AN EXPLORATION OF A SUBSTANCE ABUSE TREATMENT PROGRAM AND ITS EFFECTS ON OPIOID ADDICTED ADULTS’ ABILITY TO MAINTAIN RECOVERY

A Scholarly Project
Submitted to the faculty of the
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By

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As deaths related to opioids continue to increase across the country, with more than 41,000 deaths in 2016, a dark cloud looms over Florida as the state strives to contain the epidemic. There were 779 deaths related to opioids in Florida in 2015, which increased to 2,798 in 2016, making their death rate 14.4 compared to 13.3 nationwide. This study sought to explore a substance abuse treatment facility, evaluating patient satisfaction with treatment and how their level of satisfaction related to maintaining recovery. The use of Vivitrol, a staple treatment for opioid dependence at the study site, was assessed for a link between its use, satisfaction, and maintenance of recovery. This was an exploratory mixed methods study which utilized surveys with follow-up individual interviews. 32 patients completed the Treatment Perceptions Questionnaire and demographics, and six patients participated in follow-up interviews, each of which demonstrated satisfaction with their treatment. A series of independent sample t-tests were computed to assess how the variables of mandating treatment, gender, vivitrol and current sobriety were related to the 2 TPQ dependent variable subscales of staff and program effectiveness. There were no significant differences for staff and program perception for any of the variables. For the continuous variables of age, times in treatment and length of treatment, a correlation analysis indicated no significant relationships. The only correlation found was that as
perception of the staff increased, so did perception of program effectiveness. Follow-up interviews confirmed patients’ satisfaction with the program while giving valuable insight into their struggle to maintain recovery. Common themes included: 1) Community support 2) Attachment to smoking 3) Outside/Inside activities, and 4) Ideal program characteristics to maintain recovery. Findings will inform DNP role in programmatic recommendations and assist in making organizational changes designed to assist opioid addicted patients in maintaining their recovery.
DEDICATION

This DNP Scholarly Project is dedicated to the memory of my aunt, Janice C. Tubbs, RN, who inspired me to become a Registered Nurse 20 years ago, and later, a Nurse Practitioner. Her commitment to the profession of nursing and her passion about the opiate crisis inspired this research study. Although she was my inspiration to pursue my doctoral degree, she was unable to see my research completed and my dream realized. This is for her. May she rest forever in the loving arms of God.

I also dedicate this work to my parents, it was your continual love, support, and encouragement that allowed me to finish my undergraduate nursing degree while working a full-time job and being a single mother. The values you taught me as a child played a pivotal part in advancing my career, specifically by inspiring me to always be the best version of myself, to pursue my dreams, and you instilled in me a strong work ethic with the knowledge that hard work always pays off.

My daughter, my best friend, you are the light of my life. Everything I have done has been for you, both to inspire you to be the best you can be, and to show you what my parents taught me, that hard work always pays off. It’s never too late to achieve your dreams. I love you more than you’ll ever know, and I appreciate your constant love and support. I am always so very proud of you!
Finally, for the patients who volunteered to participate in this study, I appreciate you. I recognize that your journey with opioid addiction, sobriety, and recovery has been a difficult one and I am so proud of you for your accomplishments. I will always be grateful to have had the opportunity to discuss your journey with addiction, your hope for the future, and your suggestions for making this substance abuse treatment program a better tool to help you achieve and maintain recovery. Mahatma Gandhi once said, “Strength does not come from physical capacity. It comes from an indomitable will”. May that “will” be your guiding light during your recovery.
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Chapter I- Introduction

While heroin abuse in America is not a new phenomenon, its use has soared since the late 1990s when pain management clinics started providing pain pills, in the form of opioids such as hydrocodone and oxycodone and devastating the lives of those living in big and small cities alike (Krisberg, 2014). According to the Department of Health and Human Services (DHHS) website, “Since 1999, the rate of overdose deaths involving opioids—including prescription opioid pain relievers and heroin—nearly quadrupled, and over 165,000 people have died from prescription opioid overdoses” (DHHS, 2016, Para 1). Additionally, the Centers for Disease Control and Prevention (CDC) reported 63,632 drug overdoses in 2016, 66% of which were related to opioids, both prescription and illicit (Centers for Disease Control and Prevention, 2017). The total number of deaths related to opioid overdoses from 1999 to 2016 are estimated at more than 350,000 (Centers for Disease Control and Prevention, 2017).

To complicate the opioid epidemic even further, there has been a sharp increase in heroin-related deaths attributed to a synthetic opioid called Fentanyl, which is often added to the heroin to increase its potency, frequently unbeknownst to the addicts, and resulting in thousands of unintended overdoses each year (DHHS, 2016).

The only means out of the resulting addiction is recovery, and maintaining recovery is a hurdle that is more and more difficult to overcome as the addiction intensifies. One study found that 91% of patients treated for opioid dependence relapsed following treatment, 59% of which occurred in the first week following discharge from the substance abuse treatment program (Smyth, Barry, Keenan, & Ducray, 2018). Thus, for an opioid addicted individual to achieve any recovery at all is difficult, and to maintain that recovery is a daunting task even for the strongest of those who are motivated and determined.
Additionally, the American Society of Addiction Medicine (ASAM) recommends treating opioid addiction as a chronic disease stating, “like other chronic diseases such as type 2 diabetes, hypertension and asthma, addiction often involves cycles of relapse and remission. Much like type 2 diabetes, hypertension and asthma, opioid addiction cannot be cured; however, it can be treated and managed” (American Society of Addiction Medicine, 2014, para.3). They also recommend utilizing Medication-Assisted Treatment (MAT) to assist in maintaining recovery, including treatment with the opioid antagonist, Vivitrol, in addition to opioid agonists such as buprenorphine and methadone (American Society of Addiction Medicine, 2017). One of the largest barriers to treatment with one of these agents was overcome in January 2017 when Medicaid began covering treatment of the use of these powerful agents (Crosby, 2015).

Because previous studies, which will be discussed in Chapter 2, have found a link between patient satisfaction with substance abuse treatment and outcomes, this study will include a comprehensive evaluation of patient satisfaction with the substance abuse treatment modalities currently available for opioid dependence at the study site. These modalities include MAT with Vivitrol (naltrexone ER), individual and group therapy, detoxification and residential treatment, yoga, meditation, spiritually-focused 12-step groups on site, and a complete psychiatric evaluation by Medication Services. This evaluation is critical to determine which patients need adjunctive pharmacologic treatment of their mental health disorders with antidepressants, antipsychotics, and/or mood stabilizers. Data from this study will be compared to existing evidence of factors contributing to treatment success in opioid dependent individuals.
Providers at the study site believe strongly in Vivitrol (naltrexone ER) as part of the treatment plan in opioid addicted patients, therefore it is important to look at the potential benefits, both perceived and supported by outcomes, which include decreased rates of relapse and increased length of sobriety. Vivitrol (naltrexone ER) works by blocking opiate receptors in the brain, which caused many to fear it may increase the risk of depression in these patients, making relapse more likely (Dean et al., 2006). However, according to the research evaluated and discussed in the literature review, there is ample evidence to support the finding that naltrexone has not increased depression in opioid dependent patients who are in substance abuse treatment. This is very important to patients’ recovery, as they are often self-medicating for anxiety and depression by abusing drugs (Krupitsky et al., 2013). While many opioid treatment modalities are available, there are varying opinions on treatment effectiveness and each of these modalities impact patient satisfaction and relapse rates due to compliance issues and timely availability of services.

Many treatment programs utilize other narcotics as part of treatment for addiction to opioids, which some view as “trading one drug for another” and require complex weaning doses and lengthy treatment regimens which complicate clinical outcomes and compliance. Furthermore, Vivitrol (naltrexone ER) can be prescribed by all clinicians, while Suboxone (buprenorphine) can only be prescribed by a physician with a specialized DEA license. Methadone is similarly under rigorous prescribing regulations. For this reason, providers at the study site for this exploratory study view Vivitrol as a more realistic and effective treatment option.
Chapter one will continue to explore the problem of opioid dependence, as well as its significance, provide an organizational needs assessment where this timely research will be conducted, define the research question, and explore the theoretical framework which will be used to conduct the proposed study.

**Statement of the Problem**

Heroin is a semi-synthetic opiate whose abuse has increased from 375,000 Americans in 2007, to 669,000 Americans in 2010 (National Institute on Drug Abuse, 2014). The disturbing increase in this trend continued as The Centers for Disease Control and Prevention reported 63,632 drug overdoses in 2016, 66% of which were related to opioids, both prescription and illicit (Centers for Disease Control and Prevention, 2017). The total number of deaths related to opioid overdoses from 1999 to 2016 are estimated at more than 350,000 (Centers for Disease Control and Prevention, 2017).

It is often difficult to separate the abuse of opiates from the abuse of heroin as the pattern of abuse in this epidemic appears to start with an addiction to prescription pain pills and moves to the use of heroin. The reason for this is in large part because the pain pills are unavailable, either due to providers refusing to continue writing prescriptions or the increased cost related to the “street value” of these medications, therefore addicts often turn to heroin as a cheaper and more accessible option (Clements, Lopez, Rachakonda, Sedky, & Pumariega, 2016).

The more disturbing statistic, however, is that the most significant age group where heroin use has increased is ages 18-25 (Krisberg, 2014). Nothing brings this to light as well as a comment made by a public health nurse in Ohio, Lisa Roberts, who stated “pain pills became
a form of commerce here. Pretty much everyone I know had an addicted kid” (Krisberg, 2014, p. 1). Many others are affected by the opioid crisis every day, such as the Department of Children and Families (DCF), who are saddled with the very large burden of trying to find homes for children who are victims of the crisis and who have lost one, or both, parents to drug overdose or incarceration. According to an article written in the Orlando Sentinel January 2, 2018 and titled “Children become collateral damage in Florida Opioid crisis”, nearly 440,000 children nationwide spent the Christmas holidays in the foster care system in 2017 (Kam, 2018). This is a 45% increase from 2011, where 400,000 children were in the system (Kam, 2018). Additionally, there are many children sleeping in their social worker’s offices or, worse, “being shipped off to prison-like institutions where they languish for months, even years, without loving families” (Lachman, 2017, para. 4). There is no way to describe these children’s feelings of abandonment and loss, or the impact it will have on their futures. Statistics show that children in foster care are five times more likely to abuse drugs and 70% of children who have been involved in the juvenile justice system have spent time in the child welfare system (Lander, Howsare, & Byrne, 2013). In addition, one third of the nation’s homeless young adults were previously in the foster care system (Lachman, 2017).

The opioid crisis has been making national headlines for nearly a decade, as the deaths from overdose continue to spiral out of control. This has fortunately been a bipartisan issue that both national and local politicians have supported as President Trump declared the opioid crisis a national emergency in October 2017 (President Donald J. Trump is Taking Action on Drug Addiction and the Opioid Crisis, 2017).
There are many ways to treat opiate addiction, including methadone and Suboxone, both of which are substitutes for the opiates, and as controlled substances, require a taper period. Unfortunately, the use of these two substances can lead to further addiction and can be difficult to control due to the increased street value of these drugs (Crosby, 2015). Other treatment methods include a complete detoxification of patients from the opiates, with follow up in individual and group therapy, as well as participation in Narcotics Anonymous. A medication called Vivitrol (naltrexone extended-release depot injection) was approved by the FDA in October, 2010 for use in opioid addicted patients who are seeking treatment for their addiction (Kruptisky et al., 2013). Vivitrol is a once monthly injection that inhibits euphoria by blocking the opiate receptors in the brain, thus inhibiting the reward centers in the brain (Krupitsky et al, 2013).

