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**Client Views About Length of Medicated Assisted Therapy for
Opioid Use Disorder**

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A Thesis

Submitted to the Graduate Faculty of

Saint Cloud State University

In Partial Fulfillment of the Requirements

for the Degree of

Master of Science

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Abstract

Opioid addiction has been on the rise since 1990, when physicians began administering prescription pain medications. The population has undergone a drastic change from opioid prescriptions such as oxycodone to illicit forms, such as heroin, to aid pain management. Illegal opiates became the alternative drug at a lower cost to fulfill cravings and dependence that prescriptions may no longer feed. With a rise in dependence, pharmaceutical laboratories developed medicated assistant treatments (MAT) to aid in this crisis, more formally known as buprenorphine and methadone. Studies conducted show evidence of a decrease in illicit opioid use when using these medicated treatments and can lead to successful retention of the addiction. The users' experiences are often overlooked in terms of how administration occurs and when the taper of these therapies begins. Anecdotal findings suggest that prescribers continue to prescribe medications with intended harm reduction approaches instead of focusing on abstinence. This study focuses on the history of opioid prescription, addiction, and medical information regarding medication therapy, harm reduction, and the deliverance of why persons administered MAT has been prescribed for an extended amount of time. This study focuses on who is primarily responsible for the length of MAT treatment. Interviews with persons previously or currently prescribed medication-assisted treatment will initiate personal experiences to conclude whether the client or physician controls MAT administration length. Recommendations of participants will be discussed regarding their opinions on the length of treatment.

Keywords: opioid(s), buprenorphine, methadone, medicated assisted treatment, length of treatment, harm reduction, counseling.

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Chapter I: Statement of Problem

Opioid addiction is an epidemic that primarily affects the U.S. but is also gaining speed in other countries worldwide. The epidemic began with the illegal use of prescription level pain relievers (Koehl et al., 2019) but is also affected by illicit opiates without the initial prescription of an opiate. Continued use from desired intoxicating effects may lead to serious physical and psychological dependence. The number of people affected is continuously rising, as have the number of those seeking addiction treatment. In 2006, more than 30,000 people lost their lives lost to opioids and, out of all drug-related deaths, opioids are the leading killer (Genetics Home Reference, 2017). Over the last ten years, the number of opioid-related deaths increased significantly, totaling 50,000 deaths (Opiate Addiction, 2020). This number of overdoses increased by 30% from 2016 to 2017 alone (Collins, 2020), indicating these numbers are drastically increasing over time.

In 2017, there was a significant increase in opioid-related deaths for 47,600 Americans; however, there was a slight decline in those deaths in 2018, totaling 46,802. The dependence problem stems from the over-prescription of pharmaceutical pain relievers that began in the 1990s (Collins, 2020). Opioids were initially intended to treat chronic pain. However, the long-term effects of repeated use and the risk of addiction increased as physicians continued to prescribe these medications. Over time, when a person's prescriptions ran out, withdrawals became more frequent. Since the dependence had already been established at this point, discovering an illicit form at a relatively low cost became the new method to treating the pain. Nearly 130 individuals die daily in the United States due to an opioid-related death

(NIDA, 2020). The costs for this crisis are estimated at eighty billion dollars a year for treatment in healthcare and judicial standings (NIDA, 2020).

Medication-assisted therapy and counseling therapy can have the ability to discontinue opiate use significantly and overall decrease the number of overdoses that occur each year. This review examines research concerning opiate addiction and treatment methods of methadone and buprenorphine to discontinue illicit opiate use. In addition, this study addresses who is responsible for prescribed medications, whether it be the client in control or physician. This will gauge whether those prescribed the medication could complete treatment after a certain period of time successfully without relapsing. Research supports such medication's effectiveness, yet there is no evidence of why opioid users undergo treatment for an extensive amount of time. This review will include research from studies on how methadone and buprenorphine treatments are prescribed and other significant findings specific to the treatments' characteristics. Harm reduction will play a factor in the research, taking the role of the physicians' alternative approach when prescribing the medications.

Koehl et al. 's (2019) treatment modality is known as abstinence-based programs, will be discussed. This treatment modality holds higher success rates for sobriety without medicated assisted therapy. Counseling therapies reduce the mental suffering of those with opioid use disorder, develop relapse prevention, and strengthen healthy coping skills. In contrast, medications-only approaches are found only to decrease the danger associated with withdrawals.

This research aims to dive deeper into the opioid addiction crisis and educate on the impacts medicated therapies have on those prescribed through interviews of personal

experiences. This study will also explain who is in primary control of continued medicated treatment for opioid addiction. Continuation of medicated therapy questions whether opioid users are not ready to discontinue or simply abuse the medication-assisted therapy or whether the concern lies with the prescriber. However, it can be understood there are contradictory truths amongst all concerns.

This study employs a grounded theory approach. Asking a question to derive a hypothesis following analysis of the data. The question presented focuses on who is responsible for the continued prescription of medicated assisted therapy for those diagnosed with an opioid use disorder? This question is undecided between the client and the physician. Whether physicians may not begin to taper clients, persuading into a continuous prescription, or whether the continued treatment is solely up to the client. Contrarily, the physician may not have adequate knowledge on how to prescribe the medication, and Louie et al (2019) explains some physicians may not provide adequate services due to the difficulties treating that specific population, resulting in them being responsible. A final questioning factor is the monetary benefits physicians receive. As for the client, a recent study indicated that those who preferred methadone continue use to remain under the opioid's influence. In contrast, those who preferred buprenorphine wanted to discontinue their drug use altogether and stay abstinent (Bennett, 2011). Lastly, clients may continue their medicated assisted therapy (MAT) prescription by not completely being ready to make a choice to become abstinent.

To prevent the client from manipulating the assisted therapy programs, the physician must follow proper treatment guidelines to perform a full assessment. These guidelines provide knowledge on how to administer medicated assisted therapy and when it is safe to taper the

client. However, if a physician does not follow the strict protocol, the clients may abuse the medications. This may happen if the physician allows the client to remain on the medicine for an extensive amount of time. There is a blurred area of why a client is on their prescribed treatment for a long duration, between the responsibility of the client or the physician. Interviews conducted from the client's perspective can initiate a deeper understanding of why they believe whether they are responsible for continued treatment or if it is controlled by their physician. These interviews will discuss what the client personally recommends the duration of the medication.

This thesis hopes to develop a hypothesis to determine whether the user or the prescriber causes the presenting issue of continuous treatment and possible action steps to shorten the time spent on medicated treatment. Making available the firsthand experiences of users in treatment can develop other studies to help those who struggle with opioid addiction. It is ethically reasonable to obtain an insider's thoughts to understand the full effects of the treatment it has on those prescribed. Studying persons with real-life experience can provide an insight into the struggles associated with medicated treatment therapy and the cultivation of what needs to change for effective treatment to allow for abstinence without medications.

It is essential to understand the client's goals when entering treatment. Some may want to continue using, as stated for those who prefer methadone, but some may want to completely diminish their addiction and live a life free from addiction and medications. With hopes that most people want to battle their addiction and establish abstinence, this study will focus on the goals each participant had going into treatment in addition to their time spent on prescribed medications.

Operational Definitions

Antagonist. Does not produce a similar effect as agonists. It can obstruct the opioid from reaching the receptor that allows for euphoric effects.

Buprenorphine. Partial agonists are prescribed to those with opioid dependence. This form of treatment is placed under the tongue in a sublingual tablet at low dosage rates.

Full Agonist. Fabricates maximum potential within the brain when activated. Obtains the same chemistry of partial agonist, however at full potential.

Half-life. Duration of time before the drug removes from the bloodstream.

Harm Reduction: The concept of understanding drug use is apparent, and some are not able to stop. Allows for death reduction by keeping people alive by still obtaining the ability to use but in a safer manner (E.g., safe/clean needle exchange to prevent HIV, safe doses to avoid overdosing).

Length of time in treatment. The duration client is active in treatment with medicated assisted therapy.

Medicated Assisted Treatment (MAT). Use of medications and therapy for the treatment of opioid use disorder.

Methadone. Full agonist that acquires longer-lasting effects than regular opioids to aid in the treatment for opioid addiction.

Mu-opioid receptor. Receptors located in the amygdala release dopamine, reinforcing pleasure, and rewards systems within the brain.

Opioid/Opiate. A substance that produces a euphoric like experience in a user, nearly for

alleviating pain. Found in prescription medications (oxycodone, codeine, morphine) or illicit versions (heroin).

Opioid Use Disorder. Self-administering of an opiate that no longer serves for medicinal reasons such as injury. The disorder characterizes obsessive thoughts and actions towards using an illicit drug. Users have elevated tolerance and dosage to obtain a euphoric experience. Withdrawals are prevalent if the user does not continue the administration of the drug.

Partial Agonist. Attaches to receptors within the brain to partially activate the opioid receptors.

Pharmacotherapy. The treatment of a disease through the administration of drugs.

Taper. The gradual decrease in methadone or buprenorphine.

