory approach which incorporated prior theoretical literature, specifically theory relating to stigma, social identity, and role-identity, as a means of further understanding the emerging themes in the context of the researchers' goals. Data analysis identified three subgroups of participants: "non-addict," "functional," and "conflicted." The "non-addict" subgroup were comprised of those who did not define themselves as addicts and managed stigma in treatment settings through positive self-concept and resources. Outside of the treatment setting, the "non-addicts" opted for non-disclosure of methadone use. The "non-addict" group further saw benefits of treatment as a means of abstaining from heroin, however,

felt that regulations (i.e., daily dosing) were restrictive and impacted daily participation in the non-methadone community. The “functional” subgroup endorsed similar experiences to the “non-addict” group, including greater social resources, support, and more positive self-concepts. Stigma among the “functional” group was linked to staff (i.e., doctors and pharmacists) attitudes and behaviors at the methadone site. A strong self-concept allowed this subgroup to defend themselves against the stigma they felt by identifying the doctors and pharmacists as the ones expressing negativity. The “functional” subgroup found that methadone treatment regulations were not controlling, as compared to the “non-addict” group, and generally expressed a laissez-faire attitude about the methadone sites not being particularly positive or negative. The “conflicted” subgroup viewed methadone treatment as another addiction that was not only stigmatizing, but influenced their negative self-concepts due to the marginalization they felt. Demographically, this group had limited economic resources and felt disconnected socially. The poor self-concept of the “conflicted” subgroup was demonstrated in their identification of stigma as the result of their poor physical appearance and their experiences of feeling like a “junkie” among the non-using population.

A qualitative approach to understanding an individual’s experience while in methadone treatment allows for a deeper look into one’s personal experiences. Gourlay et al. (2005) provided a powerful study in that regard. The small sample size does not allow for generalizations, however, the results speak to the importance of social resources and self-concept in the face of adversity. Those who expressed a stronger self-concept were able to better defend against any existing stigma. Personality traits likely play a role in the development of a stronger self-concept, as well as childhood experiences. Similar to

the Luoma et al. (2007) study, examining personality traits may have provided for an additional understanding of protective factors against stigma. The overall study utilized a sound methodology and an advanced technique for analyzing the data provided valuable insight into the personal experiences of methadone patients.

Gourlay et al.'s (2005) investigation of self-concept and identity is taken a step further in Doukas' (2011b) exploration of the barriers perceived as preventative for identity transformation among methadone patients. The author conducted a literature review of qualitative studies that had addressed the experiences of opiate substitution treatment patients and hypothesized that barriers would exist to forming a new identity as the result of existing negative biases. The need to build a new identity was identified as one of the most important aspects in the transformation from addict to non-addict. This process involves creating new social networks and environments that are non-drug using. The challenge, as noted by the author and reviewed earlier in Rosen's (2004) review of methadone maintenance treatment, is that often one's family members and/or spouses may also be actively using. Forming a non-addict identity requires distancing oneself from these active users until they are also able to make transformations in their own lives. A frequently identified challenge is the environment at methadone dosing clinics, wherein one is engrossed in the drug culture daily. A lesser acknowledged challenge is the loss of the enjoyment of the substance. The substance lost served a purpose in the user's life. The drug may have been used as a coping mechanism or served as the primary source of pleasure in one's life. Regardless, the substance of choice was destructive.

Doukas (2011b) acknowledged that across the literature there is a consensus that methadone is a choice of last resort for heroin users. The use of methadone not only ties a

person to a treatment system indefinitely, but is commonly perceived as an additional drug addiction. The concept of being tied to a treatment system has been identified as one of the most challenging aspects of methadone treatment. Methadone programs have been frequently described as intrusive. Clinics require frequent urine analysis and the majority of patients receive their doses daily at the clinic. Few patients receive carry out options which are based on frequent negative urine analysis results. This limits a patient's vocational opportunities and the option of planning a vacation. The environment of the methadone clinics are regarded as challenging due to the varying goals of the patients. The buying and selling of drugs is a frequent occurrence and this is a problem when one is trying to distance themselves from the drug culture. The author further discussed the impact of maintaining the secret of being a methadone patient in the workplace and in relationships. There is a tremendous amount of fear of losing one's job if found out or being judged by peers, family members, and friends. Keeping a secret creates an air of anxiety and may contradict the methadone patient's values. With all of the above identified hurdles, Doukas (2011b) concluded that challenging the general public's negative view of methadone treatment is critical to helping former addicts with their development of a new identity. Existing stigmatization must be addressed and educating frontline staff on the importance of identity transformation may be a first step in the right direction.

Frischknecht et al. (2011) explored the impact of perceived stigmatization on affect and quality of life among opiate dependent patients in a comparison study. The authors discussed heightened stress response, as caused by the experience of discrimination, as a major risk factor for relapse in addiction. The authors further implied

that depression is frequently associated with stigmatization, however, the existing literature failed to delineate whether the stigmatization caused the depression or whether the depression led to feelings of being stigmatized due to the devaluation of the self; moreover, Frischknecht et al. further sought to determine if depression led to low quality of life among opiate substituted patients or if a low quality life was causing the depression. To identify what the authors referred to as the “chicken-egg question” (p. 242) they recruited 106 opioid-dependent patients from an outpatient opiate maintenance program, 71 men and 35 women. The average starting time of heroin use had been at age 16, close to 20 years prior to the study. A comparison group was recruited from the general population of 144 participants who were not screened for physical or mental illness or drug addiction. The comparison group was purposefully not screened for these conditions to allow for the determination of whether the variables under study were independent constructs.

Methodology included the administration of a number of surveys including the Beck Depression Inventory, State-Trait Anxiety Inventory, an adapted version of the Internalized Stigma of Mental Illness scale for drug-addicted patients, a generic Quality of Life measure, and a number of questions created specifically to target perceived discrimination, demographic data, and addiction characteristics. Data analysis confirmed that opiate-dependent patients felt significantly more discriminated against than the comparison group (63% versus 16%). The specific factors that led to discrimination included social rejection, family discrimination, police discrimination, and job discrimination, to name a few. Among the comparison group, discrimination factors included sexual orientation, weight, height, gender, smoking restrictions, and social

rejection. When controlling for age, sex, depressiveness, anxiety, and partnership on the global, physical, and environmental subscales of the quality of life measure, opiate-dependent patients had a significantly lower quality of life; however, when looking specifically at mental quality of life, both groups' mental quality of life were equally impacted by age, depression, and anxiety. Further analysis confirmed the authors' hypotheses that perceived stigmatization was highly associated with low quality of life among the opiate-dependent patients, even when controlled for depression and anxiety. In regard to the original "chicken or egg" inquiry, the authors found that one's negative perspective increased the perception of stigma in relation to mental quality of life. In regard to the physical quality of life for opiate-dependent patients, the authors found that perceived stigmatization increased depression and anxiety. Limitations were apparent based on the differences between groups, for example, the comparison group differed in age, sex, employment, partnership, and education. Lower socioeconomic status and education is often associated with heroin addiction and these variables, take into account, can significantly impact the results (Frischknecht et al., 2011).

Stigma and Older Adults in Opiate Substitution Treatment

As the population of older adults in opiate substitution treatment grows, it will be even more important for clinicians to develop a clearer understanding of the needs of this population. Conner and Rosen (2008) examined the experience of multiple stigmas among older adult methadone clients in relation to delaying seeking treatment for substance abuse and mental health treatment. The authors noted very little literature regarding the impact of multiple stigmas, specifically among older adult methadone patients. Using a qualitative approach, 24 participants, aged 50 and older, were

interviewed specifically regarding their sense of their own physical and mental health, their feelings regarding methadone maintenance treatment and corresponding experiences, and their perceptions of mental health and substance abuse treatment. The interviewers purposefully chose not to ask directly about stigma, with the goal of looking for spontaneous emergence of stigmatization. The participants were also asked to complete the Patient Health Questionnaire-9 (PHQ-9) for the purpose of assessing experiences of depression in the prior two weeks. Following rigorous analysis of the content, eight stigma themes emerged including drug addiction, old age, psychotropic medications, depression, methadone maintenance, poverty, race, and medical conditions. The core stigma identified by three-quarters of the participants was the stigma of drug addiction, followed by aging, taking psychotropic medication, and depression. African American men reported the highest number of stigmas experienced, nearly double that of African American women, White men, and White women.

The stigma of drug addiction was a prevalent theme experienced by most of the participants. This stigma was felt as the result of interactions with drug counselors, family, friends, and therapists. One participant reported that methadone clients were regarded as “the scum of the earth” (Conner & Rosen, 2008, p. 252) by those in position of authority at methadone treatment sites. In dealing with the drug addiction stigma, many of the participants reported to concealing their methadone treatment and living in secret due to feelings of shame and embarrassment. The stigma of being an older drug addict was reported by 13 of the 24 respondents. Specifically, these participants felt judged by staff at the treatment center for having been on methadone for decades. A frequent sentiment was that they felt like “old junkies” (Conner & Rosen, 2008, p. 254).

Many expressed a fear of being the oldest clients at the treatment site and being judged and ashamed for being there. The stigma associated with depression and taking psychotropic medication was felt by 10 of the 24 participants who expressed feeling like others perceived them as crazy. Such sentiment prevented many of the participants from opening up to treatment counselors or being willing to engage in mental health treatment. Economic factors were further identified as being a stigma, particularly when compounded with older age. Shame and embarrassment were felt as the result of being both older and homeless.

Conner and Rosen (2008) concluded their discussion with the urging of future research to address the stigma experienced by older adults with substance abuse problems. The authors suggested that treatment centers address the impact of multiple stigmas and how they influence treatment seeking behavior, particularly among this cohort of older adults. Additionally, it was recommended that treatment providers be further educated to recognize the stigma of mental illness and how that can influence a methadone patient's willingness to partake in mental health treatment and adhere to a psychotropic prescription regimen. This was a thorough qualitative study with familiar limitations, including the reliability of self-report and generalizability of the results. Surprisingly, six of the participants identified significant depressive symptoms and four of the participants met the criteria for major depression based on the results of the PHQ-9, however, the authors made no mention of referral to mental health treatment. Because of the identification of mental health stigma by 41% of the participants, one would be curious as to how the ethical requirements of referral to treatment upon identification of a serious and potentially harmful mental illness was approached by the researchers.