The purpose of this research study was to explore the relationship between level of satisfaction with treatment in opioid-addicted adults, and their ability to maintain recovery. Because there has been limited research completed in this area, this research plans to utilize information gathered from surveys and individual interviews to improve the substance abuse treatment offered at the study site.

Significance of the Problem

The opiate epidemic has had significant societal costs, including deaths, which are now estimated to be nearly 115 people every day in America (Centers for Disease Control and Prevention, 2017) and many homeless families and children (Lachman, 2017). There were more Americans who died from drug overdoses in 2016 than died in the Vietnam War with an estimate.
of 59,000-65,000 deaths, the year with the highest death rates to date (Welch, 2017). For comparison, consider that nearly 60,000 soldiers died in the Vietnam War, nearly 55,000 Americans died of car crashes at their peak in 1972, more than 43,000 died due to HIV/AIDS during its peak in 1995, and nearly 40,000 died of gun related deaths during their peak in 1993 (Welch, 2017).

While attacking this issue is complex, one important piece of the solution lies in knowing more about treatment effectiveness. Because opioid use of both pain pills and heroin has become a nationwide epidemic, in 2016 Georgetown University hosted a screening of “Chasing the Dragon: The Life of an Opiate Addict.” Speakers discussing this epidemic included former Federal Bureau of Investigation (FBI) Director James Comey, former Attorney General Loretta Lynch, and former Drug Enforcement Agency (DEA) Acting Administrator Chuck Rosenberg. Given such vast resources allocated to addressing the opiate epidemic nationwide, there is a substantial amount of research available about this issue, including available treatment options.

**National impact of the opioid epidemic.** According to the Annual Surveillance Report of Drug-Related Risks and Outcomes (2017) published on the Centers for Disease Control and Prevention website, 435,000 people self-reported using heroin during the past month. Of those who admitted to using heroin, 16,000 of those were ages 12-17, 82,000 ages 18-25, and 172,000 ages 26-34. When comparing to the self-reported number of heroin users in the past year, the numbers increase substantially, with 914,000 people reporting the use of heroin in the past year. Of those who reported using heroin, 28,000 were ages 12-17, 268,000 ages 18-25, and 346,000 ages 26-34.
Local impact of the opioid epidemic. Florida is one of many states on the front lines of the nationwide opiate epidemic, with 779 opiate-related deaths in 2015, statistics mirroring that of the U.S., which led Florida congressmen to initiate new regulations, including the restriction of opioid prescriptions (Florida Drug-Related Outcomes Surveillance and Tracking System (FROST), 2015-2016). Restriction of prescription opioids in 2014 appears to have contributed to an increase in deaths caused by heroin, a 79.7% in 2015 when compared to 2014 (Florida Drug-Related Outcomes Surveillance and Tracking System (FROST), 2015-2016). There have been numerous state laws written in Florida to combat the epidemic, including the creation of a monitoring system where providers can determine what controlled substances their patients are prescribed, as well as for the state to monitor which providers are prescribing opiates, and the amounts they are prescribing (Florida Drug-Related Outcomes Surveillance and Tracking System (FROST), 2015-2016). These legislative measures have decreased the number of prescriptions written for pain pills in the form of opioids, as well as decreased deaths from oxycodone by 70.6% from 2010-2014. However, due to the decreased availability of prescription pain pills, there has been an increase in deaths related to heroin and Fentanyl use (Florida Drug-Related Outcomes Surveillance and Tracking System (FROST), 2015-2016).

Cost of the opioid epidemic. No discussion about the opiate epidemic is complete without including the costs or burden to society. The DHHS (2016) website reported the opioid epidemic costs the United States $55 billion dollars a year, and $22 billion a year for emergency room visits and inpatient hospitalizations due to opioid overdoses.
It is estimated that the opioid epidemic cost this country more than a trillion dollars between 2001 to 2017, and the “economic fallout” from the heroin and prescription pain pills is predicted to cost $500 billion from 2018-2020 alone (Mangan, 2018). President Trump’s budget proposal called for $17 billion in opioid treatment spending, with $13 billion to go to the Department of Health and Human Services for use to “combat the opioid epidemic by expanding access to prevention, treatment, and recovery services, as well as support for mental health” (Mangan, 2018, para. 9).

In conclusion, on an average day in America, 580 people initiate heroin use, 3900 people initiate nonmedical use of prescription opioids, and 78 people die from opioid-related overdoses (DHHS, 2016). Families are torn apart due to death or lengthy prison sentences and children can be removed from their homes and placed in foster care because of parental drug use (DHHS, 2016). Often the best thing that can happen is that the opioid abuser goes to jail because, in the state of Florida specifically, there is a program that helps the addict become free of opioids and can assist in reuniting affected families called “Drug Court” (Crosby, 2015). This “Drug Court” program offers group and individual counseling, as well as, monthly Vivitrol injections to assist in preventing relapse (Crosby, 2015).

Organizational Needs Assessment

The site where this research study was conducted is a not-for-profit mental health clinic which serves several counties in Southwest Florida, providing both mental health and substance abuse services to more than 10,000 people a year. This organization has approximately 250 employees on three campuses including nurse practitioners, physicians, nurses, behavioral
technicians, therapists, and case managers. The organization’s primary focus is the treatment of mental health and substance abuse issues across the lifespan. The main campus includes an inpatient Crisis Stabilization Unit (CSU), as well as an inpatient substance abuse treatment and detoxification center. Additionally, there are two moderate size buildings that provide offices for the outpatient staff. One building has space for company in-services, orientation, and lunch, as well as the case management staff. The other building holds the offices for the providers, therapists, administrators, and outpatient substance abuse counselors. The individual and group therapy which is provided to patients receiving substance abuse treatment is located in the substance abuse building on the main campus. There is a lounge area with television available for viewing while awaiting services provided. There are bathrooms and vending machines in that building as well.

The study site values patients’ level of satisfaction in accordance with their mission and values statement. At discharge, each patient is given a link to an 18-item customer satisfaction survey which is completed utilizing Survey Monkey. These surveys are completed online anonymously and are unobserved by staff members. For 2017, 1895 patients completed this survey and it is estimated to have taken them 10 to 15 minutes to complete. The most recent Outcomes Report informed by those surveys was for the fiscal year 2016-2017, which included an assessment of the Recovery Center, both detoxification and residential. This report evaluated access to care, defined as the number of hours from the initial call until services were offered, and demonstrated an average of approximately 13 hours against a target goal of less than 48 hours. The second measure evaluated was effectiveness of treatment defined as: 1) Percent of
patients successfully completing the treatment program, and 2) Percent of patients re-admitted within 30 days of discharge. The targets for these two parameters was >60% and <20% respectively. The average for parameter 1 was 67% and for parameter 2 was <4%, both exceeding organizational goals. The current patient satisfaction tool can be found as Appendix A.

The third measure evaluated on this annual report was patient satisfaction and was evaluated based on patient completed surveys. The results showed that 92% of patients were satisfied with services, compared to a goal of 90% satisfaction. While the organization reached its benchmark for patient satisfaction, the patient satisfaction survey shows room for improvement.

According to Schein (2010), it is important to assess the artifacts of an institution, which are defined as:

The visible products of the group, such as the architecture of physical environment; its language; its technology and products; its artistic creations; its style, as embodied in clothing, manners of address, and emotional displays; its myths and stories told about the organization; its published lists of values; and its observable rituals and ceremonies. (p. 23)

These artifacts are readily displayed and visible throughout the institution from the openness of the office, to the relaxed appearance of the staff, and specifically the providers. The waiting area provides comfortable seating and a large screen TV for viewing. These qualities act to maintain a relaxing environment for the patients while they wait for their appointments with the providers.
Additionally, there are pamphlets that provide information about the other services offered such as substance abuse treatment, family intensive therapy, and case management.

Additionally, espoused beliefs of this organization include the belief that all patients are equal and deserve to be treated fairly, and given the same quality of care, regardless of their ability to pay. A research study conducted in this type of environment, where staff and specifically, the Medical Director, encourage growth and evidence-based practice, will be supported by the key stakeholders. These key stakeholders include: other providers, the Medical Director, the Chief Executive Officer (CEO), and the Chief Operating Officer (COO). One of the values listed on this organization’s website states, “We strive to use the best practices that promote the best outcomes for persons served. We believe “striving” means that improvement must be continuous, and that it is rooted in creativity and constant sharpening of existing skills.” Research is an important part of an environment that encourages these values in its employees. This researcher is encouraged by the support given by the Substance Abuse Treatment Center on campus, and their willingness to help collect data for this study, as well as provide direction where needed. They reported they are excited by the idea of studying patient overall satisfaction with the substance abuse treatment program, learning ways they can improve outcomes, and evaluating patient satisfaction with Vivitrol and its effectiveness in treating their opioid dependence.

Although the organization is receptive to research, it is evident that the current Consumer Tool has a positive skew and may, in fact, not be adequately capturing true patient satisfaction. All of the items on the current tool are written in the affirmative, leaving little room for
disagreement or negative comments, and there is limited opportunity for patient discussion or qualitative responses about their healthcare experiences. For these reasons, the researcher utilized the Treatment Perceptions Questionnaire (TPQ) to explore patient satisfaction for opioid dependent patients. The TPQ is a ten-item questionnaire with both positively and negatively skewed statements which uses a Likert Scale to quantify patients’ satisfaction with treatment.

One significant advantage to utilizing this tool to measure satisfaction is the addition of an open space for narrative comments at the end. This allows patients to provide more detailed feedback about their experience and adds a qualitative component to their evaluation (Marsden et al., 2000).

Research Question

According to Melnyk and Fineout-Overholt (2015), the first step of evidence-based practice (EBP) is the formulation of a clinical question. The format used to state this question is PICOT, defined as “the process in which clinical questions are phrased in a manner that yields the most relevant information from a search” (Melnyk & Fineout-Overholt, 2015, p. 609). By utilizing the PICOT format, the population (P), intervention (I), comparison (C), outcome (O), and time frame (T) are clearly identified to the reader (Melnyk & Fineout-Overholt, 2015). This format will be used as a framework to identify this scholarly project’s inquiry into the overall patient satisfaction of opioid addicted patients, as well as treatment effectiveness in one substance abuse treatment facility. The research question is as follows: In opioid-addicted adults (P), what is the effect of a substance abuse treatment program (I) on patient satisfaction and maintenance of recovery (O)? There are three study aims. The primary aims include identifying
the patient’s perceived level of satisfaction with the treatment they receive, and evaluating how their satisfaction, or lack thereof, effects their treatment outcomes, primarily maintenance of recovery.

Additionally, a secondary aim will be to assess how responses on the TPQ compare to the feedback given during follow-up individual interviews. This will include areas of the treatment which could be improved, therefore potentially assisting patients in maintaining their recovery. The importance of this cannot be overstated, as an accurate assessment of patient satisfaction with treatment is of critical importance in making improvements to the program in the future, with the ultimate goal of improving patients’ chances of maintaining recovery. This researcher is interested in capturing patients’ feelings and attitudes towards the treatment they received for their opioid dependence, more specifically, what tools best assist them in maintaining recovery. Most importantly, the information gathered will be important to determining what improvements could be made to the substance abuse treatment program to better assist them in achieving their goals.

Finally, a third aim of the study will be to assess the effectiveness of Vivitrol by comparing patients who received it during treatment and those who did not. More specifically, it would be of paramount importance to note if patients on Vivitrol have been more able to maintain their recovery as evidenced by no use of opioids since receiving the injection.