**Definitions cited from Substance Abuse and Mental Health Services Administration (2018) and American Psychiatric Association DSM V (2013).*

Chapter II: Background

Opioids began with the intent to aid in pain management, post-surgery, or any intense medical procedure. Common prescription opioids include morphine, hydromorphone, codeine, oxycodone, and hydrocodone. Street opioids include heroin and fentanyl (Strum, 2020). Most opiate addiction starts when a person sees a physician who prescribes prescription medication to aid in chronic pain. Jones and McCance-Katz (2018) state in their research regarding the opioid history and strategies for pain management that prescribing doctors are fully aware of the issue at hand and are continuing to be an active member in the crisis. The issue is, there is no evidence for long-term treatment to aid in chronic pain to this date. The problem of chronic distress causes conflict from one prescriber to another. Some may have good intentions to help the population, whereas some physicians lack this quality, yet some may have those positive intentions yet make wrong choices. Physicians that did not use opioids for treatment were shamed and told they were unethical and "inhumane" for not prescribing pain medications for those in need. This led to many more physicians prescribing opioids to diminish the stigma attached to medical doctors (Jones et al., 2018). However, negative stigmas were still found to be attached to those associated with the disapproval of continuous prescriptions. Prescribing one an opioid for pain following a discontinue in their medication may lead them to the illicit forms (Lahey, 2016), causing them to become even more addicted.

The presenting issue that remains is that many people may become addicted if they continue prescription use and gradually turn towards illicit ones such as heroin when these prescriptions are discontinued and when the onset of withdrawal is experienced. As mentioned previously, illegal use is exacerbated by the low cost and the fact that these drugs are readily

available on the streets (*Opiate Addiction*, 2020). Other factors associated with opiate addiction relate to prior drug use, certain personality traits, and undergoing traumatic upbringing (Genetics Home Reference, 2017; Somer, 2005). As these types of drugs are continued over long periods of time, changes in brain chemistry occur, which leads to psychological and physical dependence that then creates unwanted withdrawals when abruptly discontinued.

When people become addicted to opiates, many changes occur within their brains. Upon entering the bloodstream, the drug mimics the nervous system's receptors on our learned behaviors, the reward center, and pain receptors (Genetics Home Reference, 2017). The primary receptor the opiate attaches to is the mu-opioid receptor. Upon administration, it mimics this receptor, opening voltage-gated channels in the synaptic membrane to release dopamine. When it releases dopamine, it releases an extensive amount, acting as a reinforcer (Mistry et al., 2014). This reinforcer establishes a connection between the substance and the brain for needed repeated use to develop that feeling of euphoria. Upon first use, the user may only experience the highest intensity of that feeling. The only way to feel that close of euphoria is by using the drug again. With repeated use, the brain ceases to create more dopamine (*Opiate Addiction*, 2020) creating a cycle of continued use to experience pleasure and avoid pain. Since the brain now has difficulty producing a healthy dopamine level, it makes the dependence often visible within users and addicts, such as pale skin, weight loss, needle marks, and isolation. The drug then alters the brain's neuroplasticity (Mistry et al., 2014). The brain relies on that drug to provide it with that external dopamine release, which then changes the brain cells (*Opiate Addiction*, 2020). Without that reliance, painful withdrawal is experienced, which consumes the body physically and mentally.

Some people are more vulnerable to addiction than others. For those who are more susceptible, after a few consecutive repeated uses, addiction takes over, leaving one with increased tolerance and dependence (*Opiate Addiction*, 2020). These drugs have an intense and powerful effect on the brain, as stated, making it difficult not to use them (Genetics Home Reference, 2017). Opioid addiction is fast due to the strength and changes that occur rapidly within the brain. Once the habit becomes established, it is a long road to recovery. The user may quit cold turkey, but typically they will gradually taper off the drug; otherwise, they will experience withdrawals that can be unbearable. Withdrawals can be painful, including nausea, depressed mood, insomnia, vomiting, cold sweats, and difficulty eating (Mistry et al., 2014). Often repeated relapse is seen due to the powerful cravings, painful withdrawals, lack of healthy coping skills, and altered brain plasticity. However, an alternative method for treating those who have acquired dependence on these substances with extreme withdrawal symptoms.

The most commonly prescribed medicated therapies in a clinic are methadone and buprenorphine. Although these medications are the most commonly prescribed, research found that medicated assisted therapy is deemed "underutilized" (Jones, McCance-Katz, 2018), due to the lack of education on how to prescribe the medications properly. Besides medications, clinicians often recommend that clients participate in counseling therapy to establish skills specific to relapse and understand triggers that initiate the relapse. Jones and McCance-Katz (2018) indicate an effort in educational training for prescribers to require a therapeutic setting for treatment to work effectively. However, since there is minimal knowledge acquired, this causes a decrease in the agreement to prescribe the medications.

Before administering medicated therapy, the clinician needs to understand where the client is at with withdrawal experiences. When determining the severity of withdrawal, clients differ from one another on physical effects and intensity. One may experience detrimental and unbearable withdrawals, whereas one may believe they are manageable. To effectively determine how severe the withdrawals are, the clinician will present the client with a *Clinical Opiate Withdrawal Scale*, formally known as "COWS" (Koehl et al., 2019). This assessment is used before medicating to determine how much medication is necessary for the initial administration dose and continued treatment.

Wesson and Ling (2003), the COWS founding creators, inform readers of its implications. Dr. Wesson developed the scale to distinguish withdrawal from intoxication (Tompkins et al., 2009). Some physical symptoms may present as either under the opiate's influence or as withdrawals from the lack of opiates. This scale asks questions based on pulse rate, gastrointestinal symptoms, if they experience any tremors, sweating, restlessness, body aches, runny nose or eyes, anxiousness or irritability, and dilation of the pupils (Wesson & Ling, 2003). Tompkins et al. (2009) performed a validity study to determine whether the scale was reliable and valid when cultivating results from mild to severe withdrawals. As this scale helps determine the severity of physical dependence established in the user, it was consistent with measuring and identifying the symptoms across time by following the distress and determination of whether the symptoms were increasing or decreasing with the continuation and discontinuation of use. The study found that the scale was highly accurate when administered to opiate users.

In addition to withdrawal severity, specific medication doses are determined and administered to achieve stability – meaning not sedated nor experiencing withdrawals. To determine whether a client has achieved stability, the clinician must observe whether the client has officially met a balance in their life. The client must report a clean urine analysis (UA) to ensure they are no longer using illicit opioids. The clean urine must accompany no present cravings in addition to a decrease in withdrawal symptoms, physically and mentally (SAMHSA, 2018). Along with medicated therapy, it is recommended that clients participate in group and individual therapy sessions that implement psychosocial counseling, relapse prevention, coping skills, and potential trigger strategies to aid in a successful recovery (Jones et al., 2018). Medications alone will not cure the addiction. However, they will aid in the physical discomfort of withdrawals that many are reinforced to avoid by continuing using.

Within the medical field, practitioners treat medical concerns through the concept of harm reduction. Harm reduction can often be viewed as an approach to establish a healthy balance in the person's life without causing harm (Kalk, 2018). Regarding opioid use disorder, this may include allowing the person to continue using at a safe needle exchange program that promotes healthy use if they choose to use it. Clients who participate in harm reduction may find themselves utilizing services available to them. These services include safe needle exchanges, MAT for clean, uncut drugs, and promote encouragement of progress towards abstinence (Williams, 2019). Since drug use will always be prevalent, the harm reduction approach, often used for other medical illnesses, began to help decrease overdose rates associated with those who still want to use opiates.

Harm reduction approaches for opioid use disorder are applied to decrease deaths and save people from overdosing. Medication therapy was introduced under this approach as a form of alternative to aid in treating opioid use disorder for those who want to continue use. The increase of medicated assisted therapy allows opioid users to medicate safely, including clean needles to avoid the spread of HIV and Hepatitis C, proper dosage to prevent overdose, and maintain withdrawals (Collins, 2020). With this, a significant decline in illicit opioid use and risky behaviors associated with the user is reported (SAMHSA, 2018; Livingston et al., 2017).

However, it has been proven that opioid seekers tend to use the system to acquire a cheap, pure high to avoid withdrawal symptoms. These people are aware of the low cost of medications, easy access, and additional doses guaranteed upon beginning this type of treatment. Bennett (2011) states, as the heroin price increases on the streets, the quality reduces. In some areas, the high price keeps the drugs from being readily available, increasing the addict's chance of experiencing painful withdrawals. Medicated assisted therapies available for opioid users are becoming readily available due to government funding and providing a safer alternative for a constant clean high. The drug quality of these therapies is approximately 98-99%. With that information, this means the user, if seeking sedation can remain sedated as pleased without the risk of withdrawal and at a low cost. However, some may not seek the sedation yet remain vulnerable to becoming sedated when administered.