Participants identifying a specific stigma, then being referred to the identified source of the stigma, would pose as a unique challenge. It would have been beneficial for the authors to have identified what measures were taken to address this ethical dilemma.

Smith and Rosen (2009) further investigated the individual factors of older adults that affected the ability or desire to make use of social supports using a qualitative approach. Twenty-four White and African American methadone clients over the age of 50 were recruited for the purposes of the study. The participants had partaken in a prior quantitative study wherein they had been asked about their willingness to participate in future studies. The participants were interviewed using a semi-structured interview format with a primary focus on barriers to mental health treatment. The interviewers focused on questions regarding depression, support systems in their lives specifically regarding their drug treatment, and their individual feelings toward drug treatment.

Following thematic data analysis, three core themes emerged. The first theme was focused around the participants' individual feelings and trust. In fact, the authors noted that the inability to trust others was the primary barrier to developing and fostering social support. Trust as a barrier was rooted for most participants in past experiences. Individual feelings as a barrier to social connections were described as being the result of past interactions with family and friends. Feelings included guilt about not being available as the result of addiction, shame, betrayal, and hurt. Participants discussed the experience of revealing their addiction to others and having it backfire by way of feeling judged and abandoned. Participants frequently discussed their inability to trust others as the result of bad experiences throughout their lives; moreover, they spoke to their preference of avoiding contact with others out of mistrust. This lack of trust dramatically impacted the

participants' desire to develop relationships with staff, clinicians, and peers at their treatment site. A second emergent theme was personal loss. The authors found that the majority of the participants had a number of significant losses in their lives as the result of violent crime and illness. This frequent experience of loss prevented many of the participants from wanting to forge new relationships. Many spoke to the difficulty of the loss experienced and the sense that it wasn't worth feeling that way again. The final theme was centered on the strain the participants felt existed in their current relationships, specifically experiences of conflict and abuse. One quarter of the participants reported that their friends and/or family members were actively using drugs and this caused a tremendous amount of conflict. Women in the study spoke to verbal and physical abuse inflicted by their partners and the impact such abuse had on trusting others. Importantly, participants spoke to feeling that their relationships with staff at the treatment site were unsupportive. Many felt that their counselors were policing them and that created a barrier to seeking further support and treatment (Smith & Rosen, 2009).

Smith and Rosen (2009) made a very important observation in their conclusions regarding the fact that their sample of participants were already at risk of social isolation due to the impact of ageism in society. The natural experience of aging was negatively impacted by experiences of mistrust, loss, and negative feelings about the self. The results implied that those who reported that they were unable to trust others were also less likely to use or maintain social supports that were available to them at the treatment site. This study is important in that it revealed a great distrust in, and conflicted relationships with, the staff at the treatment site and spoke to the need to recognize why the older adults underutilize available services. Older adults have the propensity to self-isolate and

when the above mentioned themes are a factor, the problem becomes multi-faceted.

Smith and Rosen pointed to the fact that treatment centers need to adapt their services to the unique needs of this growing cohort. The authors further implicated opiate substitution treatment centers' traditional model of treatment as being ineffective for this population of older adults and addressed the need to further recognize the barriers perceived by the older adults. This study is a beneficial addition to the current literature in that it specifically targeted the growing population of older adult methadone patients and their needs. A long history of mistrust, loss, and negative experiences inevitably affects an individual's current desire to engage in available services. This study speaks directly to the need for current treatment centers to recognize these factors affecting the utilization of mental health services.

Loneliness and Older Adults

Continued improvements in medicine, science, and technology have led to a dramatic increase in life expectancy worldwide. According to the World Health Organization, by 2017, the population over the age of 65 will exceed that of the number of children under five years old. Dykstra (2009) reviewed empirical literature on older adult loneliness with the goal of challenging assumptions regarding an increase in loneliness in an aging population. Dykstra found that at advanced ages, 80 years and older, the prevalence of loneliness increased. The author further identified a theme regarding the ability to develop satisfying relationships and a reduction in loneliness at any age (Dykstra, 2009). Within the aging methadone population, feelings of general mistrust, loss, and negative feelings about one's self inhibits the formation of satisfying relationships, potentially leading to a greater degree of loneliness (Smith & Rosen, 2009).

Additional research has shown that there is a relationship between loneliness, quality of life, and health outcomes (Herman, Hawkley, & Izbijaro, 2013). In an editorial, Herman et al. recalled meeting an older gentleman who compared his experience with loneliness to losing one's sight. The author reported that loneliness among older adults may be combated with reasonable interventions including home visits, telephone contacts, and social groups. Valtorta and Hanratty (2012) defined loneliness as "a subjective negative feeling associated with a perceived lack of a wider social network (social loneliness) or the absence of a specific desired companion (emotional loneliness)." (p. 518). The authors identified risk factors for social isolation and loneliness to include many of the same risk factors seen in older adult methadone patients. These overlapping factors include poverty, the social environment such as place of residence and access to transportation, physical health, mental health, and disability. Doukas (2011a) discussed many of the risk factors for relapse and these factors, as earlier addressed, are similar to those identified by Valtorta and Hanratty as those factors leading to loneliness in older adults. The former authors reported that isolation and loneliness among older adults have been linked to cardiovascular disease and increased morbidity. Interestingly, those older adults who are lonely and isolated have been found, across a number of studies, to be more likely to develop dementia than those with a strong social support network. Valtorta and Hanratty suggested that future research should use population-based strategies in the development of interventions specifically designed to reach older adults living in loneliness and isolation.

Adams, Sanders, and Auth (2004) addressed risk and resilience factors among older adults living in retirement communities in relation to loneliness and depression. The

authors were specifically interested in investigating the personal and situational characteristics associated with loneliness and depression; furthermore, the authors were interested in how loneliness and depression differed and whether they occurred simultaneously in the population under study. Participants were recruited from two retirement communities and included 234 independent living individuals aged 60 years and older. The methodology included three self-report surveys placed in the mailboxes of the participants. The surveys, the Geriatric Depression Scale (GDS), the UCLA Loneliness Scale (Version 3), and the Lubben Social Network Scale, were completed and returned anonymously to the researchers. In addition, the researchers created a questionnaire addressing the participants' involvement in social activities, a rating of their current health including a checklist of 11 chronic health conditions, and a yes or no question asking the participant if they were grieving a loss (i.e., spouse, pet, family member, friend).

Demographic results indicated that nearly 100% of the participants were White and 74% were female. The mean age of the participants was 81.35 with a range from 60–98 years. The majority of the sample rated their health as good, 73.3%, and on average reported 1.7 chronic health conditions. Results indicated that 21% of the sample endorsed depressive symptoms above a set cut-off score and 19% endorsed feelings of loneliness. Significant results based on a chi-square analysis indicated that loneliness may be a risk factor for depression. Additionally, grieving a loss and lack of visitors influenced the incidence of the constructs of loneliness and depression. The relationship between loneliness and depression was minimal. The authors concluded that those who reported loneliness were not always depressed, however, loneliness was indeed a potential risk

factor for depression. Further analysis resulted in the conclusion that the most depressed participants were older and had more health problems. This finding is important in relation to the present study given the myriad of chronic health problems endorsed by older adults in opiate substitution treatment programs (Doukas, 2011b). Adams et al. (2004) identified clear limitations in their study, specifically the lack of generalizability given a population of primarily White and Protestant older adults. Additionally, the authors acknowledged that self-report measures placed in mailboxes may not be an adequate means of measuring risk factors for depression and loneliness given one's desire to appear in a more favorable light. The target sample, older adults living in retirement communities, is dramatically different from the general population of older adults given the built-in support network of these communities. Future studies may result in more powerful findings if researchers compare those older adults living in retirement communities with those living outside of such settings. It is likely that without the built in support networks the incidence of loneliness and depression would be more substantial.

Clinical Case Management and Opiate Substitution Treatment

Sullivan (2013), in an editorial review, discussed the current problems faced by opiate substitution treatment centers. The author identified patient retention as the primary problem among treatment centers worldwide. Patient retention is primarily based on the methadone dose administered, with lower retention associated with lower methadone doses and the insufficient screening of patients prior to their admittance into a treatment program. Methadone maintenance is a long-term treatment approach, with a minimum requirement of at least one year in order to see improvement. Improper screening leads to low retention rates and the high cost of the re-enrolment of patients

who have previously dropped out has led to the closure of many treatment centers worldwide. Staff retention is an additional problem due to the low pay and high expectation for staff to have an unrealistic repertoire of skills ranging from clinical skills to chemical dependency expertise (Sullivan, 2013). These problems are frequently addressed throughout the literature and treatment centers have recognized the need to incorporate a multitude of services to better meet the needs of their patients. Important services include psychiatric evaluations, primary care, chemical dependency, and clinical case management.

Plater-Zyberk, Varenbut, Daiter, and Worster (2012) investigated the utility of clinical case management in a methadone maintenance treatment program. The authors examined, through a retrospective before and after study, the effects of the introduction of clinical case management to methadone patients already enrolled in treatment. A control group received no clinical case management. The study took place over one year across three community based methadone clinics and included 1,704 participants, 396 of which were assigned to the intervention group. Measures included urine analysis results, missed daily methadone doses, and missed methadone physician appointments prior to the introduction of clinical case management and again beginning three months into the implementation of the intervention. Results of the study indicated that participants who received no clinical case management had no significant changes in their number of positive urine analyses, missed doses, and missed physician appointments.