**Theoretical Framework**

Because organizational change can be a very complex and overwhelming process, theoretical frameworks are often used to simplify the process by creating simple steps to follow.
The framework used for this scholarly research project will be the Donabedian Model, which will assist this researcher in evaluating the measurement of patient satisfaction utilizing the Treatment Perceptions Questionnaire (TPQ). The researcher will compare the responses given in the surveys to feedback received during the individual interviews to evaluate patient satisfaction with treatment and how it impacts their outcomes, most importantly, maintenance of recovery.

The Donabedian Model states that there are three ways to monitor quality of care, which is of tremendous value in this study because the purpose of conducting the research is to explore patient satisfaction, specifically as it relates to determining outcomes (Donabedian, 2003). The three quality measures discussed are structure, process, and outcomes (Donabedian, 2003).

Evaluating “structure” is important because this is an assessment of the conditions where patient care is provided, and which can influence satisfaction (Donabedian, 2003). This includes maintenance of facilities and equipment, human resources, including the number of personnel and their roles, and, finally, organizational characteristics such as mission, vision and values, the type and frequency of supervision and performance review, and methods of paying for care. The assessment of structure is of paramount importance because it “could be the major determinant of the quality of care that the system, on the average, is able to offer” (Donabedian, 2003, p. 50). Also, it is important to note that many attributes of structure are more readily observable, easily documented, and overall more stable than the other measures (Donabedian, 2003).

The processes of an organization can have a tremendous effect on a patient’s perception of the quality of care they receive, and often are more directly related to outcomes than the structure of an organization (Donabedian, 2003). Another advantage to note is “processes of
care are what would be called contemporaneous, they are taking place in the here and now and consequently offer current, even immediate, indications of quality” (Donabedian, 2003, p. 52). This information is easily obtained from the EMR, direct observation, or by asking the patient directly or via a patient satisfaction survey.

Many believe outcome measures are the gold standard in measuring quality because the most important aspect of quality is the effect of health care received on the patient’s health and well-being (Donabedian, 2003). It is generally recognized that the outcomes are easily measured by asking patients directly what their perception is of the care they received. For the purposes of this scholarly work, outcomes will be utilized to provide information related to very specific clinical objectives: (a) the maintenance of recovery as evidenced by a decrease in relapses, and (b) improved patient perception of their quality of care.

This study utilized a combination of structure, process, and outcomes measures, identified as primary aims of the study, thus giving a complete picture of what is being studied. Donabedian (2003) states “a combined strategy can help identify the causes of failures in quality, attributing them to structure, process, or both. This can suggest what corrective measures should be taken to improve quality” (Donabedian, 2003, p. 56).

This study will be conducted utilizing the TPQ survey to evaluate patient satisfaction with their substance abuse treatment program. Following administration of the survey, patients will be invited to voluntarily participate in an individual interview to elaborate on the findings from the survey and assess their personal experiences with treatment, what they found beneficial,
things that may have been a hinderance to their recovery, and what they perceive as ideal components and characteristics of a successful treatment program.

**Definition of Terms**

**Addict**- someone suffering from addiction. Addiction is classified as abnormal and classified as a disease. It is manifested as uncontrollable cravings, inability to control drug use, compulsive drug use, and use despite harm to oneself or others. Addiction can occur without dependence (American Psychiatric Association, 2013).

**Adult**- a person 18 years or older

**Craving**- defined as “an overwhelming emotional experience that takes over your body and produces a unique motivator of behavior-wanting and seeking a drug.” It is described as “the memory of the positively rewarding effects of the drugs” (Heshmat, 2015, para. 2).

**Detoxification**- defined as the reduction or elimination of the substance of abuse (Kruptisky et al., 2011). For the purposes of this study, detoxification is the elimination of opioids from the body and is most often the initial treatment step towards recovery.

**Natural opiates**- described as substances originating from natural opium alkaloids that occur in nature. This category includes morphine, codeine, and opium. (Centers for Disease control and Prevention, 2017).

**Opiate-dependence**- when the body relies on an external source of opioids to prevent withdrawal symptoms (American Psychiatric Association, 2013).

**Opioids**- synthetic/man-made opiates. This term is frequently used interchangeably with opiates; however, in this study, opioids refers in large part to oxycodone. Opioids bind to opiate
receptors and create euphoria and/or pain relief. (Centers for Disease Control and Prevention, 2017).

**Outcomes**- In this study, it will be a measure of patient’s reported levels of satisfaction with the substance abuse treatment received, as well as their ability to maintain their recovery.

**Patient Satisfaction**- a measure used to qualify patient experiences, patient perception about the care they received, and how that care impacted their outcomes (Marsden et al. 2000).

In this scholarly project, a survey will be utilized to gather this information followed by individual interviews.

**Rehabilitation**- defined as the stage of treatment where the substance abuse program utilizes resources to assist the addict in maintaining his/her sobriety following detoxification. Rehabilitation is when the patient will begin to develop better coping strategies, improve physical and psychiatric health, and improve social functioning, both at home and in the workplace. (American Society of Addiction Medicine, 2017).

**Recovery**- the continued maintenance of sobriety following rehabilitation. Continued improvements in social functioning and personal health should be recognized during this stage. (American Society of Addiction Medicine, 2017).

**Semi-synthetic opioids**- contain a small amount of opium alkaloids. Semi-synthetic opioids include oxymorphone (Opana), hydrocodone (Vicodin, Norco), oxycodone (Roxycodone, OxyContin), buprenorphine (Subutex), heroin, and hydromorphone (Dilaudid). (Compton, 2017).
**Synthetic opiates (referred to as opioids)**- drugs manufactured according to the chemical structures found in natural alkaloids. Since these drugs originate in the laboratory, they can be made stronger than opium itself. These include fentanyl (Sublimaze, Duragesic), methadone (Dolophine), and pethidine/meperidine (Demerol). (Compton, 2017).

**Vivitrol**- this drug is an intramuscular injection formulation of Naltrexone, which is an opiate antagonist that binds to opiate receptors to prevent the euphoric effects of opiates. (Kruptisky et al., 2011).

**Conclusion**

This chapter discussed the catastrophic effects of opioid abuse and dependence in the United States, and more specifically, in Florida. The significance of the problem was defined with statistics that demonstrate the importance and timeliness of additional research in this area. Vivitrol was also introduced as a viable treatment option offered in the substance abuse treatment program being studied.

An organizational needs assessment was also completed and included identification of Schein’s artifacts, the mission and values statement of the organization, and the attitudes of the stakeholders’ including willingness to allow this researcher to complete the study at their organization. Although the use of a Consumer Tool is currently being utilized to measure patient satisfaction, it is possible that the format of this tool is not comprehensively capturing patient satisfaction.

Donabedian’s Model illuminates the structure, process, and outcome measures as integral in evaluating quality of care. Utilizing this framework, the current outcome measures captured
by the Consumer Tool may need to be re-examined and compared with the TPQ tool to obtain more relevant results for this vulnerable population.

This research is critically important as patient satisfaction with treatment and outcomes, primarily maintenance of recovery, are inextricably linked. The patient satisfaction survey currently utilized at the research site does not demonstrate areas of dissatisfaction from the patients’ perspective, which is required to institute change designed to better assist opioid addicts in maintaining their recovery. As more of these patients become productive members of society, the cost and burden to society will be reduced.
Chapter II-Review of the Literature

Introduction to Search Criteria

This chapter will review the literature related to the research question as discussed in Chapter 1, as well as discuss the strength of existing research and applicability to the proposed study. Many search terms were used to allow for a broader search to return the greatest amount of related research. While there is a paucity of research available which uses mixed methods to evaluate a single substance abuse treatment program, specifically utilizing individual interviews, many of the related topics were searched independently and yielded results that will assist the researcher in designing the proposed study.

Because the primary aims of the proposed study is to evaluate patients’ satisfaction with their substance abuse treatment and assess for a possible link between their level of satisfaction and their outcome, primarily their ability to maintain recovery, the Ovid database was searched for research related to substance abuse treatment and patient satisfaction. When the keywords “patient satisfaction” were entered, 89,615 results were returned, however the number was decreased to 27,585 when the search was limited to only those studies that appeared in the literature in the past five years. A search for “substance abuse treatment centers” OR “substance abuse treatment”, limited to the past five years, returned 1661 results. Finally, a search was completed with the keywords “patient satisfaction” AND “substance abuse treatment centers” OR “substance abuse treatment”, and limited to the past five years, which returned 25 items. Of those 25, one article was relevant to this research study and was kept. This was a study completed by Trujols, Iraurgi, Oveido-Joekes, and Guardia-Olmos (2014) titled, “A Critical
Analysis of User Satisfaction Surveys in Addiction Services: Opioid Maintenance Treatment as a Representative Case Study.” Most of the search results returned were for patients who were on methadone or buprenorphine, and therefore were excluded from this study.

OVID was searched again using the keywords “substance abuse treatment” AND “client satisfaction questionnaire” and the search was limited to research completed in the past five years (2013-2018). Two studies were returned, one was the Kelley et al. (2017) article and the other was unrelated to the research study. Due to the paucity of research available, a further search was done to find similar articles to the Kelley article, five articles were returned but none were related to the research subject matter. Lastly, the Marsden et al. (2000) article was found with an ancestry search from the Kelly et al. (2017) article. This article details the research which was done to validate the TPQ survey was found and a search of the literature was completed to investigate the value of a mixed qualitative and quantitative study in assessing patient satisfaction with substance use treatment programs as it relates to outcome measures, as well as a search for valid instruments to utilize in measuring both patient satisfaction and outcomes.

Because a portion of the quantitative and qualitative part of the study will include an evaluation of patients who are taking Vivitrol and comparing it to the outcomes and satisfaction levels of patients who are not on Vivitrol, the PubMed database was reviewed searching with the keywords “opioid dependence AND Vivitrol.” Initially, 29 results were returned but research was narrowed to 12 after limiting it to articles published within the past five years, only used human studies, and only clinical trials. Of those 12 results, three were initially retained which were related to the research (PICOT) question. Upon further evaluation of these studies, the
Farabee et al. (2016) and one of the Lee et al. (2016) articles were eliminated because they were found to be incomplete studies. A Study completed by Sullivan et al. (2013) was retained. The other studies were not retained because they were either comparative studies utilizing buprenorphine or were studies done with opioid dependent patients who were incarcerated.

Two studies were provided directly from the Vivitrol representative who serves the Southwest Florida area. They were both completed by Krupitsky et al. (2011 & 2013) and were the result of the studies completed to obtain approval by the Food and Drug Administration (FDA) for use in opioid dependent patients. A total of four studies were included in the final review after meeting all the inclusion criteria as outlined.

The critique of the research below details the more pertinent research that has been done to date and provides insight into the areas remaining which need further study, including measurement of patient satisfaction and patient outcomes in a substance abuse treatment facility where opioid dependent patients are treated, and how these two parameters affect one another. Also, it will be important to assess the responses to the TPQ as they relate to the follow-up individual interviews. A tertiary outcome to be evaluated and researched further is satisfaction and outcomes as it relates to patients who elect to receive Vivitrol for treatment of opioid dependence.

After this exhaustive review of the literature, a total of 6 articles were retained. Many were excluded because they were unrelated to the research question proposed in this study, either because of the study population itself (most of the studies were conducted with inmates) or
because the study participants were treated with medications other than Vivitrol, such as methadone or buprenorphine.