As this approach can benefit those who want to continue use, there are pitfalls associated with clinics that practice harm reduction. Clinics are often hot areas for dealers and users to locate and use (Williams, 2019). Generating an area of previous users, this can cause conflict and triggers for those aiming for abstinence. From a prescriber's perspective, it is often noticed that

the client's goals are disregarded (Kalk, 2018). If one has the goal of abstinence, but the prescriber practices harm reduction, the client may never see life without a dependence. However, those clients who often push for abstinence at an early stage are often seen as most vulnerable to relapse. The prescriber must keep reanalyzing the client to ensure they understand the client's goals since abstinence and harm reduction are viewed at opposite sides of recovery. Nevertheless, those who do not receive medicated treatment or counseling therapy maintain their likelihood of remaining addicted.

Anecdotal evidence mentions that the addict goes from paying a dealer to paying pharmacies, yet their addiction does not subside. The addiction is then viewed as being replaced by a pharmaceutical and now not allowing for abstinence from overall opioid use. Bennett (2011) states that instead of healing the addiction, medicated therapy continues the dependency. Aside from harm reduction, this notion is yet a significant concern whether the physician is responsible. Is the physician keeping a client on MAT for monetary gain?

Pharmaceutical companies benefit heavily from the number of medications administered to the community (Jones & McCance-Katz, 2018). This notion questions whether the intent to diminish opioid use is to transfer users from illicit form to licit instead of the goal of abstinence. Livingston et al. (2018) claim within their qualitative study that with an increase in kickbacks to physicians who prescribe opioids, they begin to provide non-effective services to their clients. Koehl et al. (2019) discussed misapprehension regarding prescribing and an absence of knowledge to prescribe, which can be the primary source of issues providers may encounter.

Pharmacotherapy for Opioid Use Disorder

The following section discusses the history of MAT and how methadone and buprenorphine work physically and mentally as an opioid treatment therapy. Also, research will be reviewed regarding these medications' outcomes to understand the benefits of their use further.

Methadone

Treatment may be essential for those who have addiction problems, especially those who become dependent, physically and mentally on a substance. Scientists and doctors have teamed up to create a medicated-assisted treatment to limit drug use with tapering methods. Methadone was the first "long-term treatment" drug to aid in opioid addiction, founded in 1965 (Levrant et al., 2012; Ali et al., 2017; SAMHSA, 2018). This medication is known for its long-term commitment and viewed as having a "ball and chain" effect, meaning that it limits one's freedom to live a life free from the medication (Livingston et al., 2017). Bennet (2017) stated, "methadone maintenance could serve as an indefinite "holding device" for those unable to give up opiates but would be willing to be maintained on methadone and reduce illegal use of drugs" (p. 133). Thus, the person would still be connected to a substance, thus supporting the notion of a ball and chain effect.

Methadone is a mu-opioid receptor *full agonist*, meaning it causes the same effect as opioids when consumed. Methadone is an artificial opioid administered to discontinue illicit opioid use and decrease cravings and withdrawal symptoms (Levrant et al., 2012; Kayman et al., 2006; SAMHSA, 2018). During treatment with proper dosing, this substitute supports the body with withdrawal prevention and helps return the brain to homeostasis, allowing the user to

discontinue illicit opiate use (White, 2012). With each week of prescribed treatment, the user slowly weans off the illegal drug and continues to use methadone. Eventually, this process is followed by a progressive decrease in methadone consumption, known as a taper.

The half-life of methadone, dependent on users, averages 24 hours, with eight being minimal and 59 being the most extended to be reported. Peak effects were noted between hours 2 and 4 (Koehl et al., 2019). However, upon initial dose, those prescribed do not experience the full effect of the drugs until approximately day four. Prescribers found no maximum effect of the prescription as doses are increased – allowing for increased sedation with increased amounts. Like all medications, methadone has potential risks and side effects associated with use. The most detrimental risk is developing physical dependence from long-term use. Internal threats may include a higher chance of constipation, respiratory depression, arrhythmia, hypoglycemia, and hypotension (Koehl et al., 2019).

According to the Substance Abuse and Mental Health Services Administration (2018) and Koehl et al. (2019), there are established guidelines in proper administering methadone. The initial dose of 5-10mg should begin slowly with a gradual increase every three to four days. Once the client has reached stability between sedation and withdrawals, the clinician continues administration, lengthening the duration between dosing to expand the time unaccompanied by cravings and withdrawals. Stable doses are typically an average of 60mg. This level of dosing has the best retention rate amongst users. Clinicians may administer higher doses to approximately 120mg, dependent on withdrawal and addiction severity. Once the client reaches consistent stability, the taper is then initiated, beginning at a 5-10mg decrease until a low dose is achieved. If this is successful, they may switch to BUP to allow for a smoother transition to be

completely off medications and follow a successful recovery. If a client chooses to withdraw from medication therapy without taper, the chances of relapse with potential overdose and death increase significantly to approximately 90% (Velandar, 2018). Symptoms of withdrawal and cravings are still present, but the tolerance established before MAT decreased. Some are not aware of the significant decrease in tolerance and if they relapse, they may overdose causing potential death. However, those who do not initiate a taper and continue long-term use may be at risk of developing a physical dependence on methadone.

Studies have found that the higher the dosage of methadone, the more substantial the decrease in illicit drug use (Kayman et al., 2006). According to Ali et al. (2017), when comparing methadone to heroin, it is not as damaging. However, there are no exact guidelines for how long the user should be on methadone (Kayman et al., 2006). Since there are no guidelines for the length of treatment, the focus of this study helps determine who is responsible for the continued MAT. Issues have been known to arise when replacing illicit use with pharmaceutical dependence, questioning why there is no exact length of treatment. The misunderstanding is associated with not completely knowing when a client is stable since methadone produces sedating effects. According to Bennet (2011), methadone should only be prescribed to patients when they have already obtained a physical dependence on an opiate. If physical dependence is not prevalent within a patient's life, prescribing methadone may cause more addiction issues.

Aside from the pharmaceutical aspects, methadone maintenance therapy strongly suggests counseling support to avoid replacing one addiction with the other. Meaning, when participating in this type of treatment, the user cannot only take methadone to diminish the

dependence; they should participate in counseling to see significant results firsthand. Those who withdraw from counseling therapy are increasingly vulnerable to relapsing (Schwartz et al., 2016).

Many stigmas have developed over time since the introduction of methadone half a century ago. According to White (2012), people believe that a user has not begun their recovery when using methadone but, instead believes that they start their recovery once they are off the methadone. These stigmas have caused extreme views and opinions regarding the treatment therapy. McElrath and Joseph (2017) also believe that it "reinforces" drug use rather than understanding that methadone is a part of the treatment and recovery process, which is then viewed as taking the place of an illicit addiction to a pharmaceutical addiction. (Louie et al., 2019). To conclude, there are negatives and positives associated with methadone maintenance. Some are pro methadone, whereas some are against the prescribed medication (Bennet, 2011).

With scientists continuously growing research and aims to avoid stigmas, the following section will discuss how buprenorphine was introduced as an alternative and less harmful agent to treat opioid use disorder.

Buprenorphine

More recently, doctors have developed an alternative method for opioid addiction called buprenorphine (BUP), or Subutex. This drug, introduced in 2001, is similar to methadone. This medication therapy is highly suggested for people who have opioid use disorder. The pitfall is that it is only available in urban areas. People with this disorder may lack available treatment in rural areas may come into conflict with a need to treat their addiction (Koehl et al., 2019). Unlike methadone, BUP is a *mixed* mu-opioid receptor *partial agonist*, meaning it only provides the

brain with partial intoxication. (Burns et al., 2015; Milne et al., 2009). When absorbed, BUP vigorously attaches to the opioid receptor to avoid other opioid bindings (SAMHSA, 2018). This drug does not allow the person prescribed to use other opiates while taking this medication; they will not experience effects simultaneously.

Buprenorphine has a "ceiling effect" with maximum doses, establishing security for a safer boundary when administered. It provides no euphoric effect, unlike the alternative, methadone (Koehl et al., 2019). The purpose of BUP is to treat and detoxify opioid addicts from the illicit drug they used and provide them with stability from withdrawals and dependence without sedation (Louie et al., 2019). However, this medication can develop a physical dependence on the user with long-term use. If discontinued abruptly, those prescribed may experience withdrawal, which again supports why a taper is highly suggested (SAMHSA, 2018).

Introduced in 2006, naloxone (NAL), a mu-opioid *antagonist*, has been combined with BUP and was popularized for its effectiveness in opioid replacement therapy (Burns et al., 2014). BUP/NAL, formally known as suboxone, is administered as a sublingual tablet, coming in two doses. BUP administration starts at 8mg and NAL at 2mg. Once the stability is established, an additional prescription at a slightly lower dose creates a taper in the prescription with BUP at 2mg and the NAL at 0.5mg (Milne et al., 2009). A significant factor of this medication is that the half-life is around 37 hours, with a 24 to 69-hour average, disconnecting at a slower rate versus methadone's half-life of roughly 24 hours (Sansone & Sansone, 2015). Longer half-lives allow for less dosing and a mental disconnect from continued dosing, allowing for significantly lower rates of illicit drug use due to the higher duration of the half-life and inability to experience the other drugs' effects.