Comparatively, the intervention group had statistically significant improvements across all three measures of methadone maintenance treatment compliance. Plater-Zyberk et al. found a 15.4% reduction of positive urine analyses, a 2% reduction in missed daily

methadone doses, and a 40% reduction in missed physician appointments. Conclusions indicated that clinical case management, including motivational interviewing, assessment, treatment planning, general counseling, and advocacy played a significant role in methadone maintenance treatment compliance. Limitations were noted in the methodology by the use of a retrospective, non-experimental design and the authors suggested that the true effects of the implementation of clinical case management would be best measured by a randomized control trial. This study speaks to the importance of the incorporation of clinical services within opiate substitution treatment settings. The large sample size added to the significance of the results. It is difficult to deduce the effectiveness of the clinical case management based on the measures assessing appointment attendance given the nature of the setting. Specifically, physician appointments at methadone treatment centers generally occur on a monthly basis. Clinical case managers wear many hats and one of those hats is to remind the patient of important appointments. Because the type of clinical case management was not thoroughly assessed, it is possible that appointment reminders played a significant role in the reduction of missed appointments. The reduction in positive urine analyses is an important finding and contributes to the value of this study. Needless to say, the reduction in missed methadone physician appointments enhances general physical well-being and speaks to the overall benefit of clinical case management.

Conner et al. (2010) sought to understand what older methadone maintenance patients looked for in their counselors; specifically, the authors were interested in the attributes of the counselor that correlated with engagement in mental health treatment and patient retention. Conner et al. hypothesized that a patient would be more likely to engage

in the treatment process when he or she shared a similar stigmatizing experience with the counselor. Employing a qualitative approach, 24 participants aged 50 and older were recruited through flyers and by referrals from the staff at a methadone maintenance clinic. Semi-structured interviews were conducted to explore participants' experiences with depression, their physical and mental health, their attitudes toward mental health, and their experiences with available services at the methadone dosing site. To avoid asking directly about the patients' counselor preferences, the interviewers asked the participants to identify their experiences at the methadone clinic and if there were any barriers to seeking counseling when they had felt depressed. Following rigorous data analysis identifying themes and patterns, the authors found that four shared stigma themes emerged. The data was specifically analyzed based on the questions that elicited counselor preferences, both in the past and the present. The themes of stigma included older age, drug addiction, poverty, and race which were identified as those stigmas that the participants preferred to share with their counselors. Forty-six percent of the participants spontaneously reported that they did not want to see a counselor who was younger than them; moreover, the participants reported that they did not feel comfortable with a younger counselor due to their inability to relate to their experiences. This theme frequently emerged along with the desire for a counselor to have also experienced drug addiction. Fifty-four percent of participants felt that a counselor couldn't understand their situation or help them unless they too had struggled with drug addiction. Poverty and race were less salient themes, emerging in 12.5% of the participants, but were important nonetheless given the strong sentiment expressed by some that Whites and Blacks, and the more or less fortunate, were incapable of relating to one another in a counseling

setting. The authors noted limitations including the reliability of self-report given by drug addicted participants and the cross-sectional nature of the study which does not allow for the analysis of therapeutic change over time. Importantly, the study addressed the need to match clients with counselors according to their preferences for the sake of retention in treatment. This conclusion is important, however, it is quite simplistic given the funding of most methadone treatment sites. Often, therapists and counselors in training begin work at these sites for little to no pay. Age among this group of therapists and counselors is usually fairly young as many are just beginning their careers. Staff turnover is high and specified training is limited; moreover, there are often very few professionals available to meet the overwhelming demand. These factors are important when assessing client retention and it may be beneficial to look at how existing staff can gain competence in specified areas.

Another interesting component of this study was the degree of self-disclosure of the counselors, as reported by the participants. For example, one participant noted that his counselor was knowledgeable because “he used to do pills. He used to do cocaine. He drank. He used heroin. I mean he knows all that. He knows all of this” (Conner et al., 2010, p. 25). Another participant stated that “Like my counselor now, she’s a couple of years older than me and she’s been where I am. She’s done drugs. She’s done it all.” (Conner et al., 2010, p. 24). It is likely that these patients’ counselors were former addicts in recovery themselves who had been trained to work with peers, allowing for the high degree of self-disclosure. Self-disclosure between a mental health counselor and patient would likely be much more limited unless the information disclosed was beneficial to the recipient. The results of this study do speak to the need to question who is providing

services within methadone clinics. If preference of the patients dictates peer counselors rather than mental health therapists, then it would be important to reevaluate the effectiveness of the current services offered (Conner et al., 2010).

Rosen, Morse, and Reynolds (2010) presented problem-solving therapy as a method for treating the depression of older methadone maintenance treatment patients. The authors reviewed the current challenges that prevent older adult methadone patients from receiving adequate treatment for their depression. One critical challenge addressed is that treatment for substance dependence-related disorders does not take into account the age-related changes, including cognitive ability and the impact of long-term substance abuse. An additional and persistent challenge is the lack of funding for therapists and the specialized skill set of the chemical dependency staff working at methadone dosing clinics. Rosen et al. recommended problem-solving therapy, an empirically tested brief intervention, to address depression in older adult methadone patients. In problem-solving therapy, patients are taught systematic skills for solving problems in the present through a series of seven stages. The critical skills to be employed in problem-solving therapy include “addressing problems that are under patients’ control, setting realistic and achievable goals, generating and evaluating potential solutions systematically, and evaluating the outcome of the proposed action plan” (Rosen et al., 2010, p. 136). Problem-solving therapy can be implemented within methadone treatment settings due to its adaptability in diverse settings with limited funding, its efficacy in treating depression in older adults with cognitive impairments, and the feasibility of training the staff already in place. The authors pointed to the importance of adapting therapy to specifically target depression in older adult methadone patients due to the high correlation between late-life

depression and relapse (Rosen et al., 2010). This review of the current challenges and the proposed suggestions are critical when adapting treatment to specific populations. When examining the use of mental health services by older methadone patients, it would prove futile if the available services did not target the specific needs of this population.

Methods

In the present study, loneliness was defined by the participants' ratings of their feelings of loneliness and social isolation on the UCLA Loneliness Scale-Version 3 (Russell, 1996). Perceived stigmatization was defined and described by the number of perceived stigmas endorsed on the Perceived Stigma of Substance Abuse Scale (Luoma, O'Hair, Kohlenberg, Hayes, & Fletcher, 2010). Utilization of mental health services was measured by the number of services the participant self-reported he or she was engaged in at the time of data collection. A cross-sectional survey research design was employed in order to explore the relationships among these variables utilizing self-administered questionnaires. The purpose of the research design was to provide a quantitative description of the variables studied through the examination of a sample of the population of older adult opiate substitution treatment clients, with the overall intention of generalizing the results to the larger population.

Site

Therapeutic Health Services, referred to hereafter as THS, is a non-profit chemical dependency and mental health agency located in the greater Seattle metropolitan area of Washington State. THS opened in 1972 and is accredited by the Commission on the Accreditation of Rehabilitation Facilities (CARF). Presently, THS offers chemical dependency and mental health services in nine locations across King and Snohomish Counties. Each branch is licensed by the State of Washington Department of Social and Health Services. The nine branches of THS offer a variety of services and are staffed by licensed mental health and chemical dependency professionals, case managers, vocational rehabilitation specialists, nurses, physicians, psychologists, and psychiatrists. THS provides alcohol and drug services including assessment and evaluation, Alcohol

and Drug Information School (ADIS), intensive outpatient treatment, opiate substitution treatment, relapse prevention, and DUI, drug court, and court-ordered treatment. THS offers treatment for co-occurring disorders among adults and a special program, ENCOMPASS, designed to address co-occurring disorders in youth ages 13–25. Mental health services for adults offered at THS include treatment for anxiety and depression, access to community support services, drop-in groups, group counseling, medication management, psychiatric evaluation and mental health wraparound services. Additional services offered by THS include a veterans' outreach program, a women veterans' program, childcare, and vocational programs. THS is currently working toward developing primary care services at each of the nine sites. Of the nine THS sites, five also serve as methadone dispensary sites. Dispensary sites have regular daily dosing hours between 6 a.m. and 12 p.m. THS is one of the few agencies across the state of Washington that offers a multi-disciplinary team approach to opiate substitution treatment.

Sample

Using purposive sampling, the participants for the study consisted of 100 older adults who were actively enrolled in the opiate substitution treatment program at THS at the time of data collection. In order to participate in the study, the individuals were required to be 50 years or older and English speaking. This was a sample of convenience based across five methadone dosing sites in the greater Seattle area. The sites included the Summit and Seneca branches located in Capitol Hill, the Eastside branch located in Bellevue, and the Everett and Shoreline branches located north of Seattle.

Recruitment and procedure. For clients currently enrolled in the Opiate Substitution Treatment (OST) program at Therapeutic Health Services (THS), the opportunity to volunteer to participate in the study was offered by their regular chemical dependency (CD) counselors over the duration of a two month period. Clients were offered a \$3 McDonald's gift card as an incentive that was provided to them by their CD counselor following participation. OST clients were required to meet with their CD counselors once a month as a part of their treatment requirements. At the beginning of their monthly case management session, clients were offered the opportunity to participate in the study. Participants were asked to read the informed consent and instructions about participating in the study. The CD counselors informed the participants that it was their choice to participate and participation would not affect their relationships with their counselors, THS, or their treatment in any way. The CD counselors had previously been instructed by the researcher as to the format of recruiting the participants (i.e., introducing the purpose of the study and explaining the informed consent process), as well as the proper protocol for administering the surveys (i.e., giving the surveys to the participants at the beginning of the monthly session and allowing them to complete the surveys in the confines of the CD counselor's office). The CD counselors remained in the office while the participants completed the surveys. The CD counselors were advised not to help the participant in answering the survey questions. The CD counselor was only allowed to help the participant with clarifying the instructions if any confusion arose. The participants were then asked to place their surveys in a designated locked drop box located for the purposes of anonymity in the CD counselor's office and the CD counselor provided the participant with the incentive.

Incentive. In addition to appealing to the participants' desire to help with enhancing services for future clients who are 50 years and older, participants were offered \$3 gift cards to McDonald's as an incentive for participation.

Materials

Demographic information. Demographic characteristics collected were limited to the age of the participant and were attached to the survey addressing the independent variable of the utilization of mental health services.