**Critique and Synthesis of Previous Evidence**

To obtain high quality evidence, a consistent measure must be utilized to evaluate and rate the studies acquired from the database searches. The measurement tool used to evaluate this research was the Strength-of-Recommendation Taxonomy (SORT) (Ebell et al., 2004). SORT is a patient-oriented outcomes method of measuring the strength of the evidence included in the study, and ultimately, the body of evidence researched (Ebell et al., 2004). Individual studies are rated, either, a level 1, 2, or 3 based on whether the study emphasizes patient-oriented outcomes and is of a strong or limited quality. After the individual studies were critiqued, the whole body of evidence was evaluated as an A, B, or C based on the overall quality of the studies included, with SORT A being the strongest body of evidence.

**Value of mixed studies in assessing patient satisfaction.** Trujols et al. (2014) conducted a study to provide a detailed overview of client satisfaction surveys as they relate to addiction treatment, with a focus on opioid maintenance treatment. They found that the same clients who reported high levels of satisfaction with treatment utilizing a survey also reported significant problems when mixed methods of data collection were utilized (Trujols et al., 2014). The study concluded that the design of client satisfaction surveys currently utilized in addiction services do not aid in improving service quality, which is the primary aim (Trujols et al., 2014). Additionally, they concluded that instruments available to assess addiction treatment are inherently unable to truly detect client satisfaction because they are frequently based on a
theoretical model, which often evaluate areas selected by researchers or clinicians, and thus are more likely to assess the researcher’s areas of interest rather than the clients’ areas of interest. The researchers were able to determine the area of addiction treatment would be better served by utilizing more generic open-ended questions which are more likely to reflect the attitudes of the client (Trujols et al., 2014). Despite not including a sample size, the study was valuable because it demonstrated why surveys alone do not capture patient satisfaction, and more importantly, why they do not aid in improving service quality. This study was rated a SORT level 2.

**Tools to Assess Satisfaction in the Substance Abuse Treatment Setting**

**Client Satisfaction Questionnaire-8 (CSQ-8).** Kelly et al. (2017) completed a cross-sectional study in Australia of patients who were in medium to long-term alcohol and drug treatment centers (N=1378) to evaluate the CSQ-8 and the TPQ as they relate to client satisfaction with the treatment compared to subsequent treatment outcomes (Kelly et al., 2017). Data was collected from 2009-2013 from voluntary participants, surveys were anonymous, and staff members were not involved in data collection (Kelly et al., 2017). The importance of evaluating patient satisfaction with substance abuse treatment cannot be overstated, as the researchers reported 40-60% of patients relapse following periods of abstinence, re-entering treatment reduces the risk of further relapses, and it is very likely that patients who are satisfied with their treatment are more likely to continue in the program, and thus be more able to maintain their recovery (Kelly et al., 2017).

The CSQ-8 includes 8 questions designed to evaluate client satisfaction with care. Total scores range from 8 to 32, with higher scores indicating greater satisfaction (Kelly et al., 2017).
Kelly et al. (2017) reported “the scale was strongly correlated with the TPQ, suggesting high concurrent validity. However, while the TPQ was normally distributed, the CSQ-8 was highly negatively skewed” (Kelly et al., 2017, p.1).

The TPQ is a 10-question assessment of substance abusers’ satisfaction with treatment outcomes. It utilizes a five-point Likert scale in which higher numbers are consistent with higher degree of patient satisfaction (Marsden et al., 2000). This tool utilizes two subscales, staff perceptions and program perceptions, to evaluate overall patient satisfaction. The study reported that the TPQ has satisfactory test-retest reliability. The test interviews conducted with 123 patients demonstrated internal reliability coefficients for staff perceptions subscale of .76 (.71 for the staff perceptions, and .83 for the total score) (Marsden et al., 2000).

When a comparison was made of the CSQ-8 and the TPQ, researchers found that the CSQ-8 provided a good indication of satisfaction with their treatment; however, it was found to be negatively skewed (Kelly et al., 2017). Although there was a significant correlation between the two instruments, the TPQ was found to have a normal distribution, indicating that this instrument may provide a more accurate measure of client dissatisfaction with their substance abuse treatment program (Kelly et al., 2017). Additionally, while the CSQ-8 demonstrated a strong correlation to the Staff Perceptions Scale, the TPQ is better equipped to evaluate both staff and program aspects of the treatment clients received because it is multi-dimensional and is designed to measure different aspects of satisfaction such as program and staff perceptions, while the CSQ-8 only measures overall satisfaction (Kelly et al., 2017). This study was rated a SORT level 2.
Development of the Treatment Perceptions Questionnaire. The TPQ was developed as a brief 10-item questionnaire to evaluate client satisfaction within the substance abuse treatment setting (Marsden et al., 2000). This tool was developed as a result with two independent studies, one of which utilized 123 subjects and a viewer-administered questionnaire, while the second was with 38 clients in a re-test administration with two interviewers (Marsden et al., 2000). Follow-up evaluation, the TPQ was administered to another 33 clients, 18 of which received injectable methadone maintenance and 15 who received oral methadone, and it was determined that the subsequent results did show the TPQ had good construct validity, good internal reliability, and acceptable test-retest reliability (Marsden et al., 2000).

Marsden et al., (2000) utilized Chronbach’s alpha for this exploratory study to evaluate the principle components analysis and the internal consistency of the TPQ. When evaluating “staff perceptions” and “program perceptions” utilizing the Chronbach’s alpha, they were found to be internally reliable with an alpha of .76 and .71 respectively. Test-retest reliability was assessed using the intra-class correlation coefficients (ICC) (Marsden et al., 2000). When analyzing the strength of the ICC, the researchers felt that a coefficient above .75 was indicative of excellent agreement, .65-.74 reflects good agreement, and .40-.64 indicates fair agreement (Marsden et al., 2000). Researchers also utilized multiple regression analysis with backwards elimination of covariates as a predictor of treatment satisfaction measured by the TPQ (Marsden et al., 2000).

Although the TPQ was originally developed to be utilized as an independent interviewer-
administered survey, the researchers did not feel it would be problematic to utilize this tool as a
client-administered survey. However, they felt it would be beneficial to include an area for
personal demographics, as well as an area for clients to give specific feedback about the
program, specific areas of dissatisfaction, or areas to be improved (Marsden et al., 2000).
Another factor important to note about the TPQ is that 88 of the 123 participants were abusing
opioids, making this tool more relevant to the current study being proposed. This study was a
SORT level 2.

**The Use of Vivitrol in Opioid-Addicted Patients**

**Safety and effectiveness of Vivitrol.** Three studies related to this research study were
retained which evaluate, either, the effectiveness of Vivitrol, the safety of Vivitrol, or both.
Krupitsky et al. (2011) provide a Randomized Controlled Trial (RCT) done to demonstrate the
safety, effectiveness, and patient-reported outcomes of extended-release naltrexone (Vivitrol). It
was a double-blind and placebo-controlled trial, which makes it a valuable, high quality study.
They utilized a sample of 126 people in the Vivitrol group and 124 in the placebo group over the
course of 24 weeks. Treatment with Vivitrol was the independent variable and a decrease in rates
of relapse, improved retention in the treatment program, increased opioid-free days, and
decreased cravings were the dependent variables. A urine drug screen (UDS) was used to
confirm abstinence, as well as an absence of self-reported opioid use on the Timeline Follow-
Back (TLFB) survey. This survey records daily recall of opioid use on calendars to document
frequency of opioid use. Additionally, cravings for opioids was assessed utilizing the visual
analogue scale (VAS), also based on self-reporting of the participants. A power analysis was
performed which indicated that a sample size of 125 patients per group would yield 85-96% power to detect an effect size of Cohen’s d 0.4 and 0.5 respectively. The sample size in this study was adequate based on these criteria. When comparing the group who received Vivitrol to the control group, it was noted that the proportion of weeks of confirmed absence from opioids was significantly greater, 90% and 35% respectively, with a p=0.0002. Also, when assessing cravings, the scores on the VAS were compared at baseline and after administration of Vivitrol or the placebo, and the scores were -10.2 and .7 respectively, with a \( p < .0001 \). The number of patients who completed the double-blind treatment period was 53% with the Vivitrol group and 37.9% with the placebo group (\( p = 0.0171 \)). The number of treatment days on Vivitrol versus the control group was statistically significant at >168 and 96 respectively (\( p = 0.004 \)). Strengths of the study included the RCT study design, use of placebo as control, double-blind study, IRB approval, voluntary participation, and utilization of high-powered statistics. Limitations include the fact that the study was done in Russia, where opiate agonists such as methadone and Suboxone are illegal and unavailable. This fact may diminish the generalizability of the results to the population in the United States. Additionally, there was a greater than expected clinical response to the placebo. This article was rated a SORT level 1, which is a very strong rating.

A second study evaluated the effectiveness of Vivitrol as a follow-up to the last study and was also done by Krupitsky et al. (2013). These researchers compared the patients from the end of the last study (after they had completed 24 weeks of treatment with either Vivitrol or placebo) and offered them the option of to either continue on Vivitrol or change to Vivitrol if using another substance. This was a one-year open-label extended phase following the previous RCT.
Again, the independent variable was Vivitrol and the dependent variable was abstinence from opioids and safety. They assessed this with the TLFB survey, addiction survey index (ASI), the visual analog scale for opioid cravings (VAS), health function severity health survey, the clinical global impression scale (CGI-I), and the Kaplan-Meier time-to-discontinuation evaluation. It was found that 62% of the participants completed the one-year extension on Vivitrol, 50.9% abstained from opioids at all assessments, which was verified by UDS. There was an elevation of liver function tests (LFT) in 16.7% of the participants, which is a risk of taking Vivitrol, however the elevations were not considered clinically significant. There were no new safety concerns discovered, no patient deaths, or overdoses. The strength of this study was the long-term extension of previous RCT double blind study. The limitations included absence of randomization, no control group, and the chance of bias as patients chose to continue Vivitrol, therefore were likely more motivated to maintain sobriety. This study was rated a SORT level 2.

Finally, another study was found to be related to the research question, a study done to assess whether the therapeutic effect of Vivitrol in eliminating drug-seeking behavior is dose dependent (Sullivan, M., Bisaga, A., Mariani, J., Glass, A., Levin, F., Comer, S., & Nunes, E., 2013). The researchers conducted an 8 week, randomized, double-blind, placebo-controlled trial designed to compare two doses of Vivitrol, the low dose 192mg injection and the higher dose 384mg injection to assess their ability to provide blockade, and whether the benefit of decreasing drug-seeking behavior, as well as the reinforcing effects of opiates, is dose-dependent. The study was completed utilizing a sample size of 57 men and women, ages 18 to 59 years old, who met the DSM-IV criteria for heroin dependence. After initial detoxification from heroin, participants
were randomized to receive the placebo, the 192mg low-dose, or the high-dose 384mg dose of naltrexone ER (Vivitrol). Primary outcome measures included retention in the treatment program, as retention is thought to be the most critical measure of effectiveness, because dropout is typically associated with relapse. Urine samples were assessed for opiates twice a week, and positive tests were associated with dropout in the placebo and the low dose groups, while the high-dose groups had only a few positives which was followed by sustained abstinence from opiates. This study was rated a SORT level 1.

**Cost of Vivitrol.** The cost of the Vivitrol injection has unfortunately been a limiting factor for many patients, averaging approximately $1000 per dose, but does not include other administrative costs such as the cost of administration which varies depending on the location (Crosby, 2015). Although this medication is covered by Medicare and Medicaid in the state of Florida, the amount of money allocated for drug court patients, who are generally uninsured, to participate in the Vivitrol program is now limited, and thus the cost of the medication could once again become prohibitive.

