MODELS OF ADDICTION AND HEALTH SEEKING BEHAVIORS:
UNDERSTANDING PARTICIPANT UTILIZATION OF AN OVERDOSE
EDUCATION AND NALOXONE DISTRIBUTION CLINIC

By

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DEDICATION

I dedicate this dissertation to my mother, Dr. Elizabeth Short- thank you for being a constant source of support, inspiration, and love. Without your patience, guidance, and encouragement this pursuit would never have been possible.
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List of Abbreviations

- Addiction Belief Inventory: ABI
- Federally Qualified Health Center: FQHC
- Health Belief Model: HBM
- Health Seeking Behavior: HSB
- Ohio Automated Rx Reporting System: OARRS
- Opioid Use Disorder: OUD
- Overdose Education and Naloxone Distribution Clinic: OEND Clinic
- Patient Health Questionnaire-4: PHQ-4
- Social Support Questionnaire-6: SSQ-6
- Substance Use Disorder: SUD
- Syringe Exchange Program: SEP
Models of Addiction and Health Seeking Behaviors: Understanding Participant Utilization of an Overdose Education and Naloxone Distribution Clinic

Abstract
by
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In an effort to combat the staggeringly high rates of opioid overdose deaths in the US, Overdose Education and Naloxone Distribution (OEND) clinics were established. This study was a collaborative partnership with a local urban hospital committed to harm reduction through their community-based OEND clinic. This study's purpose was twofold. First, to understand who utilized OEND clinics and the factors affecting their HSB (i.e. number of Naloxone kits). Second, to understand how OEND clients framed their understanding of their SUD and if their model of addiction affected HSB.

The study was comprised of three distinct phases. Phase 1 Quantitative assessment examined the demographic characteristics (i.e., gender, race, education, SES, occupation), mental health concerns (i.e., anxiety, depression & general distress), breadth and satisfaction of social support, and addiction beliefs in 235 clients from a local OEND clinic in Cleveland, Ohio. Since all participants in this study were already a part the OEND clinic, the number of naloxone kits will serve as a proxy for HSB. Phase 2 Qualitative Assessment explored how 61 of the enrolled clients framed their understanding of their substance use disorder (SUD). Qualitative interviews were coded for themes related to SUD beliefs, the type of stigma experienced by clients as a function of their drug use, and their motivation behind the decisions to seek out Naloxone. Phase 3 involved informal clinic observations to understand clients' experiences and interactions with OEND clinic staff.
Gaining a better understanding of patients' health-seeking behaviors (HSB) at OEND clinics is a critical first step along the road to combatting the opioid epidemic. Phase 1 data revealed that clients who chose to engage in the HSB of OEND clinic were primarily unemployed, Caucasian males who were approximately 38 years of age. They were highly anxious, depressed, and in need of more social support to assist in their recovery. The majority of the sample subscribed to multiple models of addiction (i.e., moral and medical). A new model of addiction measure was created for this study based on the ABI data. While, the adherence group measure proved ineffective for discriminating OEND program participation rate (i.e. number of kits requested), it was effective at differentiating mental health issues within this sample. Clients who endorsed the medical model were more anxious and depressed than clients who endorsed the mixed or moral models.

Quantitative and qualitative data were both useful for understanding OEND clients HSB of the OEND clients. That said, the qualitative narrative data clarified the clients' lived experiences suffering from SUD. Interviews were useful for understanding the type and breadth of stigma experienced by clients. Stigma occurred at the level of the self, friends, family, providers, and bystanders. All forms of stigma had a powerful negative impact on motivation to engage in HSB. Addressing the Opioid epidemic is imperative to improve the quality of life for thousands of Americans. OEND clinics are an essential step along the recovery road for clients with SUD. The anthropological and clinical significance of the findings were discussed, as were limitations and future directions.
Chapter 1

Introduction

"I'm not saying there's no such thing as addiction; I just don't think it's a disease. I mean, addiction is real, but it's not a disease. I hate when people call it a fucking disease. Like, I mean, diseases aren't something you chose to have. This is something I chose to do, and it spirals. You know, but um, yeah, I don't buy into that; I think that you chose every time you do it, and you chose when you want to quit. I don't think it should be lumped in with disease. I think addiction is all on its own. It's a completely separate entity... I mean, there's nothing else like it."

Study Participant CH19

Introduction:

How do people understand their experiences of substance use disorder (SUD) and does their understanding impact willingness to seek out medical care? The field of addiction research is quite broad, and must tackle issues of stigmatization, racial and healthcare inequities, barriers to treatment, and homelessness. Individual experiences of trauma, broken support systems and inadequate treatment access are common themes in the addiction literature. Researchers interested in addiction have historically examined experiences of both external and internal stigmatization. Furthermore, the literature addresses the shame associated with drug use and the negative social ramifications that drug use has on relationships. Although much is known about the harms associated with SUD, less is known about the etiological beliefs of those who suffer from SUD.