Perceived Stigma of Substance Abuse Scale (PSAS). The Perceived Stigma of Substance Abuse Scale is an eight-item self-report measure designed to assess perceived stigma toward substance abuse users (Luoma et al., 2010). The scale was adapted from an existing measure addressing perceived stigma toward serious mental illness. Luoma et al. developed the PSAS after discovering that there were no existing measures that specifically addressed how perceived stigma impacts or serves as a barrier to seeking treatment. The authors recruited 252 adult participants in treatment for substance abuse for the purpose of evaluating the scale. Participants were administered a number of self-report measures, including an original 12-item measure as modeled after a prior developed measure of perceived stigma toward severe mental illness. Following administration of the PSAS, the authors eliminated three items based on low quality and fit regarding the construct being measured. An additional item was eliminated following an examination of the correlation matrix for the remaining nine items. The authors examined the relationship between the PSAS and demographics and determined that "perceived stigma was not related to gender, age, education level, number of previous treatment episodes, ethnicity, employment status, or whether the person was having

problems with the legal system” (Luoma et al., 2010, p. 51). The authors were able to conclude, following a year of rigorous testing, that the Perceived Stigma of Substance Abuse Scale had good face validity, reliability and construct validity. Independent raters confirmed the face validity and quality of the content scales. Convergent validity was demonstrated through moderate correlations of a number of other measures of stigma. Luoma et al. noted that higher perceived stigmatization correlated with higher levels of shame, secrecy and concealment as a coping method, and internalized stigma.

The brief nature of the Perceived Stigma of Substance Abuse Scale made it a valuable measure for the present study. The eight items are measured on a 4-point Likert scale, ranging from (1) strongly disagree to (4) strongly agree. Six of the eight items on the scale are reverse scored. The scale is limited due to its’ brevity and, as a result, has weaker internal consistency and may not adequately capture all constructs as related to stigma in a substance abusing population. Despite these weaknesses, the brevity allowed the participants to complete the survey in a reasonable time frame and eliminated the risk of absorbing too much of their time with their CD counselors. Luoma et al. (2010) granted researchers permission to use the PSAS with the understanding that they would like to be informed about any results and/or publications resulting from the use of their measure.

UCLA Loneliness Scale (Version 3). The initial version of the UCLA Loneliness Scale was introduced in 1973 and has since been revised twice. The scale was initially developed on college students and, over the past several decades, the need for a measure of loneliness among varying populations has become evident. Prior to the development of the third version, Russell (1996) found that the scale had a problem with wording.

Specifically, the phrases on the measure included double negatives that were difficult for respondents to understand leading to a reduction in reliability. To rectify the problem Russell (1996), along with a number of researchers over the duration of more than a decade, developed the measure to be used with varying populations (Russell et al., 1980). Such populations included examining the reliability and validity of the measure when administered to the elderly. In a longitudinal study of 301 participants over the age of 65, baseline interviews were conducted targeting the acquisition of information specific to quality of life, depression, social support network, health factors and medication regimen through a number of administered surveys including the UCLA Loneliness Scale (Version 3). One year later, the participants were again administered the third version of the scale. Results indicated a test-retest correlation of .73, demonstrating high reliability. Loneliness scores further indicated a strong relationship to the perceived quality of the participant's interpersonal relationships; furthermore, loneliness was significantly related to the measures of well-being and self-report ratings of health status and chronic illness (Russell, 1996).

Throughout the literature review above, it is frequently evidenced that loneliness is related to chronic health problems and physical ailments among older adults. Russell (1996) found similar correlations during the development of the third version of the UCLA Loneliness Scale when used with adults ages 65 and older. Physical ailments and chronic illness are important factors to consider when implementing services to accommodate the needs of older adults. Older adults enrolled in opiate substitution treatment often endure more physical health problems than the general population, therefore, it is evident that the interaction of many challenging life experiences may lead

to higher degrees of loneliness. The UCLA Loneliness Scale (Version 3) will be used in the present study as a subjective measure for examining the construct of loneliness. The 20-item self-report measure uses a 4-point Likert scale, ranging from “1” never to “4” always. Nine of the items on the scale are reversed scored. The measure is significantly longer than the Perceived Stigma of Substance Abuse Scale, however, the questions have been streamlined specifically for the purpose of readability and simplification. These factors allowed the participants in the present study to complete the scale in a reasonable time frame. The authors of the UCLA Loneliness Scale (Version 3) grant all researchers permission to utilize their measure with the understanding that a summary of the findings will be sent to them upon completion of the study (Russell, 1996).

Utilization of mental health services. Participants’ use of mental health services were assessed using a self-report survey designed to quantitatively measure the number of services an individual was enrolled in at the time of data collection. The participants were asked to check boxes corresponding with the services they were using.

Data Analysis

Data consisted of the age of the participant, the number of mental health services the participant reported being enrolled in, the results of the Perceived Stigma of Substance Abuse Scale, and the results of the UCLA Loneliness Scale (Version 3). The age of the participant was asked strictly for the purpose of confirming that the participant was 50 years or older and eligible to participate in the study. The number of mental health services a participant could have reported being enrolled in ranged from zero services to 12 services. The Perceived Stigma of Substance Abuse Scale provided a single total score ranging from 8–32, with higher scores indicative of a greater degree of

perceived stigma. Six reversed scored items include numbers 1, 2, 3, 4, 6, and 8. The UCLA Loneliness Scale (Version 3) provided a single total score ranging from 20–80, with higher scores indicative of a greater degree of loneliness. Nine reversed scored items included numbers 1, 5, 6, 9, 10, 15, 16, 19, and 20.

A multiple regression was used to statistically analyze the data using the Statistical Package for the Social Sciences (SPSS). Specifically, a multiple regression was used to predict the dependent variable, the participants' utilization of mental health services, based on the values acquired from the two independent variables, the UCLA Loneliness Scale (Version 3) and the Perceived Stigma of Substance Abuse Scale. The utilization of the multiple regression statistic allowed for the determination of the overall fit, or variance explained, of the model and the relative contribution of each of the independent variables to the total variance explained (Creswell, 2009).

Using a multiple regression to analyze the data required that the data pass eight assumptions. Because the use of services was a count variable, it was possible that participants would score a "0" on the dependent variable. It was predicted that the dependent variable would be normally distributed, however, if the data collected on the dependent variable was not normally distributed a negative binomial regression would have been employed. If perceived stigmatization and loneliness were highly correlated this would have violated the assumption that the data show no multicollinearity. Such a violation would have created difficulty when discerning which independent variable contributed to the variance explained in the dependent variable. Following collection of the data, SPSS was used to check that none of the eight assumptions for using a multiple regression statistic had been violated (Creswell, 2009).

The eight assumptions below were deemed to have been met following data collection, allowing for the use of the multiple regression statistic to analyze the data:

1. The dependent variable, use of mental health services, was measured on a continuous scale. In the present study, the dependent variable was a ratio variable as indicated by the number of services the participant reported being engaged in.
2. The data collected utilized two or more independent variables that were categorical in nature. Categorical includes nominal variables which defined the measurements of both the UCLA Loneliness Scale (Version 3) and the Perceived Stigma of Substance Abuse Scale.
3. This assumption required that the data had independence of observations. This was checked during the data analysis phase using the Durbin-Watson statistic which was run through SPSS. This assumption was tested once data analysis was initiated following the data collection phase of the study.
4. This assumption required that there be a linear relationship between the dependent variable and each of the independent variables, as well as between the dependent variable and independent variables collectively. Using SPSS, both scatterplots and partial regression plots were created to visually interpret the linearity.
5. The data showed homoscedasticity. Homoscedasticity occurs when the variances along the line of best fit remain similar as you move along the line. In the present study, the number of mental health services a participant was enrolled in exhibited similar amounts of variance across the range of values for the independent variables. SPSS calculated the Levine statistic to test for the

homogeneity of variances. The assumption was met which led to the enhancement of the power of the results

6. The data was tested to assure there was no multicollinearity. Mutlicollinearity would have occurred if the two independent variables were highly correlated with one another. This would have created a problem due to a lack of clarity regarding which independent variable contributed to the variance explained in the dependent variable. SPSS was used to check for multicollinearity by inspecting the correlation coefficients and determining the variance inflation factor (VIF).

7. When conducting the multiple regression analysis, there should be no significant outliers (also called influential points and high leverage points) in the data. Such outliers may have a negative effect on the regression equation that is used to predict the value of the dependent variable based on the independent variables. Using a measure of influence, Cook's Distance, SPSS helped to determine the specific influential points in the data and they were removed for practical purposes.

8. The final assumption required checking that the errors were normally distributed. To check that this assumption had not been violated, a histogram and normal probability plot were utilized to determine the normality of the data.

The data collected met all eight of the assumptions for analysis using a multiple regression, as determined through SPSS. Assumptions #1 and #2 were met prior to analysis based on the methodology of the present study.

Results

There were 104 individuals who participated in this study, however data could only be collected from 102 participants as two individuals produced invalid protocols. Additionally, eight cases (2, 29, 50, 62, 69, 78, 80, 86) were identified as outliers and were removed from the data set, resulting in a final sample size of 94 participants. The ages of participants ranged from 50 to 71, with a mean age of 57.22 ($SD = 5.13$). Participants reported receiving a mean of 2.13 services ($SD = 1.07$), with a range of 1 to 4. The participant scores on the UCLA Loneliness Scale ranged from 26 to 71, with a mean score of 48.96 ($SD = 9.99$), and scores on the Perceived Stigma of Substance Abuse Scale (PSAS) ranged from 17 to 32, with a mean score of 22.13 ($SD = 3.15$).

Bivariate Pearson correlations were performed on the independent variables (UCLA and PSAS scales) and the dependent variable (Number of Services), the results of which are displayed in Table 1 below.

		Number of Services	UCLA	PSAS
Number of Services	Pearson Correlation	1	.214*	.221*
	Sig. (2-tailed)		.039	.032
	N	94	94	94
UCLA	Pearson Correlation	.214*	1	.288**
	Sig. (2-tailed)	.039		.005
	N	94	94	94
PSAS	Pearson Correlation	.221*	.288**	1
	Sig. (2-tailed)	.032	.005	
	N	94	94	94

Note. * Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

There was a significant positive correlation between number of services and scores on the UCLA scale ($r = .214$, $N = 94$, $p < .05$, two-tailed). This is a fairly weak correlation that explains 4.58% of the variation. Figure 1 depicts the distribution of the data points along the regression line, a linear relationship.