**Rationale for Project**

As detailed in Chapter one, opioid addiction is the cause of numerous societal problems, and costs states and the federal government nearly 100 billion dollars a year (DHHS, 2016). In addition to the monetary costs, a large burden has been placed on the criminal justice system, and hardship is felt in the homes where parents are removed and incarcerated due to drug use. An additional burden is noted as the Department of Children and Families (DCF) struggles to find safe and healthy placements for displaced children from these broken homes. Many opioid
addicts die as a result of overdose, suicide, or infections, making the family unit less effective and creating a larger burden on the family members left behind (DHHS, 2016).

Additionally, the site where this scholarly project will be completed prefers the utilization of Vivitrol for MAT because it is not addictive, unlike Suboxone and methadone, which are drugs with street value. Additionally, they are frequently abused, and clients utilizing these medication options need to be tapered off slowly to avoid withdrawal symptoms. Because the stakes are extremely high with the current opiate crisis, it is important to know if treatment with Vivitrol at the study site is making an impact on the recovery of their opioid-addicted patients who are trying to put the pieces of their shattered lives back together.

There have been few studies done in the United States that explore substance abuse treatment centers where opioid dependent patients are treated, patient satisfaction with their treatment, and the relationship between the satisfaction and patient outcomes, most importantly, as it relates to maintenance of recovery. There have been even fewer which assess how Vivitrol affects both patients’ perceptions of satisfaction and maintenance of recovery.

The opioid epidemic has been devastating to The United States, and some states have been more affected than others. Southwest Florida has been hit particularly hard, and the state has responded with programs to help fund treatment, including the use of Vivitrol. However, what is not known is how effective these programs are and how satisfied patients are with the services and treatment components of the program. Expanding research will likely provide various state and local government agencies with a reason to continue their support of
these programs, including continued funding of Vivitrol for use in opioid-dependent patients, making Vivitrol more accessible to uninsured and lower socioeconomic status patients.

In conclusion, treatment of opioid addiction is complex and requires therapy and substance abuse counseling, which can be more successful with MAT. Appropriate treatment is of paramount importance when addressing patients with opioid dependence and is necessary to combat growth of an already devastating epidemic. Although there are other medications which can be used to assist recovery of opioid addicted adults, Vivitrol is the medication of choice at the study site.

This study assessed patient satisfaction with their treatment for opioid addiction at the study site, and the potential relationship between satisfaction with treatment and maintenance of recovery. Primary outcome measures included self-reported sobriety and retention in the program. The study utilized the TPQ survey to assess client perceptions of the program and the staff, measured on a Likert Scale. Additionally, the open-ended question responses from the TPQ and demographics questionnaires were explored further in follow-up individual interviews to determine if the TPQ was a successful predictor of client dissatisfaction. Finally, a tertiary objective is to assess for a relationship between treatment with Vivitrol and maintenance of recovery. The goal of the research is to determine what characteristics of a substance abuse treatment program best assist patients in maintaining their recovery and to inform the treatment facility at the study site how they may best serve this population.
Chapter III-Methods

Design and Implementation

This was an exploratory mixed methods study designed to evaluate levels of patient satisfaction in a large substance abuse treatment center in Southwest Florida. This study utilized the Treatment Perceptions Questionnaire (TPQ) survey tool to assess patients’ perception of the treatment they received in the study site’s substance abuse treatment program. This tool asked the participants to complete an anonymous demographic information sheet, answer 10 questions using a Likert-type Scale, and which included a space for narrative feedback to capture more detailed responses.

Each question on the TPQ tool contained five choices ranging from strongly agree (4) to strongly disagree (0) with (2) representing uncertainty. There was also a space for participants to add brief comments about any of their responses if they desired. The TPQ Survey contributed to the quantitative data portion of this study while the “free text” options at the end of the TPQ Survey were culled for additional relative comments from participants.

In addition, an individual interview opportunity followed the TPQ Survey to expand upon the quantitative data collected by the survey and allow the researcher to explore questions related to patients’ experiences with their treatment, their struggle with addiction and recovery, and issues which may be impacting their ability to maintain recovery. The open-ended responses from the TPQ and demographics were analyzed and provided themes for exploration during the follow up interviews. Data collected from the questionnaires were confirmed during the individual interviews.
Recruitment for the survey was conducted from July 9, 2018 to August 16, 2018, which included an extension past the initial four-week plan due to limited opportunities for participation around holidays and employee vacations during the month of July. Due to scheduling changes at the study site, the researcher had to relocate the data collection site to the substance abuse building, which required an additional IRB notification and consent. Additionally, due to an unexpected prolonged illness of the initial person trained to pass out the envelopes containing the TPQ and demographics forms, a new person had to be designated and trained. After approval was given, flyers were re-posted in the building where the substance abuse treatment program is located, and requested volunteers to participate in the study. This flyer stipulated the purpose of the study and highlighted the patient satisfaction component of the study. The flyer also included a $10 gift card offer to participate which was funded by the researcher’s personal research account for this project.

For the same reasons listed above, the site for the individual interviews also had to be relocated to the substance abuse building. This change also required permission from the IRB, which was granted. After the changes were approved by the IRB, recruitment flyers for follow-up individual interviews were posted in that building. A $10 gift card was also offered for this arm of the study as an incentive to participate.

**Project Sponsors and Resources**

This study was supported and approved by the Board of Directors of the facility, including the CEO, COO, and Medical Director. The Medical Director was also the content expert for the study.
The researcher provided the volunteers who participated in this study with a $10 gift card for their time and participation. The incentive was also offered for the follow-up individual interviews for anyone who desired to participate and met inclusion criteria. The purpose of the follow-up interview was to share findings, allow confirmability and provide participants with an opportunity to provide additional feedback that may not have been adequately captured by the survey.

**Human Subject Protection**

This study was conducted in accordance with the Institutional Review Board (IRB) protocol for research on human subjects at Georgetown University. This doctoral project obtained an expedited review. Informed consent was provided via voluntary completion of the survey and interview. Federal regulations inform the guidelines for participants in a research study and protection of the following rights were evident in the protocol for IRB application: (a) the participants were informed of the purpose of the research, (b) the participants had the right to ask questions of the principal investigator and were provided with the principal investigator’s contact information, (c) they were informed that they had the right to withdraw at any time without consequence, and (d) they were not subject to any form of coercion nor were they forced to participate in the study (Terry, 2015). Anonymity was maintained by absence of specific patient identifying data. All data collected was kept in a locked box for which only the researcher has access, and a staff member was instructed to pass out the survey and ensure it was placed in the locked box prior to giving the gift card. She did not touch the data and simply observed the study participants dropping their surveys in the locked box.
Data were protected during and after the interviews as well by the absence of patient identifiers and the study results were reported in aggregate form. Individual interviews were recorded with 5 participants who consented, for the expressed purpose of capturing accurate and thorough information from volunteer participants. There was one participant who chose not to be recorded. Therefore, the researcher took notes during that interview.

**Population: Sample and Setting**

The setting for this research study was a substance abuse treatment center associated with a not-for-profit behavioral health center in Southwest Florida. It included 32 adult patients, >18 years old who responded to a voluntary call for feedback about satisfaction with their treatment by answering a survey designed to evaluate and improve services in the substance abuse treatment center. Exclusion criteria included a) anyone <18 years old, b) non-opioid dependent, c) not a patient at the facility being evaluated, d) anyone who was a patient of the researcher, and e) anyone who was taking Suboxone or methadone.

**Incentives**

Study participants were offered a $10 gift card to Starbucks or Walmart for their participation in the survey. There was an additional $10 gift card for those who agreed to participate in individual interviews.

**Study Duration**

The estimated duration of the study procedures as detailed in the IRB application was four months, with eight weeks allowed for accrual of participants. Surveys were collected for six
weeks, which was extended due to the Fourth of July holiday to allow more time for those interested to participate.

**Tools for Measurement**

1) The demographic tool is a 16-item questionnaire detailed below in Table 1.

**Table 1 Demographic Tool**

| Demographics and other population characteristics |
|---|---|
| 1) What is your age? |
| 2) What sex do you identify with, male or female? |
| 3) Is your treatment court mandated? Yes or no? |
| 4) Prior to seeking treatment, what would you identify as your drug of choice? |
| 5) Is this currently your drug of choice? Yes or no? |
| 6) How many times have you received substance abuse treatment? |
| 7) If you had previous treatment, was it related to abuse of the same substance? |
| 8) If no, what other substance did you seek treatment for? |
| 9) How long have you been in the program? |
| 10) Does your current treatment include the use of Vivitrol? Yes or no? |
| 11) If yes, what was your experience with Vivitrol? |
| 12) Are you currently using opioids (methadone, oxycodone, suboxone, fentanyl, hydrocodone, oxycontin)? |
| 13) What other medications are you taking either prescribed or not prescribed? |
| 14) What else would you like to share related to your experience with recovery? |
| 15) What else would you like to share related to your experience and your level of satisfaction with treatment? |
| 16) If you were going to design your own treatment program that you think would work for you, what would that look like? |
2) The TPQ is a ten-item questionnaire (available as Appendix B) designed to evaluate patient satisfaction in substance abuse treatment. It has both positively and negatively skewed items designed to get a more accurate picture of what patients do not like about the program, as opposed to the study site’s current patient satisfaction survey which only has positively skewed questions. Because the original research study, Marsden et al. (2000), demonstrated two reliable subscales, patient perceptions of staff and patient perceptions of the program, a Cronbach’s alpha was computed for each scale to determine internal consistency.

3) Individual interview questions, including themes to be discussed from the survey and demographic surveys (Appendix C) and additional follow up questions (Appendix D) are detailed in the Appendices.

Outcomes Measurement

Several outcome measures or metrics were included in this analysis with the principal aim of assessing patient satisfaction with treatment services at one substance abuse treatment program in Southwest Florida which treats opioid-addicted adults. The primary aim of the study was to explore the relationship between patient satisfaction with treatment and maintenance of recovery. A secondary aim was to assess the confirmability of the TPQ results via individual interviews. Lastly, the third aim looked at ability to maintain recovery when receiving Vivitrol as compared to not receiving Vivitrol.

The data used to identify outcome measures in this study were gleaned from both the TPQ survey and the researcher interviews post-TPQ administration and analysis of TPQ survey data. Outcome measures or variables of interest included the patients’ use of Vivitrol, length of
time in the treatment program, relapse rate, and patient satisfaction ratings, both quantitatively and quantitatively expressed.

Data Analysis Plan

The plan for data analysis for this study included the use of quantitative and qualitative data analysis measures. Because this is an exploratory study, a power analysis was not recommended or required (Moore, Carter, Nietert & Stewart, 2011). Descriptive statistics were used to depict the general characteristics of the study population including age, whether they are on Vivitrol, whether they are court-mandated to the treatment program, gender, sobriety (as defined by checking the “no” box next to the question that asks if the participant is currently using opioids), the number of times in treatment, and length of time in the current program. Independent sample t-tests were computed to compare the variables of mandating, gender, Vivitrol, and whether they are currently using opioids and the two subscales on the TPQ, patient perceptions of staff and patient perceptions of the program. For the group variables of mandating, we compared those who were mandated for treatment to the two dependent variables of perception of staff and perception of program. The same analysis was done with the gender (male/female), Vivitrol (on/off), and current use of opioids (yes/no) and the two dependent variables of perception of staff and perception of the program.