SUD is not a novel problem in the United States, and has been studied extensively in the field of Anthropology. Individuals have struggled with SUD for centuries, long before society realized the magnitude of the problem. Societal models of addiction have evolved, yet universal consensus regarding SUD etiology has not been achieved. Prior to 1987, individuals diagnosed with SUD were exclusively blamed for their deviant behaviors, with society viewing them as morally corrupt. The moralization of drug use
can be seen prominently in the legal and political realms of society (i.e., the war on drugs, criminal prosecution of those using drugs, etc.). In 1987, the American Medical Association (AMA) championed a new model of addiction, the medical model, which classified SUD as a disease. The medical model of addiction gained greater momentum when brain science classified SUD as a "chronic, relapsing brain disease" (McClellan, 2002). The medical model of addiction developed as an alternative to the moral model of addiction.

In contrast to the moral model of addiction, the medical model of addiction attempts to destigmatize drug use, reduce judgment toward those suffering, and increase access to necessary medical care. Despite the adoption of the medical model of addiction, individuals who suffer from SUD still frequently experience stigma and are often blamed for their addiction both internally (i.e., self-stigmatization) and externally (i.e., social community networks). The anthropological perspective contends that illness experiences are socially constructed, with society’s perceptions and stigmatization affecting how those suffering from SUD understand their symptoms and experiences (Conrad and Barker, 2010). Beliefs about illness experience and perceptions of need are critical variables that impact utilization of health care services (Anderson 1973, 1995). Understanding the effects that an addiction model(s) has on clients' health-seeking behaviors is at the heart of this study.

**Purpose of Study:**

This study examined how clients of an Overdose Education and Naloxone Distribution (OEND) clinic framed their understanding of their SUD. OEND clinics represent a public health response to the opioid epidemic. OEND clinics teach clients
about risk factors for an overdose, train clients how to identify an overdose, and instruct clients how to respond to an overdose using an opioid antagonist medication called Naloxone. OEND clinics are harm reduction programs designed to reduce the high mortality rates associated with opioid overdoses and provide both education and medication to clients within the broader social and cultural context of SUD treatment in the US. How SUD is conceptualized is hypothesized to be a critical variable that influences client engagement in OEND clinics.

This study examines the relationship between harm reduction programming (the OEND clinic), models of addiction (moral, medical, mixed model), and HSBs (number of times participants chose to receive Naloxone). As OEND programs become more prevalent, there is a growing need for research to understand how participants decide to utilize these resources. Gaining an understanding of why clients engage in OEND programs and the barriers to participation is imperative on the national and local level.

This study addressed two primary research objectives (see Table 1 for a complete list of research objectives and research questions):

1. Understanding who utilizes the OEND clinic and the factors affecting their HSB
2. Understanding how OEND clients frame their SUD and whether models of addiction affect HSB

Table 1: Research Objectives and Questions (Abridged Version; Full version in Appendix)

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<th>Objectives</th>
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As shown in Table 1, multiple research questions addressed the two primary research objectives, with answers to these questions critically important in combating mortality due to opioid overdose. Research has further shown that OEND clinics serve as an important opportunity to connect patients to medical care (i.e., SUD treatment) after an overdose (Kerensky & Walley, 2017). As compared to those who do not utilize OEND clinics, individuals who seek out Naloxone are more likely to receive lifesaving referrals for additional medical treatment and social services, including housing assistance, help with medical insurance, and access to food stamps (Kerensky & Walley, 2017). By improving our understanding of how clients conceptualize their SUD and their decision to seek out Naloxone, this study has the potential reduce rates of opioid overdose deaths. In addition, contributing to public health practitioners’ knowledge of how OEND clients perceive their SUD and the obstacles they encounter on the road to recovery can only improve the design of patient-centered treatment programs that are sensitive to and address clients' needs more effectively.

This study took place at an OEND clinic located in Cleveland, Ohio. This study was possible in part due to the researcher’s experience working as a program assistant for the local clinic. In 2013, the county hospital established an OEND clinic to provide

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individuals suffering from SUD with access to the lifesaving medication Naloxone. The OEND clinic worked in partnership with a local federally qualified health center’s (FQHC) syringe exchange program (SEP) to access and support large numbers of individuals suffering from SUD. Recognizing the critical need to distribute Naloxone on a larger scale and get it into the hands of as many people as possible, the clinic hired three program assistants to broaden their reach. The researcher became formally employed by the county hospital, working as a program assistant for the OEND clinic.