The Substance Abuse and Mental Health Services Administration publishes guidelines on how to administer BUP in addition to methadone. Upon initial prescription, the first dose is prescribed at 2-4mg with two-hour supervision of the patients' response to the medication. The clinician may administer an additional amount if the patient is still experiencing withdrawal. The user may experience withdrawals for up to twelve hours. Upon beginning the medicated treatment, BUP is administered on a Monday, Wednesday, and Friday basis. Extended time is due to the extended half-life of the drug. Like methadone, proper dosing is achieved when the drug provides the patient with stability from craving and withdrawals without being sedated.

Once the patient has acquired a stable balance between decreased withdrawals and craving, the clinician actively begins the taper. The Substance Abuse and Mental Health Services Administration (2018) implies that the taper starts by reducing the dose to 5mg with an extended time between administering an additional amount. It suggests significant results are established at a maximum dose of 30mg, where the taper begins. A downfall to starting the taper is that it is solely up to the client. Meaning that even though they are stable, they may not want to begin the taper. To avoid this, the clinician should educate the patient and encourage them to start their taper once stability is achieved.

For a clinician to prescribe BUP, they must first receive a waiver before providing services. Eligibility to obtain the release is through the Substance Abuse and Mental Health Services Administration (SAMHSA). The administration, as of 2018, grants physicians the authority to prescribe up to 275 patients BUP. However, those who obtain a waiver are reluctant to prescribe due to their attitudes regarding the population (Louie et al., 2019). This belief may

be due to the physicians' lack of education and their own opinions and biases. Those who lack the knowledge may pose a barrier in their treatment approach (Koehl et al., 2019).

Recent studies from Burns et al. (2014) and McElrath and Joseph (2017) have found that BUP has positive effects for those who willingly want to discontinue opiate use. The willingness could be associated with the significantly lower doses administered, concluding that this drug may be a better option for those who do not want to consume many treatment dosages (Burns et al., 2014). McElrath and Joseph (2017) state that users will experience fewer depression symptoms in a single dose. Users report they are also associated with a lower risk of illicit drug use and side effects. Reports also note that participants found it easier to engage in treatment when not forced and the opportunity to openly attend counseling treatment, which then leads to higher attendance rates. Other studies report that buprenorphine increases their overall quality of life. Mitchell et al. (2015) studied the four major domains of life on buprenorphine effects – social, environmental, psychological, and physical. He found a statistically significant increase in each domain when participating in this type of treatment. These positive attributes leave people feeling more comfortable when seeking out treatment rather than being stigmatized. This study, however, did not include at what time length clients reported a higher quality of life.

Much like all pharmaceuticals, there were some adverse effects found with the use of buprenorphine. Difficulty breathing and the likelihood of overdosing are uncommon; however, it is experienced with other opioid and IV use (Koehl et al., 2019). They also discovered that when undergoing treatment with other drugs, the medicated treatment can cause sedation within the patient. According to Burnes et al. (2014), the recovery rates for those undergoing this treatment are lower due to their first experience's unpleasantness. This could correlate with the

significantly low dosage administered. Users typically use large amounts of illicit drugs every day. When decreased drastically to a lower dose, this can cause uncomfortable feelings—withdrawal symptoms such as nausea and vomiting. Studies have shown, indeed lower retention rates in BUP due to the patient not experiencing intoxication as found when using methadone (Bishop et al., 2018).

Oftentimes, users undergo both types of treatment. When under the influence of methadone, they experience similar feelings as when using the illicit form. However, when using buprenorphine, they typically do not have the same physical and mental experience when using methadone or illegal forms. The following section will discuss research conducted on MAT's effectiveness, with highlighting the time attributed to being on MAT.

Effectiveness of MAT

When focusing on methadone, a study found that those who do not want to abstain from opiate use prefer methadone treatment, primarily due to the intoxicating experience (Bishop et al., 2018). A second study to solidify those findings conducted by Burnes et al. (2014) discovered that those who initially started on buprenorphine for treatment had transferred to methadone more often than those on methadone had transferred to BUP. This statistic found that the doses are smaller with BUP, and the euphoria experienced was not as powerful as with methadone due to the withdrawals from the initial taper. The Substance Abuse and Mental Health Services Administration (2018) also verifies that switching from BUP to methadone is significantly more remarkable due to the desire to avoid withdrawals. As stated previously, BUP does not provide a user with the sedating intensity experienced from methadone or the drug of choice. When interpreting the results of those who switched from BUP to methadone, the

euphoric feeling was not equivalent to the illicit experience. This study, however, did not mention how long a person had prescribed the medications or what time frame they switched between the medicines, or when the euphoric feeling was established.

From a BUP perspective, Milne et al. (2009) deemed this treatment safer to use than methadone. The side effects of dependence, nausea, and vomiting are significantly lower with BUP due to the lowered dosages administered. Bishop, Gilmour, and Deering (2018) found that it was also more comfortable to withdraw after treatment was complete than when using the methadone treatment. According to Hser et al. (2013), those who pursued BUP treatment had a much more positive experience than those who chose the methadone treatment. However, the study conducted by Blum et al. (2017) found that the success rate amongst the two is similar. Nevertheless, both medications show improvement with a decrease in illicit drug use by the addicts undergoing treatment. Granted the findings of success rates for BUP, there was still no valued time frame of how long these participants were prescribed the medication to achieve successful withdrawal and report positive feedback.

When comparing studies conducted on each treatment drug, methadone had a better retention rate than buprenorphine. Methadone was the preferred treatment method due to the user experiencing sedating effects. The limitation of this conclusion is specific to the dosage given to the patient. Methadone has a significantly higher dose than buprenorphine, making the retention rates higher for that drug. SAMHSA (2018) found that those prescribed methadone stay with treatment longer than those prescribed BUP. The reason being it is harder to taper off MET. It is questioned whether testing is performed to determine whether methadone doses can be equivalent to buprenorphine doses: either lower or higher. Although both substances deem high

retention rates from illicit opioid use, there was no provided therapeutic time frame from these results.

In addition to retention rates, attention is also focused on the dosage amounts. When administered either drug, there was a significant difference in how much of the dosage one received. The lowest amount generally delivered for methadone is 60mg. One study showed an 80% retention rate when given that specific amount. When given the highest dose of 120mg, the retention rate increased to 91%. As for buprenorphine, Hser et al. (2013) claimed that BUP's highest retention rate was only 60% on its highest dose of 32mg. Those numbers reflect the findings of those undergoing methadone treatment having 50% better chances of staying in treatment than BUP. This study implies that if treatment facilities increased the dose of BUP, perhaps to that of methadone, would retention rates increase? Although the amounts are studied heavily, there was no significance associated with how long they are administered to establish those retention rates.

While studies have shown that methadone has better retention rates, buprenorphine has a higher potential for true success. The quality of BUP administered is lower than that of methadone. These studies also conclude that there is a potential to be entirely off both illicit and treatment drugs when using buprenorphine. Methadone, however, does have the potential for aiding in the termination of illegal opioid use but is limited to complete termination of the medication. Koehl et al. (2018) suggest that BUP is preferred over methadone because of its adaptability. Allowing the client to remain in a stable state without withdrawals and sedation. There is also a preference for BUP due to the significantly low side effects experienced when undergoing treatment compared to methadone. However, the study states there is no evidence on

which drug deems to be superior to the other. Overall, both drugs show a significant contribution to overcoming opioid addiction. Again, granted research has found MAT effective to discontinue illicit use; there was still no duration for how long these participants were prescribed to establish the discontinuation of illegal use and terminate the medication.

According to the Substance Abuse and Mental Health Services Administration (2018), when prescribing methadone or buprenorphine, the longer time spent prescribed MAT, the higher the success rates of discontinuing illicit use. Before continuing long term, the physician must consider the needs and goals of the client. In addition to MAT's continuation, a research study conducted on MAT mortality found an average time length of those prescribed MET and BUP. Those prescribed methadone therapies were averaged 363 days and 173 days for buprenorphine (Hickman et al., 2018). This study indicated that the average time for those to establish low mortality levels was around the year and half-year mark. This information is essential to note that there are noticeable changes within the client around those milestones and perhaps consider beginning the taper at the point. However, it did not mention whether the length of time was therapeutic and did not include any additional information regarding time spent in treatment.

To conclude, there is a significant potential associated with medicated assisted treatment to deplete opioid addiction. However, it is essential to note that psychotherapy should be encouraged while engaging in medicated assisted treatment to provide optimal outcomes. The lack of focus with each medicated assisted treatment is when these participants have been prescribed the medication is, for how long they were prescribed when effectiveness is established, and if they have enrolled in psychotherapy. Indeed, the results are positive and have

been proven to increase life satisfaction compared to what they may have been before the MAT; it is important to focus on the time frame for therapeutic effectiveness.