To assess if the continuous variables of age and number of times in treatment were related to the continuous variable of length of time in the current program, a Pearson-product correlation was computed for age, times in treatment, and current length in the program.
The final question that needed to be assessed was whether the two categorical variables of Vivitrol (yes/no) and patient’s ability to stay sober (yes/no) were related. A Chi Square test of independence was computed for this assessment.

The narrative portion of the TPQ along with the demographic questionnaires was reviewed and several commonalities were noted. Those commonalities, were then utilized to extract more detailed information from the individual interviews. Finally, the individual interviews were evaluated among all participants to arrive at “themes” from the data that described a similar experience (Vaismoradi, Turenen, & Bondas, 2013). Janice Morse (2015) detailed various strategies to improve rigor in qualitative research which were utilized in this study including providing a thick, rich description captured in the interviews, inter-rater reliability, peer review and debriefing, external audits, and triangulation. Themes from the qualitative analysis which were discussed in the follow up interviews are available in Appendix C and are further detailed and reported in aggregate in chapter 4.

The individual follow-up interviews were conducted in a private office in the substance abuse treatment building and were estimated to take 45 minutes. Study participants were recruited with a flyer requesting volunteers, which was posted after the TPQ and demographic surveys were completed and analyzed. Interview participants were informed of the results of the surveys and asked if they had anything to add to the data. Following the discussion of survey findings, an interview guide was utilized, which was developed by the researcher, to assist in guiding the interviews. The same guide was utilized for all 6 interview participants.
Chapter IV- Results

Evaluating the results of a research study, arguably the most important step in the research process, is a time intensive endeavor that acts to give the researcher the data required to turn theory into practice. Quantitative data collected utilizing the TPQ will be discussed using descriptive and inferential statistics. Additionally, qualitative data gleaned from common themes which were obtained from the narrative portion of the TPQ survey, the demographic questionnaire, and from the individual interviews will be described.

As detailed in Chapter one, there were three essential aims of this study. The primary aim was to assess the patient’s perceived level of satisfaction with the treatment they received, and to evaluate how their level of satisfaction affected their treatment outcomes, primarily maintenance of recovery. The secondary aim was to assess how responses on the TPQ compared to the feedback given during follow-up individual interviews. This included areas of the treatment which could be improved, therefore potentially assisting patients in maintaining their recovery. Finally, a third aim of the study was to assess the effectiveness of Vivitrol by comparing patients who received it during treatment and those who did not. More specifically, it would be of paramount importance to note if patients on Vivitrol are more able to maintain their recovery as evidenced by no self-reported use of opioids since receiving the injection and by completion of the treatment program.
Population Characteristics

TPQ and demographic questionnaires. Recruitment for this study was conducted from July 9, 2018 to August 16, 2018. There were 36 patients who volunteered to participate in this arm of the study, only 32 of them met the inclusion criteria. Of the 32 who participated, 13 were male and 19 were female. Of the 32 who completed these questionnaires, half of them were mandated by the court for treatment in lieu of jail time and 18 were free of opioids at the time they completed the questionnaires. Finally, nine of the 32 participants received Vivitrol.

Demographics are detailed in Table 2.

Table 2 Demographics of the Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency/Percentage</th>
<th>Frequency/Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Males: 13 (41%)</td>
<td>Females: 19 (59%)</td>
</tr>
<tr>
<td>Mandate Status (mandated by the court to seek treatment in lieu of jail time)</td>
<td>Mandated: 16 (50%)</td>
<td>Not Mandated: 16 (50%)</td>
</tr>
<tr>
<td>Vivitrol Status (did they receive Vivitrol during this treatment period)</td>
<td>Yes: 9 (27%)</td>
<td>No: 24 (73%)</td>
</tr>
<tr>
<td>Current Sobriety (no current use of opioids)</td>
<td>Yes: 18 (64%)</td>
<td>No: 10 (36%)</td>
</tr>
</tbody>
</table>
Descriptive Statistics

The first set of analysis was to compute descriptive statistics on months in rehabilitation (monthsrehab), number of times receiving rehabilitation (timeinrehab), and age. Table 3 indicates the average number of times in rehabilitation ($M=3.53$), number of months in their current stay ($M=4.11$ months) and age ($M=34.5$ years). Frequency analysis on other demographic information indicated that the sample included 13 males (41%) and 19 females (59%), with 16 people being mandated for treatment (50%) and 16 not being mandated (50%). Nine were receiving Vivitrol (27%) while 24 were not receiving Vivitrol (73%). Finally, 18 were currently sober (64%) and 10 were using drugs/opioids (36%).

Table 3 Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>MIN</th>
<th>MAX</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>32</td>
<td>22</td>
<td>52</td>
<td>34.53</td>
<td>7.779</td>
</tr>
<tr>
<td>Monthsrehab</td>
<td>32</td>
<td>.00</td>
<td>36.00</td>
<td>4.1172</td>
<td>7.62133</td>
</tr>
<tr>
<td>Timeinrehab (months)</td>
<td>32</td>
<td>1</td>
<td>13</td>
<td>3.53</td>
<td>2.603</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Treatment Perceptions Questionnaire

The TPQ is divided into two subscales. The first is patient perception of staff, which is evaluated in questions 1, 3, 4, 5 and 8 on the questionnaire. Questions included items that were
specifically designed to assess how the patient viewed the staff at the treatment center such as “the staff have not always understood the kind of help I want”, “the staff and I have different ideas about what my treatment objectives should be”, “there has always been a member of staff available when I have wanted to talk”, “the staff have helped to motive me to sort out my problems”, and “I think the staff have been good at their jobs.”

There are also five questions on the TPQ which are designed to evaluate the perceptions of the program itself. These questions include “I have been well informed about decisions made about my treatment”, “I have received the help I was looking for”, “I have not liked all of the treatment sessions I have attended”, “I have not had enough time to sort out my problems”, and “I have not liked some of the treatment rules or regulations.”

**Scale Properties and Demographics**

This analysis (SPSS 22.0) was done to assess the psychometric properties of the TPQ scale (Marsden et. al. 2000). The original psychometric research indicated two reliable subscales with one being patient perception of staff (Q1,Q3,Q4,Q5,Q8) and the other one being patient perception of the program (Q2,Q6,Q7,Q9,Q10). Table 4 indicates that the patients rated the staff higher than the program. To assess the internal consistency of the current data, a Cronbach alpha (α) was computed for each scale and both indicated strong internal consistency (α > .7). For staff perception Cronbach alpha (α) was .85 and for program assessment Cronbach alpha (α) was .81.
Table 4 Staff and Program Perceptions

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>MIN</th>
<th>MAX</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>staffperceptionfact</td>
<td>32</td>
<td>.40</td>
<td>4.00</td>
<td>2.75</td>
<td>1.04</td>
</tr>
<tr>
<td>programperceptionfact</td>
<td>32</td>
<td>.60</td>
<td>4.00</td>
<td>2.33</td>
<td>1.00</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Parametric Statistics**

A series of independent sample t-tests was computed to assess how the categorical variables of mandating, gender, Vivitrol and current sobriety were compared on the two TPQ dependent variable subscales of staff and program effectiveness. There were no significant differences for staff and program perception for any of these variables ($p > .05$). For the continuous variables of age, the number of times in treatment, and length of time in the current treatment program, a correlation analysis indicated no significant relationships ($p > .05$). The only significant correlation found was that as perception of the staff increased so did perception of program effectiveness $r(30) = .757$, $p < .001$.

One of the aims of the study was to assess if Vivitrol would have an impact on patient satisfaction with the staff or the program. In order to assess this question, an independent t-test was computed with the grouping variable of Vivitrol Status (Yes/No) and the dependent variables of staff perception and program assessment. The results as shown in Tables 5 and 6 indicate that Vivitrol status had no impact on either variable ($t<1$). Other independent t-tests were computed to analyze if any of the other categorical grouping variables (mandating, gender,
current Vivitrol status) had an impact on patient satisfaction with the staff or the program. The results in Tables 5 and 6 also indicated none of these variables had an impact on patient satisfaction ($p > .05$).

Table 5 Staff Perception T-tests

<table>
<thead>
<tr>
<th>VARIABLE (N)</th>
<th>STAFF PERCEPTION MEANS (SD)</th>
<th>T SCORE</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (16)</td>
<td>2.76 (1.2)</td>
<td>.11</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>No (15)</td>
<td>2.72 (.93)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (13)</td>
<td>2.8 (.88)</td>
<td>.22</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Female (19)</td>
<td>2.71 (1.16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vivitrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (9)</td>
<td>2.82 (1.3)</td>
<td>.24</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>No (23)</td>
<td>2.72 (.95)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Sober (9)</td>
<td>2.51 (1.2)</td>
<td>.426</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Sober (18)</td>
<td>2.71 (1.04)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 Program Perception T-tests

<table>
<thead>
<tr>
<th>VARIABLE (N)</th>
<th>PROGRAM PERCEPTION MEANS (SD)</th>
<th>T SCORE</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (16)</td>
<td>2.25 (1.14)</td>
<td>.22</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>No (15)</td>
<td>2.39 (.89)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (13)</td>
<td>2.29 (.90)</td>
<td>.20</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Female (19)</td>
<td>2.36 (1.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vivitrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (9)</td>
<td>2.69 (1.27)</td>
<td>1.25</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>No (23)</td>
<td>2.20 (.87)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sober (9)</td>
<td>1.82 (.90)</td>
<td>1.39</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Non-Sober (18)</td>
<td>2.33 (.90)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In order to assess if any of the continuous variables (age, length of stay, and number of times treated had any impact, a Pearson-product correlation analysis was computed between the three continuous variables and the dependent variables of staff perception and program assessment.

Table 7 indicates that age was not significantly correlated with staff perception \( r(30) = .059, \ p > .05 \) nor program perception \( r(30) = .069, \ p > .05 \). Duration of the stay (long) was also not correlated with staff perception \( r(30) = .166, \ p > .05 \) nor program perception \( r(30) = .051, \ p > .05 \). Finally, there was also no correlation between the number of times in treatment (timestreat) and staff perception \( r(29) = -.061, \ p > .05 \) nor times in treatment and program perception \( r(29) = -.266, \ p > .05 \). The only correlation that was significant was that as participants perceived the staff more favorably they also perceived the program more favorably \( r(30) = .757, \ p < .001 \). This is illustrated in Table 7.

<table>
<thead>
<tr>
<th></th>
<th>age</th>
<th>long</th>
<th>Timestreat</th>
</tr>
</thead>
<tbody>
<tr>
<td>staffperception</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.059</td>
<td>.166</td>
<td>-.062</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.749</td>
<td>.363</td>
<td>.741</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>programperception</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.069</td>
<td>.051</td>
<td>-.266</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.708</td>
<td>.781</td>
<td>.148</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>31</td>
</tr>
</tbody>
</table>

Finally, one of the aims of the study was to assess if Vivitrol had an impact on participants current ability to stay sober. Since both of these variables are categorical with 2
levels, a chi-square test of independence was computed between them and can be seen in Table 8.

Table 8 Chi-square Results

<table>
<thead>
<tr>
<th></th>
<th>Non-sober</th>
<th>Sober</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vivitrol No</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Vivitrol Yes</td>
<td>7</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>18</td>
<td>27</td>
</tr>
</tbody>
</table>

For those that were on the Vivitrol, 12 out of 19 were able to stay sober (63%) and for those not on the Vivitrol, 6 out of 8 were able to stay sober (75%). Statistically, the chi-square test of independence indicated that this was not a significant difference $X^2(1, N=27) = .355, p > .05$.