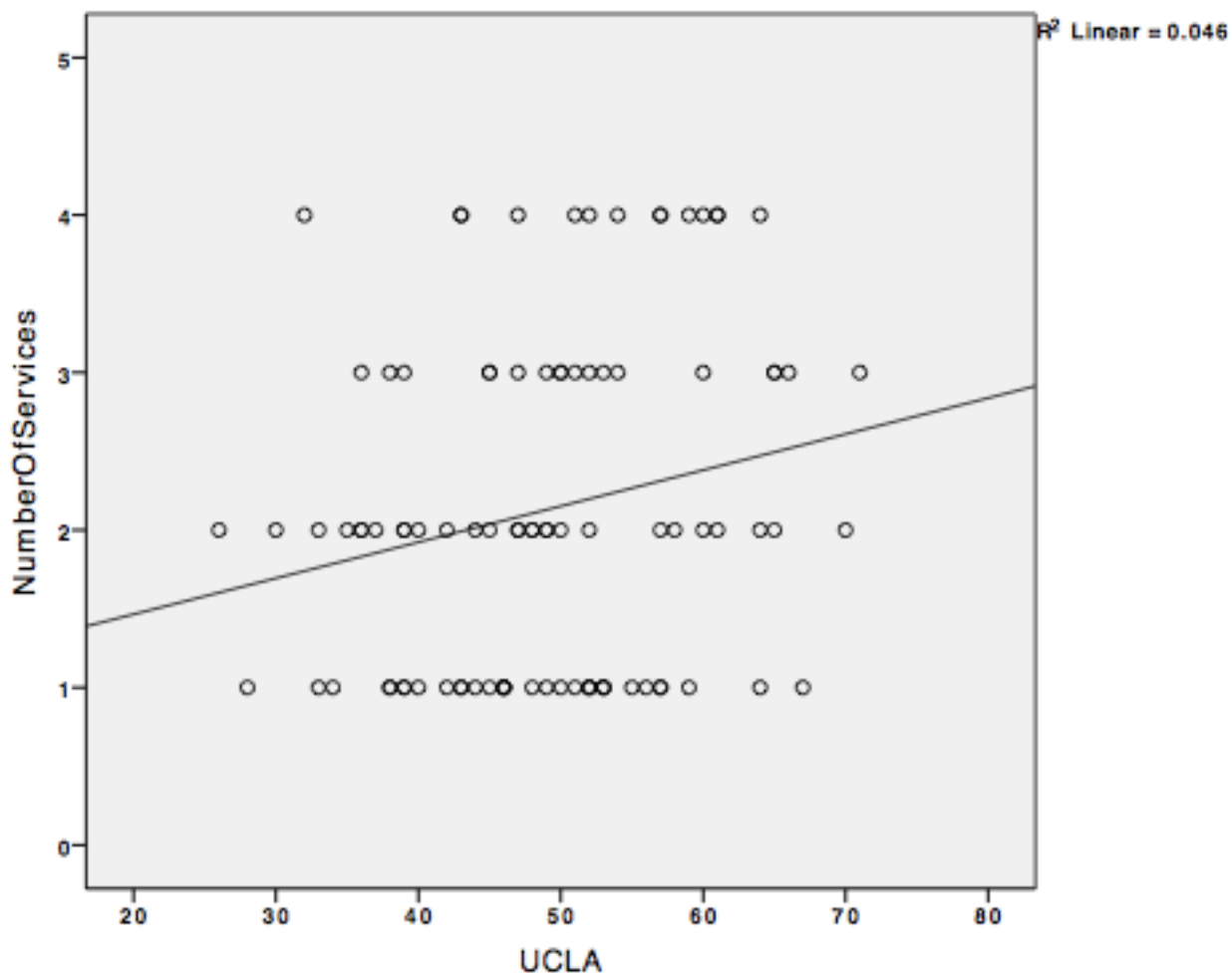


Figure 1. Correlation between number of services and UCLA scores.

There was also a significant correlation found between number of services and scores on the PSAS scale ($r = .221$, $N = 94$, $p < .05$, two-tailed). This is a fairly weak correlation

that explains 4.88% of the variation. Figure 2 depicts the distribution of the data points along the regression line in a linear relationship.

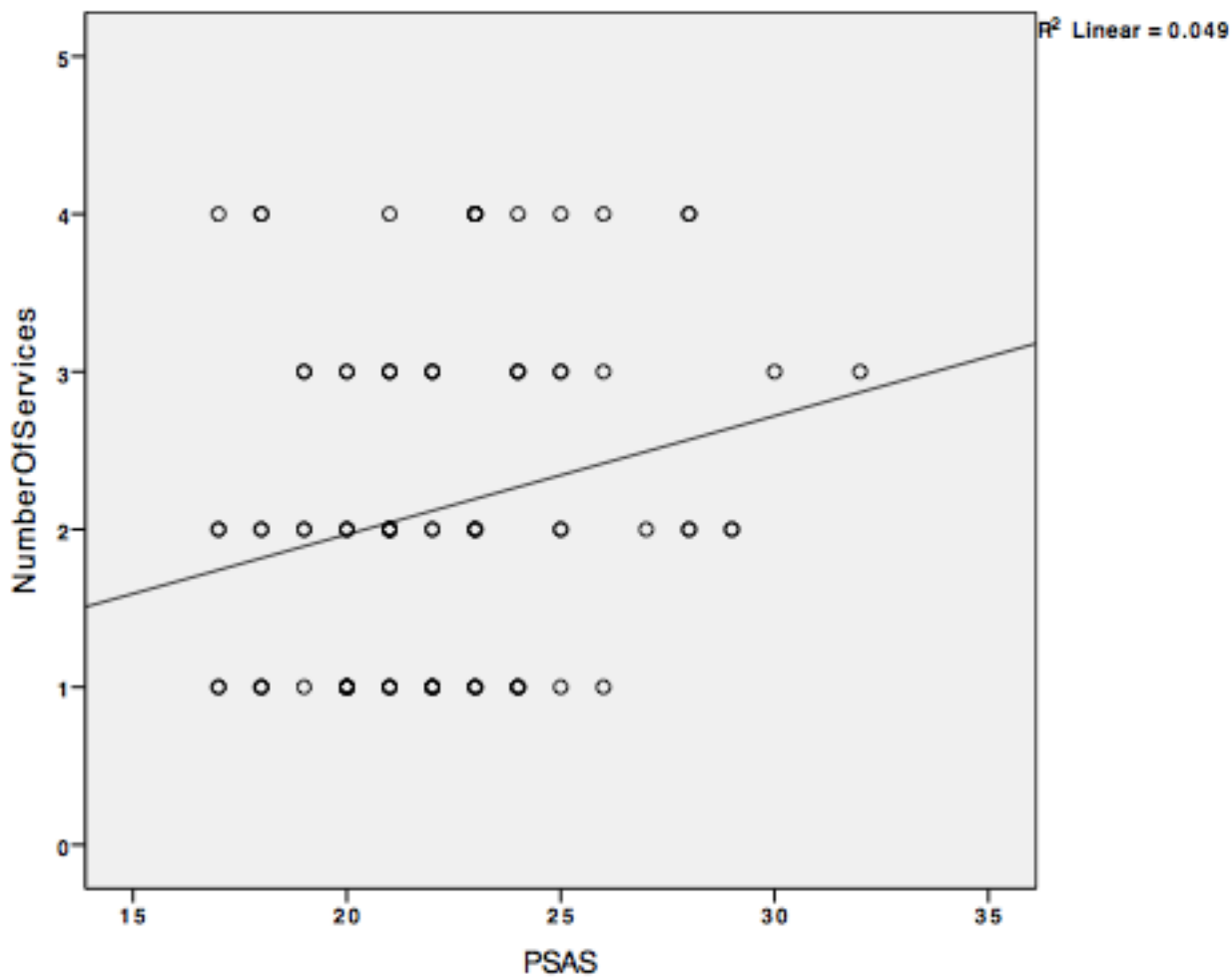


Figure 2. Correlation between number of services and PSAS scores.

Additionally, there was a significant positive correlation between scores on the UCLA and PSAS scales ($r = .288$, $N = 94$, $p < .01$, two-tailed). This is also a fairly weak correlation, explaining 8.29% of the variation. Figure 3 shows that the data points are fairly well distributed along the regression line, in a linear relationship with few outliers.