As mentioned, this study aims to understand why opioid users are undergoing treatment for an extensive time when there are proper guidelines to taper a client from the medicated treatment. The Substance Abuse and Mental Health Services Administration (2018) provides physicians with the understanding and knowledge on how to properly administer each of the medicated treatments for opioid use disorder and how to decrease the medication of a taper to the eventual discontinuation of opioid use ultimately. Treatment protocol discusses what doses are administered for each prescription, dependent on the client's physical dependence and sedation level upon administration, including where the dose amount should begin, how to increase the dose gradually, and where and when to stop growing. The increase remains until withdrawals are managed and sedation is no longer. Following the plateau of the rise comes the decrease, which is when the taper begins. The protocol ensures how to accurately understand when to decrease the prescription and address the withdrawal and sedation levels, yet the time frame of when these interventions of taper being initiated are not looked at enough. It questions whether there is a lack of knowledge and education in the prescriber on administering medication correctly or if the client is withholding information to lengthen the medicating process.

Chapter III: Methods

The research in this study implemented qualitative findings derived from interviews with people previously prescribed one of the medicated opioid use disorder treatments previously discussed. Interviews focused on life experiences and perspectives regarding the length of their prescribed treatment. Data collected was used to develop an in-depth insight into why those prescribed MAT had to undergo long-term treatment. Chapter IV will review the results and summary of the data as written and perceived by the researcher.

The Institutional Review Board approved this study from Saint Cloud State University.

Participants

This study obtained five adult participants, one of whom had experience with prescribed methadone and four with buprenorphine. Participants were either currently taking these medications or have done so in the recent past. Some also had experience with both drugs. The participants were recruited from various Minnesota locations and volunteered to be a part of this study. There was no stipulation as to the dosage amount used for their treatment or length of treatment. Drug of choice documentation, how long they were actively addicted, what MAT they received, and if they received any counseling services while undergoing MAT was provided (see Table 2). Maximum doses prescribed are included to provide additional conclusions when comparing other information (see Table 3). It is believed that those characteristics place value on opinions and beliefs regarding treatment regimens.

Participants asked to participate, engaged in a one-on-one interview with the researcher, and were encouraged to provide truthful content to establish factual findings in this study. Each

participant was provided the opportunity to withdraw or take a break from the interview if any discomfort was experienced. Referrals for treatment help were provided upon request.

Design and Procedure

Based on a grounded theory approach, this study used an analysis-based design focusing on the time spent with medicated assisted therapy to examine treatment perceptions—the primary data will be qualitative, collected by semi-structured interviewing. Data were collected from participants through face-to-face interviews via Zoom. Open-ended baseline questions gathered information regarding the participant's treatment, experiences, and perceptions regarding treatment. Private and confidential interviews were established to ensure a willingness to provide the researcher with accurate information. Quantitative data were collected to establish a fundamental understanding ground of each participant and their experiences. Quantitative data includes dosage, length of medicated treatment, length of active addiction, drug of choice, and prescribed medicated assisted therapy.

Interviews lasted approximately one hour and were recorded for transcription purposes. All interviewees were required to complete a consent form before questioning. Interviews were then transcribed to form codes to analyze the collected data. Based on grounded theory, this approach will help formulate a hypothesis regarding the data collected from participants. Participants answered similar questions based on their treatment to examine different themes and categories. Additional probing was performed to gather additional information regarding their length of treatment. These findings were placed into similar and different groups based on relevant information. The primary focus is given to the thoughts and opinions regarding their treatment length. The researcher will question how they felt about receiving treatment for as long

as they did/are and their beliefs on whether they thought they were in control of their treatment or if the physician was.

Measures

Upon questioning, participants provided information on what treatment was prescribed. They answered how long they have been on MAT and which medication they received. This information placed them into groups to find the similarities and differences between the responses provided. Another question asked was regarding their dosage of treatment and the maximum dose received. After collecting characteristic information, participants were asked, *“what goals did you have entering medicated treatment?”* *“Do you believe being on MAT for your duration was/is effective?”* *“Was the length of time a form of harm reduction?”* Additional questions regarding the role of their physicians were asked to break the barrier between who is responsible. Opinions regarding counseling services were also gathered. Lastly, thoughts and opinions for an opioid-dependent to be prescribed MAT for a certain amount of time was provided. Answers were noted and further analyzed by coding. Those who have been in therapy a long time will be asked if they see themselves coming off the medicated treatment anytime soon. Since this study is founded on semi-structured questions, the questions will begin similarly. However, once probing begins, data will be collected with questions specific to the individual.

Analysis

Upon completing the interviews, data were transcribed and coded, which placed participants responses into thematic groups. Codes were also combined to create different categories and themes to compare treatment types. The information focused on the differences and similarities in the length of their treatment experience.

NVivo coding system was used to aid in transcription and coding for recursive themes. This program placed data collected into a node to develop several codes specific to the interview responses. This method helped the researcher organize and analyze the data to combine participant experiences for further conclusion. All codes were given functional definitions to describe each participant's experiences that were similar and dissimilar. Post coding, a review of information and literature was required to ensure the coding was correct and the conclusion is accurate.

Chapter IV: Results

This chapter details the results analyzed from interviews conducted on those prescribed methadone or buprenorphine for opioid use disorder. Characteristics of the participants will be discussed through tables, and the results through qualitative quotes and codes developed from NVivo. A collective summary of the results will be provided at the end of this chapter. To begin, Table 1 describes participant characteristics to develop an understanding of the demographics of each participant. Table 2 explains the percentages attributed with Table 1 in addition to information not provided in Table 1. Table 3 provides an explanation of the prescribed doses over what years. This information will be discussed at the end of the chapter. Table 4 indicates a percentage of participants deem responsible for their treatment for how long they have been prescribed the medication. Lastly, Table 5 indicates a representation of client perspectives on how long one should be maintained on MAT to recover from opioid use disorder.

Characteristics of the Sample

Table 1

Participant Characteristics with MAT

Participant	Age	Length of Addiction	MAT	Years of MAT	Prescribed Dose	Year Started MAT	Counseling for OUD
1	28	6 years	Suboxone	1	16mg	2020	Yes
2	42	21 years	Methadone	2	200mg	2012	Yes
3	24	2 years	Suboxone	3	16mg	2018	No
4	36	13 years	Suboxone	4	32mg	2012	No
5	33	10 years	Suboxone	5	24mg	2016	No

Table 2*Characteristic Percentages (n= 5)*

Characteristics	<i>N</i>	%
Gender		
Male	2	40%
Female	3	60%
Age		
20-25 years	1	20%
26-30 years	1	20%
31-36 years	1	20%
36-40 years	1	20%
41-45 years	1	20%
Drug of Choice		
Heroin*	3	60%
Pills*	3	60%
Fentanyl	1	20%
Length of Addiction		
0-5 years	1	20%
6-10 years	1	20%
11-15 years	1	20%
16-20 years	1	20%
21-25 years	1	20%
Medicated Assisted Therapy (MAT)		
Suboxone	4	80%
Methadone	1	20%
Length of MAT		
0-1 year	1	20%
2-3 years	2	40%
4-5 years	2	40%
Received Counseling for OUD		
Yes	2	40%
No	3	60%

*Two participants obtained two drugs of choice.

Table 3*Participant Prescription Data*

Participant	MAT	Prescribed Dose	Years Prescribed
1	Suboxone	16mg	2020-present
2	Methadone	200mg*	2012-2014
3	Suboxone	16mg	2018-present
4	Suboxone	32mg*	2012-2016
5	Suboxone	24mg	2016-present

*Suboxone recommended doses: <30mg

*Methadone recommended doses: <120mg

Tables 1 and 2 explain the characteristics viewed in this study to develop an understanding of each participant's background specific to their addiction, drug of choice, medicated treatment, length prescribed MAT, how long they were prescribed, and so on. This provided the researcher with information to refer to when comparing the data provided by each participant. The average length of treatment in the study was three years, with a participant prescribed for only one year, and one prescribed for five years.

Of the 5 participants (two male, three female), 4 (80%) have been prescribed suboxone, and 1 (20%) prescribed methadone. Between ages 36 and 45, two of the participants have been prescribed over the recommended MAT doses and began treatment in 2012. The additional three participants, between 20 and 36, are currently prescribed within the recommended dose range and have initiated treatment within the past five years. Each participant reports obtaining different drug choices, two of which held pills to be their first addiction, followed by heroin. Two of the three participants received counseling for opioid use disorder, one of which reports not receiving supplementary services. The following three participants report receiving MAT without OUD counseling services.

As the study primarily focuses on time, data was analyzed on recursive themes regarding physician's role and participant's role in treatment to formulate observations on who is primarily taking more responsibility for the length of time in treatment. The main themes focused on include physician-related factors, participant-related factors, opinions, and recommendations for length of treatment. Refer to Table 4 for a visual representation of client perspectives on who they believe was in control of the length of their treatment.