Perceptions of the Staff

As stated previously, perceptions of staff at the study side were evaluated in questions 1,3,4,5, and 8 of the TPQ, and were found to be higher than the scores of the program (see Table 9). The individual interviews did confirm that patients were more satisfied with the staff than the program itself. This was evident in comments patients made such as “I’ve only had one one-to-one session and I’ve been here 6 months.” While a few people reported they felt disrespected by the staff on the demographic questionnaire, this was not found to be true in the interviews. When asked this question in the interviews, patient responses included “not at all, they are serious about helping people stay on track. They know what it feels like to relapse, can be taken too personally”, “I never felt disrespected by staff”, “no but I did what I was supposed to do”, “you
all are doing an awesome job”, “I feel like they’re family, they’re recovering addicts too so they understand”, “I don’t believe that at all”, and “as long as you treat people with respect, you get respect back. When I first got into the program, I was an a-hole period. I’m grateful to them for putting up with my crap. Over the two year I’ve been here, I’ve learned to love the staff members here. It’s like a second home. They saved my life.”

Table 9 TPQ Results

Analysis of Qualitative Interviews

Individual interview demographics. Six patients, 3 women and 3 men, volunteered to participate in the follow-up interviews, which were conducted on three different days during the month of September in 2018. Five of the six allowed the interviews to be recorded, one of them had also completed the questionnaires, all of them identified as sober at the time of the interviews, all were mandated by the court for treatment, two of the five were in their first month of treatment, and five had relapsed on opioids at some point during their journey with opioid

50
addiction. Additionally, it is important to also note that although only one patient was given Vivitrol, two others had requested it, however, were unable to get the injection because of decreased funding for the “Drug Court” program.

**Interview findings.** Interviews were conducted on three separate Mondays in September of 2018. These dates were September 10, 17, and 24. Interviews were designed to discuss the results of the TPQ survey and demographics, their thoughts about the results, namely if they agreed or disagreed with the results, and to ask more detailed information about their journey with addiction to opioids. Most importantly, topics related to addiction, recovery, and relapse were discussed to gain insight into what factors affected their ability to maintain recovery. These interviews were conducted with open-ended questions and common themes were noted as detailed below.

Data from the open-ended questions of the TPQ were analyzed for congruence across participants. Data were then categorized and reviewed for themes. The data and themes were reviewed multiple times between the DNP student and the Project Mentor who arrived at consensus on the themes. Themes included: 1) Community support, 2) Attachment to smoking, 3) Value of inside and outside programming, and 4) Ideal treatment program characteristics. The themes from the open-ended survey, in addition to several researcher generated general questions were then shared with the 6 participants who consented to participate in the individual interviews. Those interviews confirmed the data that generated the themes from the open-ended survey and enriched, through narrative descriptions the data associated with the themes. In addition, participants were able to elaborate on what they thought would make an ideal program.
that would contribute to sustaining recovery. Trustworthiness of the findings were met through credibility, confirmability and authenticity of the qualitative findings (Morse, 2015). This was achieved through review and extensive discussions of the data with a qualitative researcher and sharing the findings of the survey with participants who were then able to confirm the findings via the process of member check (Morse, 2015).

**Individual interview themes.** There were several themes noted during the interviews which confirmed the findings from the TPQ and demographics. The most notable of those included attachment to smoking, the need to have support for a longer duration of time (the option for a longer treatment program), the need for programming opportunities outside of the treatment center, such as sports teams and meetings, and their ideas about what may constitute the ideal substance abuse treatment program. These ideas often included suggestions such as the need for individual counseling in addition to group sessions, mindfulness exercises, meditation, and yoga. They also reported that it would be helpful for them to have these sessions count towards their required meetings for the Drug Court program, as this is a very time intensive program which also requires them to obtain gainful employment.
Chapter V- Discussion and Conclusions

Conducting this research study with the opioid-addicted population was grueling at times, as these patients are often overwhelmed by the conflict between the desire to use drugs and their need to maintain their recovery. It was often a heart-wrenching experience listening as these patients described their struggle to combat the deadly disease known as opioid addiction and observing their very real struggle to put their tattered lives back together. However, it was as rewarding as it was grueling, to have been offered the privilege of sitting across from them and listening to them describe their internal struggles, as these feelings were often heart felt and extremely personal. Study participants often did not fill out the surveys completely or legibly, but they were forthright and transparent about the information they were willing to provide in a face to face interview. They often reported feeling appreciative about the opportunity to discuss their journey with substance abuse, as well as, their road to recovery. Their ability to be insightful surpassed the expectations of the researcher, especially noting the minimal information they volunteered on the surveys.

Unlike the current tool which is utilized at the study site to measure patient satisfaction, the TPQ offers both positively and negatively skewed items which are more specific to substance abuse treatment. For this reason, the TPQ is considered a more valid and reliable instrument to capture dissatisfaction with substance abuse treatment, which is of more value in an organization where making changes designed to assist patients in maintaining their recovery are truly desired (Marsden, 2000).
The Donabedian Framework, described in chapter 1, was used as a tool to organize this research study. Patient satisfaction necessarily encompasses the building blocks of this framework, which was designed to describe issues with structure, processes, and outcomes. This framework was captured in the design and the results of this study.

**Aim 1 and 2 Summary**

While the statistical data collected from the TPQ and demographics did not demonstrate a significant relationship between satisfaction with treatment and maintenance of recovery in this study, it is likely that it could have if there were a larger sample size. Additionally, the individual interviews did seem to support this relationship as all six of the participants were maintaining their recovery at the time of the interviews and their length of time in the program ranged from two weeks to two years.

The items on the TPQ were detailed previously in Table 9, along with the average of the responses to each individual question. All scores are out of four possible points on the Likert Scale, with a sample size of 31, as one of the 32 who participated in this arm of the study filled out the demographic questionnaire but not the TPQ. Two on the scale indicates an “unsure” response. Additionally, responses from the individual follow-up interviews which pertain to each section are included to support the data collected.

**Perceptions of the program.** The individual items from the TPQ related to perceptions of the program are detailed below, along with comments from the individual interviews which were related to that item.
I have been well informed about decisions made about my treatment. The average score on this response was 3.09, which indicates overall agreement that patients feel they were well informed about their treatment. One patient was asked what the most challenging thing about the treatment program was and he stated, “90 in 90 (referring to the requirement of attending 90 meetings in 90 days), but it's needed, if you want to stay sober, you’ll do it, the busier you are the less likely you are to use.”

I have not liked all of the treatment sessions I have attended. The average score of this response was 1.94, indicating patients are unsure of this statement. Regarding the desire to have more outside activities, one patient stated, “any hobby or activity to keep us busy” and reports “not enough to do in this town if sober.” She also suggested “fishing, ceramic classes, teaching meditation, volleyball, dodgeball, going to the beach, anything to be around other sober people”. Regarding groups, another patient stated, “So many people, hard to talk when scared/nervous, one on one therapy should be more available, maybe dim the lights to help anxious people get out of their shell, another place offered candlelight meetings for this, I feel like I’m being judged in open groups.”

I have not had enough time to sort out my problems. The average score on this response was 2.0, indicating uncertainty by the patients filling out the questionnaire. One patient summed it up well when he said, “I was coming off heroin, I wanted to be clean from everything and they put me on Suboxone. I still had insomnia, was antsy and they send you out the door. After 7 days not even mentally capable of grasping what you need to do. After 28 days, you begin to grasp what is going on. I committed a crime so I could get this treatment.”
**I have received the help I was looking for.** An average score of 2.88 on this response indicates that patients agree that they received the help they were seeking. Regarding treatment, one patient stated, “I like that its hands on, smaller, more personal. The program at Sarasota was so big they didn’t know your name.”

**I have not liked some of the treatment rules or regulations.** An average score of 1.78 on this response indicates that patients are unsure of this statement. One patient reported not having a car, license or housing stating “transportation was hard, balancing job and this program, they make you get a job immediately to pay fines to court or you get sent to jail”. Regarding the no smoking policy on campus, one patient stated, “bring back the smoking. If you take away my cigarettes, what’s the point” and “I’m doing this much, meet me half way. You would have a lot more participation from people”. Regarding patients who are in detoxification and the comments received in the survey and demographics that they should not be in groups with those who are in the 28 day program “because detoxers come in and get Suboxone, then they are nodding off high in group, they shouldn’t be in groups because it’s a trigger for those of us who are trying to stay clean.”

**Perceptions of the Staff.** The individual items from the TPQ related to perceptions of the staff are detailed below, along with comments from the individual interviews which were related to that item.

**The staff has not always understood the kind of help I want.** An average score of 2.38 on this response indicates that patients are uncertain about whether staff understood what type of help patients are seeking. One patient interviewed was asked what her ideal program would be
like and she stated, “a lot of groups, meetings in the morning and not just at night, start your day off right, there is no option to have a sponsor here, feel cut off from the outside world, take us to outside meetings to meet others so they can go make new friends who are sober.”

**The staff and I have different ideas about what my treatment objectives should be.** The average score on this response was 2.28, indicating that patients are uncertain about whether they and the staff have the same ideas about what their treatment objectives should be.

**There has always been a member of staff available when I have wanted to talk.** The average score on this response was 2.75, indicating that patients agree there has been someone available if they wanted to talk. One patient stated, “I’m getting everything I need and then some. I have the director’s personal phone number to use 24/7 if I need something.”

**The staff has helped to motive me to sort out my problems.** The average score on this response was 3.03, indicating that patients agree that staff have helped them sort out their problems. When asked about the treatment program at the study site, one patient stated, “I really like it. They really know what’s going on with you. There’s no getting around them. They know what’s going on in your life. I was in classes in Sarasota and I was high half the time, they didn’t even notice. I think they really care here.”

**I think the staff has been good at their jobs.** The average score on this response was 3.31, indicating that patients agreed with this statement. One patient reported, “I like the way they teach. They let us talk, they meet us 50/50. Open and honest, they extended their hand above and beyond what is expected.”
Aim 3 Summary

More patients received Vivitrol in the survey group than in the interview group, however, the survey participants did not provide comments regarding their perceived benefit of receiving the injection. One patient of the six interviewed was receiving Vivitrol at the time of the interviews and reported feeling as though it saved his life. Others did express interest in receiving Vivitrol in the future if it were available to them.

Limitations

To the author’s knowledge, this is the first study of this kind to evaluate a substance abuse treatment facility in the United States which utilizes the Treatment Perceptions Questionnaire (TPQ) along with follow-up interviews to assess patient satisfaction with substance abuse treatment, as well as, to gain valuable insight into what may help or inhibit an opioid addicts’ ability to maintain recovery.

This study asked for volunteers to participate, both in the surveys and the interviews. Participants were compensated with a $10 gift card for their time. Due to programming at the study site, and the requirements of many of the study participants who are mandated to treatment by the court, it was difficult for many of them to participate in the study. Additionally, due to the loss of their jobs, income, and driver’s licenses, many of them reported having difficulty with transportation. For these reasons, changes were made to the protocol to further facilitate participation for those who expressed an interest in the study (day of the week and interview site). The location where the surveys were administered changed from the researcher’s office in building A to the Substance Abuse Treatment center in building B. Prior to that change being made during the
third week of recruitment, there were only two participants. The changes were made in accordance with IRB protocol and approved. Thirty-six patients participated in the survey, however, four were eliminated because their drug of choice was alcohol and not opioids. The small size of the sample ($N=32$) is considered a limitation of the study because it impacted robustness of statistical data, and thus the results. A larger sample size may have yielded different results. Patients did verbalize more detailed information regarding survey questions when asked in private individual interviews.