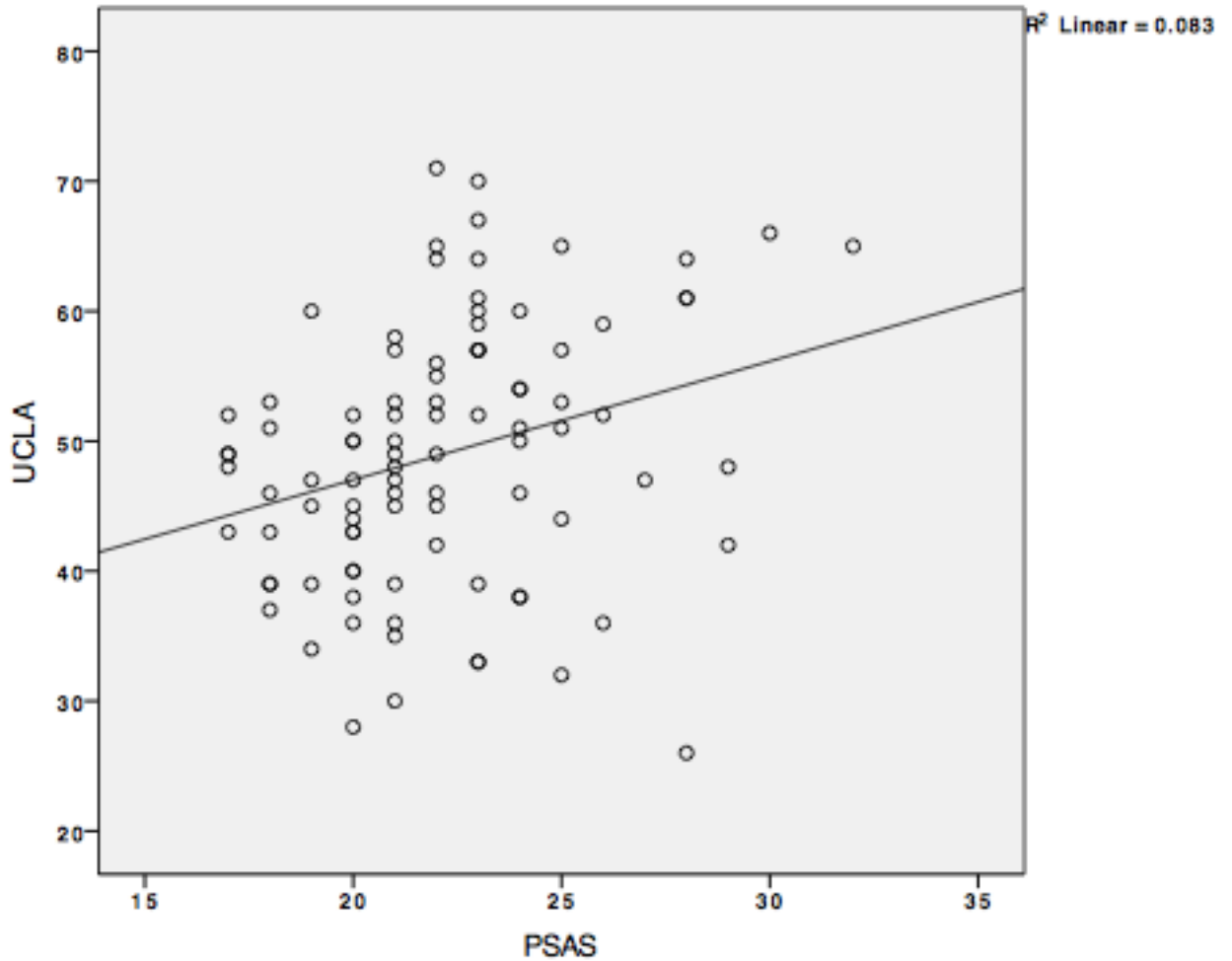


Figure 3. Correlation between UCLA and PSAS scores.

UCLA and PSAS scores were chosen as predictor variables that might be used to predict the criterion variable of number of services used by participants, which would be determined through a multiple regression analysis. Such an analysis would not be appropriate if the predictor variables are strongly correlated, as multicollinearity between predictor variables can be problematic when trying to draw inferences about the relative contribution of each predictor variable to the overall success of the standard model. While UCLA and PSAS scores were correlated ($r = .288$), this is a weak correlation ($.30 = \text{weak}$, $.50 = \text{moderate}$, $.80 = \text{strong}$) which allows a multiple regression analysis to be used.

The dependent variables, UCLA and PSAS scores, were entered as predictors into a multiple regression analysis using the standard model. A significant model emerged: $F(2,91) = 3.613, p < .05$. The model explains 5.3% of the variance in number of services utilized by participants (Adjusted R Square = .053). Table 2 gives information about regression coefficients for the predictor variables entered into the model. Both UCLA and PSAS scores were found to be significant predictors of number of services.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.039	.831		-.047	.963		
UCLA	.018	.011	.164	1.552	.124	.917	1.090
PSAS	.059	.036	.174	1.655	.101	.917	1.090

Note. Dependent Variable: Number of Services

Figure 4 shows a scatterplot of standardized residuals and standardized predicted values for the criterion variable, number of services. The multiple regression equation, $Y' = A + B1(X1) + B2(X2)$, as it pertains to this model is:

$$\text{Number of Services} = -.039 + .018(\text{UCLA}) + .059(\text{PSAS})$$

The multiple regression equation for this model can be used to predict the number of services (Y') used by individuals in a similar population by taking into account the Y intercept (A), which is the value predicted for Y when all X s equal zero, the regression coefficient for each variable ($B1$ and $B2$), which indicates how much Y' will change if

that X changes by one unit, and the individual's scores on the UCLA (X1) and PSAS (X2) scales.

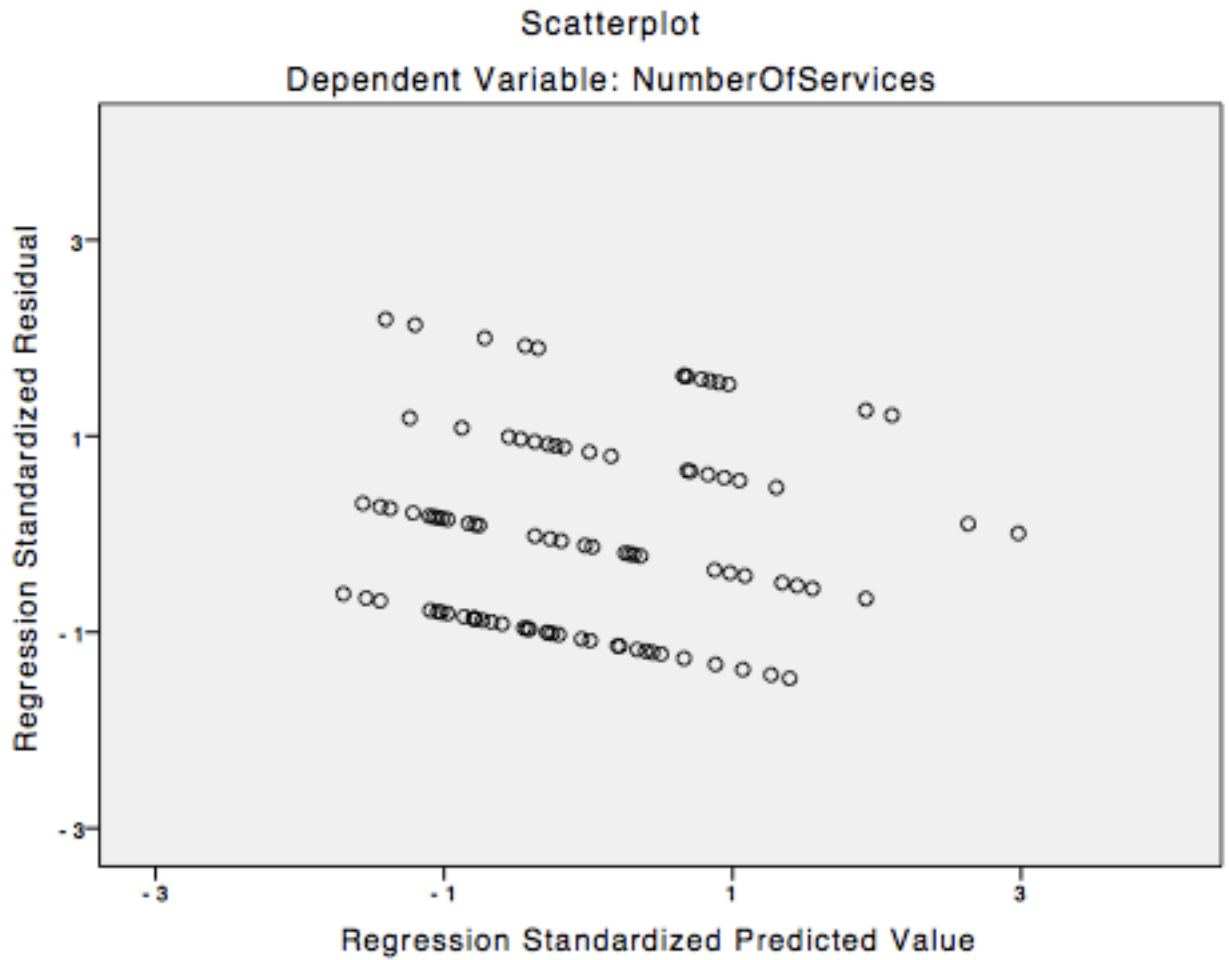


Figure 4. Scatterplot of standardized residuals and standardized predicted values for number of services.

Discussion

This section presents a summary of the study and discusses the findings in an attempt to analyze and identify the concept of the existence of perceived stigmatization and loneliness among older adults enrolled in opiate substitution treatment, serving as a barrier to engaging in available mental health services. Important conclusions will be drawn from the data presented above and the implications for action to reduce perceived stigmatization and loneliness among older adults in opiate substitution will be presented; furthermore, limitations of the present study and recommendations for future research will be identified.

Summary of the Findings

The purpose of this study was to identify if there was a verifiable relationship between loneliness, perceived stigmatization, and the utilization of available mental health services among adults, aged 50 and older, in opiate substitution treatment. It was hypothesized that participants who endorsed a greater degree of loneliness and perceived stigmatization would underutilize available mental health services. It was further hypothesized that there would be a positive correlation between loneliness and perceived stigmatization. A population of 104 older adults actively enrolled in opiate substitution across four branches of Therapeutic Health Services served as the participants for the present study. Two invalid protocols and eight additional outliers were removed from the data analysis resulting in 94 total participants.

The research instrument design included the utilization of the UCLA Loneliness Scale-Version 3, a 20-item scale designed to measure one's subjective feelings of loneliness as well as feelings of social isolation and the Perceived Stigma of Substance

Abuse Scale, an 8-item scale designed to assess perceived stigma toward substance users. An additional self-report survey was utilized to quantitatively measure the participant's use of mental health services. Participants were asked to state their age as a means of assuring that they were 50 years or older and met the requirements for participation in the study.