Physician-related factors

Harm Reduction. During each interview, participants were educated on harm reduction strategies and why the medical field uses them to deal with medical concerns. Participants 2 and 4 believed the MAT was not a form of harm reduction. Participant 4 stated, "There was no harm reduction being on methadone. Methadone for me was not a treatment; it was an addiction." Both participants continued on MAT at higher than the recommended doses for their entire treatment. They also noted the withdrawals were significantly worse than coming off of their drug of choice alone. One participant suggested that why would this be a form of harm reduction if it is worse than illicit use? Participants 3 and 5 reported they believe their treatment is a form of harm reduction due to decreased going backward with their recovery, and their physicians do not want to see them fail. However, participant 3 questioned "why are the withdrawals worse then?" This question was asked due to trying to understand the concept of harm reduction and why it would be applied to treatment if there is more harm done once discontinuing the treatment. Participant 1 did not report on harm reduction due to early initiation of treatment and believe they control their treatment.

Monetary Motivation. A perception of the participants was that their treatment length may have been continued due to increased benefits for the physician. This recursive theme was held for 60% of participants that the physician is primarily responsible for continuing their treatment longer than necessary. Of course, it is not certain this is the sole reasoning, but it was mentioned enough to provide a section on the theme. Participant 4 mentioned that continuing treatment was “filling his (the physicians) pockets.” They then questioned, “I don’t see why you would maintain somebody for that long if there weren’t something behind it.” The other two participants suggested the reason they were prescribed for as long as they were/are having some affiliation with their physician receiving money for maintaining a prescription with them. Participant 2 strongly stated, “I never once was encouraged to get off the methadone therefore, I have thoughts on the idea that it may have something to do with money. There was no “harm reduction” from being on methadone.” There is an idea that physicians may be motivated by increased benefits for maintaining these medications, whether it be suboxone or methadone. Participants from each prescription group indicated some form of money motivator within their interview.

Negative Perspectives. There were also additional negative themes associated with physician’s worth mentioning. Participants 2, 4, and 5 reported that their physicians never encouraged them to begin a taper and begin thinking about life outside of MAT. Participant 4 reported persistence on beginning their taper every time they refilled their prescription but reported receiving a deny after each request. After asking to taper, a reported comment from a physician said, “*if you want to lower your doses, do it on your own.*” The lack of encouragement and direction was “offensive” according to participant 5. Participant 5 indicated their physician

continually “pushes” them to remain on MAT regardless of their goals. Participant 2 indicated they only saw their physician twice, which made addressing their treatment difficult. Each participant indicated negative experiences while working with their physician and their MAT.

Participant-related factors

Positive Choice. Positive perspectives were not included in the *physician-related factors* section due to the positives recorded were associated with the client’s ability to have a choice regarding their treatment. Two participants mentioned that their physician met them where they were at with their treatment. Participant 1 and 3 provided positive regards towards their physicians and how they approached their treatment management. Both implied their physicians were very supportive in their recovery and were meeting them where they are in their recovery. Participant 1 reported that their physician provided them with information regarding approximately how long they would be on their prescription. Whereas participant 3 reported their physician allowed continued treatment for as long as they needed to, to avoid relapsing. They both participant 1 and 3 reported that their physicians are there to help them through their recovery on their own terms. However, the concluding factor for both participants was that their treatment and length are solely up to them.

Negative Choice. Two participants explained that they are partly held responsible for the continuation of their MAT. Interestingly, they both noted the withdrawals as a driving motivator for them to continue treatment. Similar to the thoughts of participant 4, both participants reported remaining on MAT due to withdrawals being significantly worse than the drug of choice (DOC). Both mentioned they were “scared” to begin a taper and discontinue due to experiences they previously encountered with withdrawals. Aside from being afraid of withdrawal experiences,

one participant stated they remained in treatment initially because they wanted to and enjoyed the euphoria associated with increasing doses and no desire to change. “I lied because I wanted more. They asked me if I was experiencing any withdrawal symptoms and I would say yes. I was never denied any dose increases.”

Table 4

Participant View: Who’s Responsible for Length of Treatment

Responsible	Suboxone (<i>n</i> =4)	Methadone (<i>n</i> =1)	Total (<i>n</i> =5)
Physician	25%	0%	20%
Participant	50%	0%	40%
Both Parties	25%	100%	40%
Total	100%	100%	100%

Table 4 provides a percentage-based visualization regarding the belief of participants for who were most in control of their length of treatment. Although not directly stated in the interview, two participants made separate comments concerning a contradiction leading to an understanding that both parties were in control of the continued treatment. The participant prescribed suboxone noted that initially the physician was to hold them accountable due to continuously pushing them to remain on the prescription. However, they are afraid to discontinue their prescription due to the severity of withdrawals. This participant made known that the beginning of their treatment was dependent on the physician’s responsibility, resulting in them being in control due to a fear of withdrawals. This statement placed the participant in a category of both physician and participant responsible for the length of treatment. For the methadone participant, it was mentioned that upon initial months of treatment; they would like to have their

doses increased due to the enjoyment of remaining under the influence. Nevertheless, they stated the physician was motivated by money to maintain a prescription without physically speaking with the client. The money motivator was indicated as the prescription continued and the addiction became increasingly worse. This participant developed an understanding of the beginning of their treatment was in their control. However, as treatment continued and their addiction got worse, the perspective regarding who was responsible for their treatment changed roles. These comments placed both participants in a *Both Parties* category due to contradictory truths amongst the two. To conclude, it is essential to understand how parties are responsible for their prescription.

Opinions and Recommendations

Despite the discussion about who is primarily in control, participants provided information regarding opinions and recommendations for time spent on medicated assisted therapy for opioid use disorder. This section will focus on participant treatment recommendations pertaining to the length of treatment and additional themes found throughout the data.

Opinions of Methadone. Due to only one participant being prescribed methadone, those prescribed suboxone were asked to provide any thoughts on the alternative treatment. Of the four, three mentioned that those prescribed it may receive euphoric highs while being prescribed. Interestingly noted, participant 4 commented on the euphoric highs attributed to prescription:

I don't understand why they think it's effective or why it's necessary. There are better ways to go about things. Harm reduction... I understand that, but then why do they have to bring people up so high, to bring them back down? It doesn't make sense.

This participant commented on the full agonistic effects of methadone. Due to there being no ceiling effect, unlike suboxone, there is a much higher likelihood of experiencing complete sedation. The participant who was prescribed methadone indicated if having known the effects of methadone, they would have never begun treatment. Primarily due to the completed sedated life, they were living with methadone maintenance. This participant reports undergoing an “awful experience” with their prescription of methadone. The participants prescribed and not prescribed provided the researcher with negative feedback regarding methadone treatment.

Opinions of Suboxone. All four participants prescribed suboxone provided positive feedback regarding their experiences with their treatment. Each stated they were thankful for the opportunity to regain control of their life. However, the two participants prescribed over four years ended with negative comments. Positive feedback is as followed. Participant 3 states, “I don’t know if I would have stopped using (illicitly) honestly, and then I got on (suboxone) and was able to stop.” Each participant stated they were thankful for the opportunity and how far they have come with their recovery with the help of suboxone. Participant 1 reported suboxone was a “lifesaver” and believes it has helped them immensely. Other participants concluded it provides mental clarity with providing the ability to set future goals for themselves. These two participants' negative comments were related to the length of their prescription. Both participants reported wishing they would have begun their taper faster than continuing their prescription. Participants provided research with positive notions regarding suboxone, with conflicts between participants on how long they should be prescribed.

Recommended Time Length for MAT. Methadone and buprenorphine obtain different mechanisms of action and intensities of sedation level, so it is necessary to keep

recommendations for each medication separate. The participants prescribed methadone for two years and reports to those prescribed not to exceed a year on methadone with a maximum dose of 60mg. This being explained by not allowing oneself to become sedated by the medication and avoid replacing their previous addiction with the new addiction of methadone. Additionally, this allocated time frame and the maximum dose may aid with the balance of not becoming sedated and managing the withdrawals for a short amount of time to taper off the medication eventually.

For the participants prescribed suboxone, there were different beliefs amongst the four participants. Two indicated that depending on where the person is at with their recovery, to recommend remaining on MAT for as long as necessary. This will ensure the high-risk person does not relapse leading to a higher risk of overdosing. Participant 3 states, “if you’re going to relapse and go back to using, I think you should probably just stay on it.” Of those two, the other participant mentioned only to be prescribed the medication for roughly a year and a half. The following two participants mentioned that people prescribed suboxone should get off as soon as possible. Indicating that once stability is achieved, one should discontinue their prescription. Participant 4 indicated that six months is “more than enough” for time allowed to get stable and lessen the chances of intense withdrawals following the taper. They believe the taper should begin at month three or four, resulting in an approximately six months of medicated treatment. Participant 5 estimated one to two years but again suggested getting off as soon as possible. This person reported blaming themselves for continuing treatment as long as they did and wished they would have been off in a year but felt pressured due to their physician continually doubting their recovery, as stated. Both participants strongly recommend tapering off MAT before the withdrawals get severe to where the person is afraid to come off. To conclude, from the reported

information, it was found that if one is able to abstain from using, to get off MAT as soon as possible.