Additionally, the specific question on the demographic tool which asked for sobriety status only referred to opioid use and did not necessarily include any other substance use. Although, court-mandated patients are subject to mandatory random urinalysis for drug use at least four times a week, it is possible that both cohorts were utilizing other substances not captured in this data.

It is unclear whether the use of the program director’s office for the individual interviews affected the data collected. It is also not clear if this office held any meaning for the interview participants or had a psychological effect on their responses to the researcher.

**Implications for Practice**

There are many important implications of the findings from this study. Valuable insight was gained into the hearts and minds of opioid-addicted patients, most importantly, what programming changes might better assist them in maintaining their recovery. What was discovered was that they have a deep desire to have sober connections in the community, whether it was through participation or observance of sporting activities, attendance at a variety
of meetings, groups, or participation in other activities with those in the community not engaged in substance use. They expressed feeling isolated from the “outside world” and thus felt somewhat alone during this very difficult and stressful time. Also, five of the six people interviewed were smokers and reported that being able to smoke on campus could be a critical factor in determining whether someone chooses to stay in the program and complete their treatment. One patient reported “a lot more people would come here if we could smoke, smoking gives us a break”, its “familiar” and “provides comfort, even if it’s just a vape pen, doesn’t have to have nicotine. I just want to feel normal for 5 seconds”.

Additionally, data reported in Chapter 4 revealed a strong positive correlation between patient perception of the staff and perception of the program. Therefore, it could be important to maintain staff education and development, and to utilize strategies to increase staff job satisfaction. These efforts could translate to better relationships and interactions with individuals receiving treatment, staff retention and possibly positively influence quality of program activities.

Of note, the researcher was able to obtain more in depth and comprehensive data from participants during individual interviews. Participants verbalized appreciation of the opportunity to share their experiences. This feedback seems to support the suggestion from participants that they would like more individual talk time with program staff rather than the current primary use of group activities.

Finally, it is important to note patient feelings about Vivitrol because the funding was recently decreased for patients in the Drug Court (court mandated) program. While there was
only one person receiving Vivitrol who was interviewed, two other patients reported that they wanted to receive it, stating, “Vivitrol should be more available to help us stay clean”, while the patient who received it reported “it’s a lifesaver. I love it. I would rate it 100/100. It’s saving my life still”. The hope of this researcher is that the data collected in this study can help provide rationale for why the funding for the Vivitrol program should be increased.

**Recommendations for Practice and Future Study**

**Practice.** The importance of the findings of this research study to inform improvements in the substance abuse treatment offered at the study site cannot be overstated. Short-term goals of the organization should be to change the policy which prohibits smoking. Patients who are trying to live a life free of opioids are typically struggling to control their anxiety, making smoking cessation a potential trigger for some to relapse. Another short-term goal would be to provide access to individual therapy for those who are interested, as the study participants verbalized the need for someone to talk to about private matters that they don’t feel comfortable discussing in a group session. Further recommendations to consider would be to separate patients who are in detox from patients who are in recovery, as well as increasing the availability of yoga, mindfulness, and meditation classes for patients in the program. Providing a variety of educational offerings to increase knowledge of health and current events was also a recommendation from participants. Finally, patients reported needing “outside” activities, providing a stronger bond to their communities and additional sources of support. Additionally, providing sporting activities within the sober community to assist patients with maintaining their
physical and mental health would be of benefit. It would also serve as a “normalizing” and accepted activity with which to engage with others in their community.

The TPQ, along with interviews, provided more detailed information about patient satisfaction with their substance abuse treatment program. The current tool is more positively skewed and does not adequately capture areas of dissatisfaction, which is necessary in order to make programmatic changes that better assist patients in maintaining their recovery. Although the TPQ is better than the current tool (found in Appendix A), it might not be robust enough for people with low health literacy, poor attention span, inability to comprehend what is being asked, or the inability of patients to provide detailed written responses. Therefore, it is very important to conduct the survey in a face to face interview, which would also allow for additional questions or clarification of responses.

Long-term goals of the organization should include consideration of increasing the length of the program for some patients who feel they need a greater support system for an extended period of time. Many patients endorsed feelings of fear of relapse associated with being discharged from the program before they are ready. It is strongly recommended that treatment programs are of a longer duration, i.e. six months, as suggested by the participants of this study, as they have the most insight into what is effective for them in assisting with maintenance of recovery.

Work with this population can be difficult and conducting surveys may not yield a comprehensive picture of how they perceive themselves or their treatment. The results of this study demonstrate that patients’ perception of satisfaction versus their perception of the
substance abuse treatment program are not always well understood. This fact supports the original recommendation of the TPQ researchers who stated that face to face interviews were the preferred method of collecting patient satisfaction information when using this tool.

**Further study.** It would be of benefit to conduct a similar study with a larger sample size to improve the generalizability of the results to the population. Specifically, including a greater number of patients who were given Vivitrol during their treatment would be important to obtain more data to utilize when trying to improve funding for the Vivitrol program. When conducting research with this population, researchers should consider including a qualitative component to their study to better capture the voice and experiences of opioid-addicted individuals.

**Conclusion**

As the nation and the state of Florida move forward with their plans to contain the opioid epidemic, it will become increasingly important to know what helps the opioid-addicted patient maintain their recovery. Because the relapse rate for opioid addiction is very high, issues with treatment programs which may lead patients to relapse should be highlighted and addressed quickly to prevent others from suffering the same fate. It has already been demonstrated that patients who are satisfied with their treatment are more likely to be retained in their treatment programs. This study was able to demonstrate that the TPQ survey is an effective tool to measure patient satisfaction in this unpredictable population and acted to confirm the TPQ developers’ recommendation to discuss the survey in person with their patients to better elaborate on areas of strength and weakness. Only after issues are identified and suggestions for improvement are heard can programmatic changes be made where needed.
Appendix A
Current Patient Satisfaction Tool at the Study Site

1. I was given hope while receiving services
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

2. I was treated with dignity and respect while receiving services.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

3. CBHC focused on my recovery when providing services.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

4. If I had complaints, they were handled well.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

5. Overall, I am satisfied with the services I received.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

6. I was provided with adequate information to assist in making an informed decision about modes of treatment, medication, etc.
   - Strongly Agree
7. The services provided are affordable.
☐ Strongly Agree
☐ Agree
☐ Disagree
☐ Strongly Disagree

8. The building (waiting room, office, rest rooms, etc.) was accessible to me.
☐ Strongly Agree
☐ Agree
☐ Disagree
☐ Strongly Disagree

9. The service I received was effective.
☐ Strongly Agree
☐ Agree
☐ Disagree
☐ Strongly Disagree

10. The service I received was valuable to me.
☐ Strongly Agree
☐ Agree
☐ Disagree
☐ Strongly Disagree

11. Services were easy to access.
☐ Strongly Agree
☐ Agree
☐ Disagree
☐ Strongly Disagree

12. Have you been hospitalized in a psychiatric facility or admitted to a Crisis Stabilization Unit since you were discharged?
☐ Yes
☐ No
13. Have you been arrested since you were discharged?
☐ Yes
☐ No

14. Do you think you were prepared for your discharge?
☐ Yes
☐ No

15. What could we have done better to prepare you for your discharge?

16. What suggestions, if any, do you have for CBHC that would help improve services?
Appendix B

Treatment Perceptions Questionnaire Survey Tool

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: How often do you feel your treatment options are explained?</td>
<td>Never, Sometimes, Always</td>
</tr>
<tr>
<td>Q2: Do you feel the treatment options are clear?</td>
<td>No, Yes</td>
</tr>
<tr>
<td>Q3: How well do you understand the treatment options?</td>
<td>Poor, Average, Good</td>
</tr>
<tr>
<td>Q4: How satisfied are you with the treatment options provided?</td>
<td>Unsatisfied, Satisfied</td>
</tr>
<tr>
<td>Q5: How well do you feel your treatment options are aligned with your goals?</td>
<td>Poor, Average, Good</td>
</tr>
</tbody>
</table>

Section 2: Your Treatment

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6: How long have you been in the treatment program?</td>
<td>1-3 months, 4-6 months, 7-9 months, 10-12 months</td>
</tr>
<tr>
<td>Q7: What is your goal?</td>
<td>Recovery, Improvement, Stabilization</td>
</tr>
<tr>
<td>Q8: How do you feel about your progress so far?</td>
<td>Not Well, Well</td>
</tr>
</tbody>
</table>

Section 3: Overall Experience

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9: How satisfied are you with the overall experience?</td>
<td>Unsatisfied, Satisfied</td>
</tr>
<tr>
<td>Q10: How well do you feel the treatment has met your needs?</td>
<td>Poor, Average, Good</td>
</tr>
<tr>
<td>Q11: How likely are you to recommend this treatment to others?</td>
<td>Not Likely, Likely</td>
</tr>
</tbody>
</table>

Section 4: Additional Comments

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q12: Please provide any additional comments or feedback.</td>
<td>Any text or feedback provided by the respondent</td>
</tr>
</tbody>
</table>

Final Note: The Treatment Perceptions Questionnaire is designed to assess how well the treatment program meets the needs and expectations of the patient. It is important to provide clear explanations and options to ensure patient satisfaction and alignment with treatment goals.
Appendix C
Themes Noted in the Surveys Used to Guide the Individual Interviews

1. TPQ demonstrated that overall patients are satisfied with their treatment, however it appears that people mandated to treatment by the court have a slightly better perception of the program. Why do you think that may be?

2. Maintaining recovery- comments included needing more resources and assistance maintaining recovery, wanting more groups. “We don’t know enough about how to stay clean”.
   a. Some wanted more recovery and SA classes
   b. Would have liked there to be more yoga, meditation, mindfulness classes
   c. Would prefer a longer residential program-need the support for a longer period of time, community resources- more information about these complementary alternative treatments and self-care that are available in the community

3. Many reported wanting more “outside” activities – What do you mean by “outside”? What kinds of activities would you want included if you had a choice? (ie: being outdoors could be synonymous with being “normal”, not being a patient)

4. Some reported feeling like they were not respected by the staff because they were drug abusers.

5. Some didn’t like that the detox and 28d program were mixed. Do you agree? What do you think they mean by this statement?

6. Many said they wished they could smoke because they feel it’s hard enough to stay clean from drugs and alcohol, asking them to also give up cigarettes may be unreasonable. What do you think?

7. If you have had a period of sobriety and relapsed, what has worked for you in the past to maintain your recovery?
Appendix D
Follow-up Voluntary Individual Interview Questions

A) Thank-you for agreeing to participate in this follow up individual interview of the study: An Exploration of a Substance Abuse Treatment Program and Its Effects on Opioid Addicted Adults’ Ability to Sustain Recovery.

B) Remind participants of their research participant rights and obtain permission to audiotape the interview

C) Start the interview by sharing results of the TPQ survey data. Ask each participant to share their reaction to study findings. Then proceed to asking questions below.

1) Tell me about your experience with our treatment program? What did you like about it?

2) What was the most challenging part of the treatment program for you?

3) If you were going to design your own treatment program that you think would work for you, what would that look like?

4) Tell me about your journey with addiction….

5) What does being able to maintain recovery look like for you?

6) What else do you think we should know to better help others working to maintain their recovery?
References


https://www.hhs.gov/sites/default/files/Factsheet-opioids-061516.pdf


http://dx.doi.org/10.1111/add.12208.