A multiple regression was utilized, using the Statistical Package for the Social Sciences (SPSS), to predict the dependent variable, the participants' utilization of mental health services, based on the values acquired from the two independent variables, the UCLA Loneliness Scale (Version 3) and the Perceived Stigma of Substance Abuse Scale. The statistic allowed for the determination of the overall fit, variance explained, of the model and the relative contribution of each of the independent variables to the total variance explained (Creswell, 2009). Utilizing a multiple regression required the data to meet eight assumptions. The first two assumptions were met based on the methodology of the study and this was established prior to the data collection phase. The following six assumptions were determined to have been met during the data analysis process using SPSS and can be viewed in the results section of this study. Careful analysis determined that the independent variables, loneliness and perceived stigmatization, were weakly correlated ($r = 2.88$), allowing for forward movement with the analysis using the multiple regression statistic. A multiple regression analysis requires that there are no significant outliers in the data, for the purpose of the present study, eight participants were determined to be such outliers and were subsequently removed from the data set. Both UCLA and PSAS scores were found to be significant predictors of the number of services

a participant utilizes. The results provide a multiple regression equation that can be utilized in future research with similar populations to predict the number of services used.

The results of this study yielded statistically significant, although weak, positive correlations between each of the independent variables, loneliness and perceived stigmatization, and the number of available mental health services the participants reported being engaged in. The hypothesis, older adults in opiate substitution treatment who experience loneliness and/or perceived stigmatization underutilize available mental health services, is not supported by the findings; however, the statistically significant results provide room for inference. The positive correlations indicate that participants who reported utilizing more available mental health services also tended to indicate higher degrees of both loneliness and perceived stigmatization. While the initial hypothesis proposed that a participant who reports experiencing a higher degree of loneliness and perceives to be stigmatized would have a tendency to isolate and not enroll in available services was not supported, the results of this study provide an alternative perspective in that an individual with a higher degree of loneliness and perceived stigmatization would tend to seek out available services as a means of addressing these feelings in a supportive environment.

A significant positive correlation was found between scores on the UCLA and PSAS scales, confirming the initial hypothesis that there is a relationship between loneliness and perceived stigmatization. The positive correlation can be interpreted as the tendency for a participant who endorses a higher degree of loneliness to also endorse a higher degree of perceived stigmatization. This finding also speaks to the concept that

older adults enrolled in opiate substitution treatment face a number of compounding challenges that should be addressed within a multi-disciplinary treatment setting.

Findings Related to the Literature

After examining the results of this study and the related literature review, there is a general consensus that loneliness and various degrees of stigmatization among older adults in opiate substitution treatment exists. The results of the present study are optimistic in indicating that those who are experiencing higher levels of both loneliness and perceived stigmatization are engaging in available mental health services. The mean score of participants' ratings of loneliness in this study, 48.96 on a scale ranging from a low possible score of 20 and a high possible score of 80, confirms the existence of loneliness among the studied population. Valtorta and Hanratty (2012) and Doukas (2011b) reported overlapping risk factors for both social isolation and loneliness. The former author addressed the general population of older adults and the latter older adults in methadone maintenance treatment; yet, both studies identified risk factors for social isolation and loneliness to include poverty, one's social environment, access to transportation, physical health, mental health, and disability. Within the opiate substitution treatment setting, all of the aforementioned risk factors may be compounded given the deleterious effects of long-term drug abuse. Valtorta and Hanratty proposed that a potential cost effective strategy to rising health care costs would be to address the impact of loneliness and social isolation on physical health. When long-term substance abuse is added to the picture, the impact on physical health takes on a whole new persona and speaks to the need to address potential risk factors that can be controlled and potentially reduced (i.e., loneliness and perceived stigmatization).

The mean scores of participants' ratings of perceived stigmatization in this study, 22.13 with a low possible score of eight and a high possible score of 32, indicates that there is a general sense of perceived stigma among the population studied. Perceived stigma is defined as "the beliefs members of a stigmatized group have about the prevalence of stigmatizing attitudes and actions in society" (Luoma et al., 2007, p. 1332). While the present study did not specifically address what caused this high level of reported perceived stigma, prior studies did address stigma on a general level in opiate substitution treatment. Gourlay et al. (2005) found, while investigating stigma within methadone programs, that a strong self-concept was challenging to maintain as identified by a subgroup of interviewees who had limited economic resources and felt socially disconnected. This group, identified as "conflicted" by the authors, reported feeling like "junkies" in the eyes of the non-using population. Doukas (2011b) further identified methadone maintenance treatment as being perceived as another drug addiction, yet one that exists within a public treatment system. This perception contributed to participants feeling the need to live in secrecy, with tremendous fear and anxiety over being found out. Frischknecht et al. (2011) identified such intense feelings of fear and anxiety, as pointed out by Doukas (2011b), being comparative to a heightened stress response resulting from the experience of discrimination. This heightened stress response was discussed as a major risk factor for relapse in addiction; furthermore, the authors identified perceived stigmatization as highly associated with a lower quality of life among opiate-dependent participants and further identified that this stigmatization increased the incidence of depression and anxiety. In the present study, the mean results of the participants on the Perceived Stigma of Substance Abuse Scale indicates the

pervasiveness of common expectations of being further stigmatized within opiate substitution treatment settings and speaks to the continued need to address the potential impact of such experiences on treatment.

The present study found that those reporting higher degrees of loneliness and perceived stigma were more likely to engage in mental health services; yet, therein lies a question as to whether those who did not choose to engage in additional services, who subsequently reported lesser perceived stigma and loneliness, chose to self-report in a manner that would align with their beliefs of being able to handle their addiction on their own. Cunningham et al. (1993) investigated whether alcoholics who sought treatment experienced different barriers than those who did not seek treatment. The authors found that participants who did not seek treatment and continued to abuse alcohol felt not only that they could handle their addiction on their own, but that they admitted to being highly deterred from seeking treatment due to the stigma attached to the term “alcoholic”. Participants who reached abstinence on their own identified embarrassment and pride as their primary reason for avoiding treatment. The results of Cunningham et al. lends to the present study in the importance of addressing stigma as it relates to the ideology that opiate substitution treatment is just another drug addiction; furthermore, if embarrassment, pride, and stigma attached to treatment prevent addicts from seeking help and reporting that they need help, then significant changes need to be made with the goal of reaching out to those too fearful to seek help themselves in an unprejudiced manner.

Limitations of the Present Study

Limitations of the present study’s methodology and generalizability will be addressed with the goal of making recommendations that future studies may implement.

The present study addressed sensitive variables, loneliness and perceived stigmatization, among older adults 50 years and older who were enrolled in an opiate substitution treatment program where they received daily methadone dosing. Prior literature suggested that older adults enrolled in opiate substitution treatment (OST) often feel judged and policed by treatment staff for having been on methadone for decades. The sentiment of being an old junkie frequently came up and was associated with feelings of shame, specifically regarding being older than most of the daily clientele (Conner & Rosen, 2008).

This lends to one of the first limitations of the methodology of the present study. Participants were offered the opportunity to complete surveys within the confines of their chemical dependency counselors' offices. Chemical dependency counselors were instructed to offer their clients the opportunity to participate in the study and assure their clients that participation was voluntary and would have no impact on their current treatment. While a number of clients declined to participate, those who did may have felt pressure to do so as the result of stigma and general fear and anxiety. Clients receiving daily doses of methadone often have an intense fear of losing their dosing privileges and being kicked out of the clinic. This fear is driven by the inevitable illness of opiate withdrawal and the subsequently high potential for relapse. At Therapeutic Health Services, rules are strict and immediate discharge from the program occurs often. Generally, continued substance abuse as confirmed by urine analysis leads to discharge, however, there are also incidences of loitering following dosing hours and drug seeking and/or selling behaviors that can impact continued treatment. Additionally, association with those who have been discharged or are on probation can lead to permanent discharge

from the program. The sentiment I observed from clients was that there is a feeling of walking on egg shells and an innate fear of staff in general. Taking this into consideration, there is a possibility that participants felt uncomfortable within the confines of their chemical dependency counselors' offices not only completing the surveys, but with mistrusting the system as a whole. Participants may have answered survey questions in a favorable light, so as not to admit feeling a greater degree of perceived stigmatization or loneliness. Despite the ensured confidentiality and the anonymous nature of the data collection, the methodology of data collection may have impacted the results of the study. Future research may consider the impact of the setting on potential participants; furthermore, future research may want to consider using data collectors who have no relation or association to the treatment setting with the goal of eliminating response bias.

The nature of self-report surveys are inherently limited. Within the present study, there are several potential biases that must be taken into consideration. The bias of attribution, wherein a participant may attribute positive outcomes to oneself and negative outcomes to an external force, may exist given the content of the scales used. The UCLA Loneliness Scale (Version 3) asks questions that could potentially be dismissed and attributed to the negative actions of others. For example, question 8 asks "How often do you feel that your interests and ideas are not shared by those around you?", attribution bias may lead a respondent to answer "never" due to the sense that it is the "others" who don't have the capacity to share interests or ideas, when in fact "always" may be a more appropriate answer if an individual alienates others due to a sense of superiority or is generally unwilling to give "others" a chance due to fear or shame and ultimately

becomes isolated. Self-report may lead to exaggerated responses or embellishment by the respondent. On the PSAS, for example, question 8 states “Most people would be willing to date someone who has been treated for substance abuse,” respondents may immediately respond “strongly disagree” without considering the depth of the question or their own personal experiences. Self-report is impacted by the respondent’s mood, personal experiences, and general self-concept. If a respondent had a bad experience immediately prior to completing the surveys, they may answer accordingly and the self-report does not provide a true sense of the person’s broader range of experiences. It is equally important to not discredit an individual’s self-report as it provides the respondent’s view and perception. In the present study, anonymous self-report may in fact provide the opportunity for deeper self-reflection and honesty in responding. Future studies may include an additional non self-report measure with the goal of decreasing response bias and allowing for higher validity.

An important limitation that must be addressed is the self-report measure utilized to assess the number of services an individual was actively participating in, either at Therapeutic Health Services or in the community. The measure was designed to determine if the respondent was utilizing available mental health services, in addition to receiving opiate substitution treatment. The first activity listed is “Individual Counseling (one on one with a therapist/case manager).” OST clients at Therapeutic Health Services are assigned a chemical dependency counselor upon admission to the program who they must report to monthly. The possibility that a respondent read “Counseling” and checked the box as a participant in that service may have led to a higher response rate of participants reporting engagement in mental health services. While this limitation may

have impacted the results, there is also a strong possibility that the respondents asked their chemical dependency counselor what their role entailed and then answered appropriately. The informed consent explained the purpose of the study, specifically to determine “how loneliness, perceived stigmatization, and the use of mental health services are related to one another,” further providing clarity regarding the overall goal of the study in relation to mental health specifically. Future research will benefit from delineating “therapist/case manager” and including a sentence on the measure that states “in addition to your chemical dependency counselor.”