For those who are currently prescribed MAT they were asked whether they view themselves beginning taper in the near future. Participant 5 mentioned in their interview that their physician denied their request for taper and was told to if they wish to taper, to begin on their own. The participant reported it was difficult for themselves to have a continued prescription at the same dose and not a tapered one, to begin to taper themselves. They indicated hopefully being able to begin a taper on their own soon. Participant 3, on the other hand, indicated they would continue their prescription due to their physician allowing them to request changes in their doses whenever they deem necessary. This participant reports requesting to lower on their own terms and increasing if they feel the low dose is not therapeutic. This information is important when considering their length of treatment and who is in primary control. Participant 3 continues with the notion that they are in control, whereas Participant 5 finds it difficult to discontinue the help of their physician to initiate the taper for them upon each request.

Table 5

Participant Recommended Time Length

MAT (n=5)	< 1 Year	1 - 2 Years	As Needed	Total %
Methadone (n=1)	0	1	0	20%
Suboxone (n=4)	1	1	2	80%
Total	20%	40%	40%	100%

Table 5 demonstrates the amount of time each participant recommended as necessary for time spent on medicated assisted treatment. As mentioned above, participants hold different beliefs regarding the length of treatment. Sixty percent of the participants believe one should be maintained on medications for a certain amount of time, in contrast, following 40% believe one should stay on for as long as they need to, depending on where they are at in their recovery. Those who believe in a certain time period is due to the hardship associated with increased withdrawal severity and decreased developed dependence from the illicit forms. The two who believe in extended treatment report that the longer the treatment, the chances of relapsing decrease.

Psychoeducation. Participants were asked whether they received any counseling services or co-occurring education for opioid use disorder while receiving their medicated treatment. As noted in Table 2, only two participants received counseling for their addiction. One mentioned that while receiving their MAT, their counselor did not address their addiction and only spoke of minor occurrences within their life. They did not find those services beneficial to their addiction and were only recommended taper when the participant mentioned one. The other participant, included attending outpatient services while receiving MAT to strengthen their understanding of triggers and develop a relapse prevention plan. This participant reports positive experiences with both medication and counseling integrated with their recovery to battle their addiction.

The other three participants report never attending counseling services for opioid use disorder while being prescribed MAT. However, they each reported that counseling should be encouraged while receiving any opioid treatment medication. “This is how people could quit and be successful” quoted from participant 5. Healthy coping skills are needed to be developed to

build accountability and learn to work through addiction. Participant 4 stressed setting a new path for themselves (clients prescribed) and actually *living* a sober life, not just being sober, e.g., learning differently and forming new habits. Counseling services for those who struggle with mental health attributed to use were noted can be beneficial to tackle addiction. Individual and/or outpatient counseling services were predominant when asking participants about their thoughts regarding psychoeducation for opioid use disorder.

Summary

A conclusion from the small sample of participants, it was found approximately equal responsibility of both the participant and physician regarding the time spent on medications for opioid use disorder. Two participants addressed that the length of their treatment was utterly dependent on their recovery stage. In contrast, another two believed the physician was strictly maintaining their prescription for monetary benefit with no regard to harm reduction. The fifth participant is what determined an equal balance between both contradicting sides. This participant believed they were in control due to the fear of withdrawals yet believes the physician has some monetary grounding force for the continuation of the prescription. Due to the sides obtaining equal beliefs, additional comparisons were noted to draw a further summary of the data.

With a focus on who was in control, after thorough analyzing and comparing tables, a correlation was noticed between those with over ten years of addiction and ages over 30 ($n=3$), held negative perspectives that it was the physician's responsibility for the amount of time they maintained the prescription. These same participants agreed on their ideal time of prescribed medicated treatment to be roughly one year. On the other hand, those with active addiction less

than ten years ($n=2$), stated it is solely up to them regarding how long they maintain their medication for recovery. The two groups of same participants were noticed to obtain similar characteristics of similar lengths in addiction and belief regarding role in continued treatment. Along with lengths of addiction, it was discovered that those in the same group of more prolonged addiction held more negative perspectives towards their physicians than those two were in the less than ten years of addiction group. Those participants reported positive feedback regarding their physician and how they approached their treatment prescription.

In addition to years of addiction, it was noticed that the participants prescribed in the year 2012 ($n=2$), received over the recommended doses of MAT for their specific prescription. As mentioned in Chapter II regarding physician's lack of education, those doses may have exceeded the recommended dose due to the lack of education. A correlation between the small sample of those two participants with their beliefs to who was responsible for the length of the treatment was anecdotally documented. Since methadone was synthesized in 1965 and suboxone in 2006, the amount of research across both medications varies. The participant prescribed in 2012 worked with a doctor who had a maximum of six years of knowledge about the medication. This raises a concern about whether they were educated enough on the medication protocol for prescribing. Conversely, those who received MAT of suboxone at later dates (2018 to present), have a higher likelihood of obtaining a physician who is more educated on the medications and how to prescribe. These participants were noticed to receive appropriate doses for their treatment, in addition to holding the belief that they were either in control – or partly in control (Participant 5) for their prescription being continued. This participant began treatment in 2016, whereas the other two were at a much later date.

Due to the small sample size, a relationship was found between the length of MAT and who was accountable for treatment with the suboxone participants ($n=4$). The methadone participant is not included in this relationship due to being the only participant recruited in the study. The participants who were maintained for four to five years stated it was their physician who was responsible. The other two participants, less than three years, believe they are in control. Along with this information, gender was noted to be affiliated with this relationship. The two participants who believed they were not in control of their time spent on MAT were males, and the two less than three years were females. To conclude, the participants with shorter MAT prescriptions stated they who were in control, whereas the one with a longer MAT prescription believes it was not.

Switching focus to those who received counseling services and was held accountable, there was no correlation. Only two members received services with one believing each was held accountable. The other three participants had similar findings. To conclude, there was no relationship between those receiving counseling services for OUD who believed it was their responsibility or their physicians. To establish a relationship between these two factors, more data between belief and counseling would be necessary.

Chapter V: Discussion

Hypothesis

This research focuses on the factors of whom clients believe is responsible and in control of their treatment regimen for how long they maintain MAT prescription regarding their opioid use disorder. Due to the small sample size, the findings were not strong enough to produce a concrete conclusion. Questions developed as the researcher developed the hypothesis leading to future research topics and focus. First, it will discuss the length of addiction, followed by the developed hypothesis. A researcher's perspective is provided in addition to the study's limitations.

From a philosophical perspective, after concluding the results and understanding the characteristics of those who have maintained addiction for a long time, blaming and justifying are common factors for those who have struggled with addiction. These cognitive distortions are central thoughts to those affected. With that in mind, one can believe that those who obtained the more prolonged addiction may still obtain those negative thought patterns if they abided by them and have used them as a bias towards their physician. It is not intended to direct the conclusions of why those who believe the physician is responsible, but it was noteworthy that may include distorted thinking in some responses. Are these participants still affected by those negative thought processes? However, it will identify that this statement will not affect the discussion and conclusion.

Despite the multiple unanswered questions this study has developed, this study's concluding hypothesis is presented. The longer a person is prescribed MAT, the harder it is for them to taper off the medication and become non-dependent on opioids/opiates. While the study

included questions to the participants regarding psychoeducation and therapy services, it is highly encouraged to engage in therapy to help decrease the amount of time spent on medicated assisted therapy. This hypothesis was derived from all parts of the study dependent on harm reduction, length of treatment, and counseling services.

Focusing on the concept of harm reduction may play a role in why some may need extended MAT due to the severity of their addiction and withdrawal symptoms. A question raised in this area was, are physicians causing more harm to the client by not engaging in a taper? This then causes an increase in withdrawals if discontinued. It is thought that the longer the person is prescribed, harm reduction decreases for the client due to the increase in severity in experienced withdrawals upon completion of the medication. Two participants stated they are afraid to begin their taper and eventually discontinue their prescription due to the anxiety developed from a fear of experiencing withdrawals. Those same participants who did taper off medications stated in their interview, it was the worst experience for six weeks to six months, worse than what they had experienced previously from their initial drug of choice. Shortening their time spent on MAT may decrease their eventual withdrawals from discontinuation. It is thought, if a person actively attends co-occurring education for their addiction, they may develop an understanding of why physicians integrate this approach into their treatment. People typically do not want to be prescribed and tied to medication for the rest of their life. Educating people prescribed these medications should decrease the amount of time spent on MAT and allow for a non-medicated dependent life.

Psychotherapy is currently encouraged to clients prescribed MAT; however, it is not required. Concerns to lessen the time spent on MAT should require those prescribed to receive

counseling services simultaneously. As stated by the participants, counseling is suggested to build a new foundation to live by, such as healthier coping skills and relapse prevention. Psychotherapy required with MAT would increase the person's resiliency to avoid relapse, understand triggers, and develop coping skills to build a structured life without use. MAT would help those at the beginning of recovery manage the deathly withdrawals while learning the new skills concurrently. Psychotherapy and MAT used together could decrease the amount of time spent in treatment altogether.

As briefly mentioned, withdrawals are a concern for those prescribed MAT and whether to continue their prescription or "bite the bullet" and manage through them to become free from the ball and chain effect stated in Chapter II. This generated another question, should counseling services be required with a low dose MAT prescription followed by marked stability? Considering this question, maintaining a low-dose prescription may allow the client to remain stable, hoping to decrease the severity associated with the final step of discontinuing the medication.

A difficulty is noting whether the client is truly sedated and experiencing withdrawal when physicians administer the Clinical Opiate Withdrawal Scale (COWS) as mentioned in Chapter II, or whether they are lying. Clients may lie about withdrawal symptoms to increase their prescribed dose. This was seen in the participants prescribed methadone. They stated that at the beginning of their treatment; they lied to increase their dose. However, the physician did not question or further analyze whether the severity was as reported. Not further assessing could be associated with the lack of education previous studies implied regarding physicians' knowledge. As the medical field grows, it is hoped that it can develop a way to detect lying and false

information provided on the COWS to avoid increasing their dose when unnecessary. These lower doses may also make it easier for the client to decrease their time spent on prescribed treatment and decrease withdrawals' severity. Finally, the more educated the physician is on MAT, the more helpful they may be prescribing the medications, allowing for more direction on individualized treatment plans and educating the client.

Conclusion

From a researcher's perspective, both participants and physicians are held accountable for continued medicated treatment therapy. If the physicians use MAT as a form of harm reduction, the client may challenge the physician by asking for a taper at a point in their treatment. Instead, the physician may disapprove of their request due to them not believing they are ready to discontinue and remain abstinent. The physician is thought to have the best interest in the client. However, what happens when the length exceeds and the client is ready, but the physician does not allow for it? This question was noticed in two participants who volunteered to be a part of this study. One of the participant's physicians lost their license and resulted in them having to begin their taper themselves. The second participant had to challenge their physician by asking for a taper, leading them to begin tapering themselves. The hopes of this situation remain that they take their recovery into their own hands, allowing themselves to taper themselves and eventually discontinue their prescription correctly.

With an emphasis on the physician, they have increased responsibility for the continued prescription over the time clients are prescribed. Regarding client thoughts, why would withdrawals be more severe from those on MAT than those discontinuing drugs such as heroin or fentanyl? Is this due to the purity levels associated with methadone? However, suboxone

cannot be attributed to that conclusion due to the ceiling effect it obtains. Due to it being an antagonist, it makes it harder for a user to abuse the drug. It still is questioned why would withdrawals associated with suboxone be increasingly worse then? It is thought to be attributed to a monetary value to replace an illicit drug with a prescription that will guarantee paid fulfillment through insurance. If a physician were to use the notion of harm reduction for the approach, it would make sense to provide the education as explained earlier to decrease their risk levels of relapse and continued use. Ethical dilemmas are flagged where beneficence and non-maleficence are concerned. Beneficence being an oath that the physician does good for their clients and non-maleficence may then be concerned to where the physician takes an additional oath to *do no harm*. Indeed, physicians may have good intentions, but may break these oaths when making the wrong decision and not providing therapeutic services. Lastly, over the years, the number of waivers has increased for physicians to maintain clients. It can view this from two perspectives. Again, one is a monetary increase for the physician and two for an increase in helping those diagnosed with an opioid use disorder. Whichever lens one wants to look through, the ending conclusion would hope to be focused on eventually discontinuing their prescription to help clients live a non-medicated dependent life.

To provide appropriate services and follow guidelines mentioned in Chapter II, physicians should consider administering the COWS screening tool to evaluate the client for stability and ensure they are not abusing their prescription. Treatment goals should also be heavily considered upon initial assessment to determine which approach is appropriate for them individually. Deciding whether harm reduction or abstinence is the long-term goal will allow the physician to meet the client where they are at and provide effective therapeutic services. The

clinician should also maintain self-education on the MAT they are prescribing to ensure they are up to date on the most effective way to treat those with this detrimental substance use disorder.

Although the responsibility of remaining on medication for opioid use disorder is amongst both physician and client, it can be concluded it is solely up to the client whether or not they stay on the medication or not. However, if the client wishes to discontinue treatment, they may, have an increased risk of relapse and withdrawals. They may also taper themselves off the prescription they receive and avoid those side effects without the help of their physician and not continue a life tied to a medication. Contrarily, the client may also choose to continue their treatment due to the security of having a continuous prescription of opiate medications to fuel their addiction without the risk of overdosing and an increase in purity of the drug. The client may view this as a benefit to maintaining their addiction with the low cost of obtaining the medication. They also have the security of knowing they may never have to experience withdrawals due to the continued prescription. Unlike when using street drugs, they have to go through the struggle of having enough money to obtain it, along with finding a dealer who has some at the time of need. Clients are not court-ordered to maintain prescription, so remaining on the prescription is the bottom line in their hands. They have the right to choose to continue or discontinue their prescription.

To conclude the research discoveries and thoughts pertaining, there was not enough participant data to develop a clear understanding of who may be held accountable when clients are prescribed MAT for OUD. It is thought that with proper education and counseling while prescribed the medications, one may have greater chances of decreasing the time spent on medicated assisted therapy and live a life independent from opioids. Decreasing time and being

on medications will help the client achieve their goal of complete abstinence, and for those who believe their recovery does not fully begin once they are off MAT.

Limitations

The limitations of this study are as follows. The study consists of using a limited number of five participants, with only one methadone perspective. Since this is a qualitative study, acquiring data from many of the opioid use population would require an intense amount of time and research. The small number of participants contain different demographics – specific opioid choice in their addiction, treatment methods they acquired, length of initial addiction, treatment duration, and whether they received counseling. Furthermore, participants may withhold information due to personal reasons that may affect data. Lastly, it is essential to note that some participants have a personal relationship with the researcher, which may influence data. However, researcher bias is taken heavily into consideration to avoid alterations of results and conclusions. This study also only included participants from a Caucasian ethnicity and did not include participants from different cultures.

Participants with different characteristics hold limitations by obtaining different perceptions and viewpoints of substance use and abuse. With a small number of participants, the opportunity of obtaining more data to derive a concrete conclusion limits the findings. Each participant received their drug of choice, limiting the study by the treatment methods to one specific opioid. Meaning one participant may use heroin as their illicit choice and methadone as their treatment method. In contrast, another could use oxycodone for their addiction and buprenorphine as their treatment.

Along with the different illicit and treatment choices, participants differ from the addiction and the duration of treatment methods. One participant may come from a history of substance abuse for ten years, whereas another only a single year. The course of addiction limits the findings for the treatment method's tapering effect and length of treatment. Since one participant may show long-term addiction over another, this could determine the success of the treatment. Along with the duration of the habit, the course of treatment has significance for a limitation. A participant's success rate could be different from others due to their treatment length, relying on physical dependence. Those who have completed treatment in the previous year might offer different experiences and opinions than those who are currently prescribed, in addition to those who have been prescribed for more extended periods of time.

Results may be affected due to the years the participants were prescribed MAT. Participants may have different opinions regarding their treatment due to obtaining a physician with possibly less education on prescribing MAT compared to those currently prescribed. Current physicians may obtain greater knowledge regarding the effects, proper dosing, and treatment protocol compared to those prescribing the medications when there was not much information about adequate services.

Lastly, participants are encouraged to disclose information regarding their addiction and treatment, including their feelings, experiences, and other information. What limits this specifier is that participants can withhold some variables from the interviewer based on personal reasons. Reasonings may include fear of judgment and legal concerns associated with their addiction. Traumatic experiences may not be discussed with flashbacks of their use and treatment, causing a relapse trigger.

In addition to the participant's limitations, this study also lacks current prescribers' thoughts and experiences. This limitation may cause a bias against prescribers due to only information data from the receiving parties. This limitation is acknowledged when conducting research being the bias concern associated with that piece of information. Research from previous studies regarding physicians' experiences has provided an analysis with enough information to gather a general notion of their knowledge. Furthermore, the years the participants were prescribed can alter the opinions regarding the treatment. Those prescribed when suboxone first received FDA approval may have received a less educated physician than those who have received a physician later, who have more education and understanding of the risks, benefits, and how to administer the medications properly.

Admittingly, this study has various limitations; the data provided is a steppingstone for future research. The study developed numerous questions for the researcher to continue exploration within this field of study. The treatment of opioid use disorder develops serious questions about medications, treatment length, physician's role, the client's role, and approaching this severe crisis the world is facing. As the medical field continues developing alternative understandings of mental health alongside addiction, physicians, doctors, therapists, and psychologists can mend together different approaches to create effective services for those most affected.

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