Conclusions and Future Prospects

The present study investigated the variables of loneliness and perceived stigmatization among older adults currently enrolled in opiate substitution treatment at Therapeutic Health Services in Seattle, Washington. The purpose of the study was to determine if there was a relationship between the aforementioned variables and the utilization of mental health services. Specifically, it was hypothesized that a participant endorsing higher degrees of loneliness and perceived stigmatization would underutilize available mental health services. The hypothesis was disproved and, in fact, the results of this study indicated that those endorsing loneliness and perceived stigmatization were more engaged in mental health services than their counterparts. While the results are surprising, it can now be surmised that those feeling alone and isolated were more readily involved in mental health groups and individual therapy; furthermore, those respondents who perceived they would be stigmatized chose to engage in mental health services. As the primary researcher, I am inclined to suspect that if the same participants were re-surveyed in six months the results may in fact be significantly different. Those who are

currently engaged in mental health services may see a reduction in their loneliness and perceived stigmatization, whereas those not involved in mental health services may see an increase in both variables. Future research may benefit from utilizing a longitudinal approach and re-testing the same respondents six months later to assess for treatment effects and reduction in previously endorsed symptoms.

The present study was created from a personal desire to determine how Therapeutic Health Services, and opiate substitution treatment centers on a broader level, could better meet the needs of older adults. The idea stemmed from my own personal work as a mental health clinician at THS and specifically from a number of elderly clients who I worked with. I found that a number of my clients began to experience physical health issues that prevented them from engaging in available services. A common thread among my clients was that they felt lonely and isolated as the result of their substance use and abuse. Many reported having lost loved ones, friends, and endorsed emotional and physical cut-offs from family due to a long life of substance abuse and criminal behaviors. Clients also frequently identified the clinic as a stigmatizing environment. One particular 65-year-old client who had been on methadone for 20 years felt that coming to the clinic was embarrassing and shameful; particularly, she was aware that many of the other clients continued to abuse the system by engaging in drug seeking and selling behaviors and she felt that she was lumped into that group. Another client who was suffering from a worsening medical condition struggled to make it to the clinic on a daily basis and felt that it was unfair that he couldn't be trusted to take his daily doses home despite having had clean urine analyses for the prior five years. I recently learned that this individual passed away from his medical condition just two

months following the completion of the study. These are the stories that inspired me to conduct the present study with the goal of better understanding how to adapt services for a growing elderly population. With the high level of loneliness and perceived stigmatization endorsed by many of the respondents, it is evident that future research should continue to address adapting services for this particular cohort. Prior literature speaks to this same need with specific suggestions including, educating frontline staff with the goal of reducing stigmatizing behaviors, recognizing the compounding effect of multiple stigmas, recognizing the need for a higher degree of trust between those working at opiate substitution treatment facilities and their clients, and acknowledging the physical needs of elderly clients which may contribute to isolation and loneliness. As the population currently relying on opiate substitution treatment ages, it is critical to address current services and how they may be adapted to shifting needs.

References

- Adams, K. B., Sanders, S., & Auth, E. A. (2004). Loneliness and depression in independent living retirement communities: Risk and resilience factors. *Aging & Mental Health, 8*(6), 475–485. doi: 10.1080/13607860410001725054
- Conner, K. O., & Rosen, D. (2008). “You’re nothing but a junkie”: Multiple experiences of stigma in an aging methadone maintenance population. *Journal of Social Work Practice in the Addictions, 8*(2), 244–262. doi: 10.1080/15332560802157065
- Conner, K. O., Rosen, D., Wexler, S., & Brown, C. (2010). “It’s like night and day. He’s White. I’m Black”: Shared stigmas between counselors and older adult methadone clients. *Best Practices in Mental Health, 6*(1), 17–31. doi: 10.1016/j.jaging.2010.05.007
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Cunningham, J. A., Sobell, L. C., Sobell, M. B., Agrawal, S., & Toneatto, T. (1993). Barriers to treatment: Why alcohol and drug abusers delay or never seek treatment. *Addictive Behaviors, 18*, 347–353. doi:10.1016/0306-4603(93)90036-9
- Dole, V. P., & Joseph, H. (1978). Long-term outcome of patients treated with methadone maintenance. *Annals of the New York Academy of Sciences, 311*, 181–196. doi:10.1111/j.1749-6632.1978.tb16775.x
- Doukas, N. (2011a). Older adults in methadone maintenance treatment: A literature review. *Journal of Social Work Practice in the Addictions, 11*, 230–244. doi: 10.1080 /1533256X.2011.596456
- Doukas, N. (2011b). Perceived barriers to identity transformation for people who are prescribed methadone. *Addiction Theory and Research, 19*(5), 408–415. doi: 10.3109/16066359.2010.530715
- Doukas, N. (2014). Are methadone counselor properly equipped to meet the palliative care needs of older adults in methadone maintenance treatment? Implications for training. *Journal of Social Work in End-of-life and Palliative Care, 10*(2), 186–204. doi: 10.1080/15524256.2014.906370
- Dykstra, P.A. (2009). Older adult loneliness: Myths and realities. *European Journal of Ageing, 6*(2), 91–100. doi: 10.1007/s10433-009-0110-3
- Frischknecht, U., Beckmann, B., Heinrich, M., Kniest, A., Nakovics, H., Kiefer, F., Mann, K., & Hermann, D. (2011). The vicious cycle of perceived stigmatization, depressiveness, anxiety, and low quality of life in substituted heroin addicts. *European Addiction Research, 17*, 241–249. doi: 10.1159/000328637

- Gourlay, J., Ricciardelli, L., & Ridge, D. (2005). Users' experience of heroin and methadone treatment. *Substance Use & Misuse, 40*, 1875–1882.
doi: 10.1080/10826080500259497
- Grella, C. E., & Lovinger, K. (2012). Gender differences physical and mental health outcomes among an aging cohort of individuals with a history of heroin dependence. *Addictive Behaviors, 37*, 306–312.
doi:10.1016/j.addbeh.2011.11.028
- Hawkey, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine, 40*(2), 218–227. doi: 10.1007/s12160-010-9210-8
- Herman, Y., Hawkey, L. C., & Ivbijaro, G. (2013). Loneliness and the elderly: Opportunities for health promotion. *Mental Health in Family Medicine, 10*, 1–2.
Retrieved from:
<http://www.ingentaconnect.com/content/rmp/mhfm/2012/00000010/00000001/art00001>
- Herman, J., Stancliff, S., & Langrod, J. (2000). Methadone maintenance treatment (MMT): A review of historical and clinical issues. *The Mount Sinai Journal of Medicine, 67*, 357–364. doi:10.1037/e605262011-001
- Luoma, J. B., O'Hair, A. K., Kohlenberg, S. B., Hayes, S. C., & Fletcher, L. (2010). The development and psychometric properties of a new measure of perceived stigma toward substance users. *Substance Use and Misuse, 45*, 47–57.
doi: 10.1016/j.addbeh.2006.09.008
- Luoma, J. B., Twohig, M. P., Waltz, T., Hayes, S. C., Roget, N., Padilla, M., & Fisher, G. (2007). An investigation of stigma in individuals receiving treatment for substance abuse. *Addictive Behaviors, 32*(7), 1331–1346.
doi:10.1016/j.addbeh.2006.09.008
- Plater-Zyberk, C. J., Varenbut, M., Daiter, J., & Worster, A. (2012). The value of clinical case management in a methadone maintenance treatment program. *The American Journal of Drug and Alcohol Abuse, 38*, 70–72.
doi: 10.3109/00952990.2011.600391
- Rajaratnam, R., Sivesand, D., Todman, M., Roane, D., & Seewald, R. (2009). The aging methadone patient: Treatment adjustment, long-term success, and quality of life. *Journal of Opioid Management, 5*(1), 27–37.
Retrieved from: <http://www.ncbi.nlm.nih.gov/pubmed/19344046>
- Rosen, D. (2004). Factors associated with illegal drug use among older methadone clients. *The Gerontologist, 44*(4).
Retrieved from: <http://www.ncbi.nlm.nih.gov/pubmed/15331811>

- Rosen, D., Morse, J. Q., & Reynolds, C. F. (2010). Adapting problem-solving therapy for depressed older adults in methadone maintenance treatment. *Journal of Substance Abuse Treatment, 40*, 132–141. doi: 10.1016/j.jsat.2010.09.003
- Rosen, D., Smith, M. L., & Reynolds, C. F. (2008). The prevalence of physical and mental health disorders among older methadone patients. *The American Journal of Geriatric Psychiatry, 16*(6), 488–497. doi: 10.1097/JGP.0b013e31816ff35a
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*, 472–480. doi:10.1037/0022-3514.39.3.472
- Russell, D. (1996). UCLA loneliness scale (version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment, 66*, 20–40. doi:10.1207/s15327752jpa6601_2
- Sivesind, D., Todman, M., Odom, A., Seewald, R., Rajaratnam, R., Roane, D., Singh, P., Bonilla, V., Ditzell, J., & Novak, D. (2005). Methadone maintenance in older adults: An exploratory study. *Graduate Faculty Psychology Bulletin, 3*(1), 94–107. doi:10.1037/e741592011-005
- Smith, M. L., & Rosen, D. (2009). Mistrust and self-isolation: Barriers to social support for older adult methadone clients. *Journal of Gerontological Social Work, 52*, 653–667. doi: 10.1080/01634370802609049
- Sullivan, S. (2013). Opioid substitution: Improving cost-efficiency. *Bull World Health Organization, 91*, 83. doi: 10.2471/BLT.13.117374
- Valtorta, N., & Hanratty, B. (2012). Loneliness, isolation and the health of older adults: Do we need a new agenda? *Journal of Social Medicine, 105*, 518–522. doi: 10.1258/jsrm.2012.120128