The Cuyahoga County OEND clinic is an ideal site for this project because of the higher than national average rates of opioid overdoses in the county, and the clinic's partnership with the local Syringe Exchange Program (SEP). The OEND clinic where this research took place was a high-traffic clinic due to its location (area with high rates of drug use), partnership with local harm reduction initiatives (the SEP), and the nonjudgmental nature of all clinic staff.

Given that the researcher was employed at the OEND clinic, a strong rapport with clients was easily established. The design of this study was informed by previous experiences, interactions, and observations of program clients. The pre-existing relationships with the OEND clients may have affected participant willingness to partake in this study and to speak to their experiences and beliefs about chronic heroin use.

The primary variable hypothesized to impact the HSB of OEND clients was their belief about SUD etiology (model of addiction). Although there appears to be wide acceptance of that the medical model best explains the etiology of SUD, coexisting models of addiction etiology continue to persist in the community and among those suffering from SUD. Varying perspectives on SUD etiology exist presumably because the
biological causes of SUD are not universally accepted (Peele, 1990). Thus, it seems that multiple models of addiction are offered to explain SUD, with the most empirically supported being: 1. the medical model (addiction as a disease), 2. the moral model (addiction is a character flaw), and 3. a combination of the two. At present, no one model is uniformly accepted (Anderson, 2010) among patients, their families, and their providers, with beliefs varying due to differences in societal beliefs and medical advancements (Anderson, 2010).

Although the moral and medical models of addiction might seem incompatible with one another, they often coexist, with beliefs about SUD changing depending on the historical, social, and cultural context. Symptom definition and beliefs about the causes of illness have the power to affect health seeking behaviors (HSBs) (Chrisman, 1977). For this reason, it is imperative to understand how clients of OEND clinics conceptualize their SUD and whether model(s) of addiction affects their engagement in the OEND clinic. In the current investigation, all study participants were actively participating in the HSB of utilizing the OEND clinics’ services. For this reason, the number of Naloxone kits requested and received (i.e. number of visits to the clinic) served as a proxy for program engagement.

This mixed-methods study is one of the first of its kind to examine the relationship between models of addiction and HSB among clients utilizing OEND programs. In order to more effectively address models of addiction and HSB, a mixed-methods approach was employed. The mixed-methods approach allows for a more in-depth understanding of the lived experiences of study participants, ensuring that study findings are reflective of and an accurate representation of study participants’ life (Hay,
The purpose of the Phase 1 quantitative portion of this study was to understand who seeks out Naloxone from OEND programs and what factors affect program utilization. More specifically, this study examined how clients of OEND programs frame their understanding of SUD (model(s) of addiction). The purpose of the Phase 2 qualitative interviews was to explore what model(s) of addiction the study participants subscribed to and the variables that influenced their decision to seek out Naloxone. The purpose of the Phase 3 ethnographic portion of this study was to observe and report on clients' experiences and interactions at the OEND clinic. A multimethod understanding of the OEND clinic client's model of addiction has the potential to shed greater insight into their ideas surrounding the efficacy of treatment and subsequent HSB (i.e., utilization of Naloxone clinics).

**Significance:**

This study has the potential to contribute broadly to the growing literature on HSBs and SUD. In addition to examining if clients’ model(s) of addiction impacts engagement in OEND clinics, this study also examined whether models of addiction were related clients’ emotional health, perceptions of social support, and experiences of stigma. The data from this study has the potential to inform researchers and clinicians on how best to develop patient-centered personalized treatment programs that can aid individuals in their recovery from SUD.

Furthermore, this study seeks to advance our understanding of how multiple models of addiction can coexist. The ethnographic portion of this study sheds light on the lived experiences of those suffering from SUD. Integrating the data obtained from the ethnographic, quantitative, and qualitative data has the potential to provide insight into
the mitigating factors (i.e., social support, mental health, behavioral health, ethnicity, and gender) that affect a client's decision-making regarding treatment utilization, as well as those that serve as potential barriers to recovery.

**Organization of this Study:**

This study is organized into eight chapters. Chapter 1: The Introduction presents this study’s research objectives and questions. It additionally, provides the reader with background information about the utility of OEND clinics and the use of Naloxone. Lastly, it discusses the purpose and contributions this research makes to the field of Anthropology. Chapter 2: The Literature Review and Theory provides relevant background information on the opioid epidemic from an anthropological and public health perspective. Furthermore, it presents both the medical and moral models of addiction and their relevancy to this study. Lastly, it discusses how the Health Belief Model can inform our understanding of OEND clients' HSB. Chapter 3: The Study Design and Method provides a detailed description of the three-phase mixed-method study design outlining the qualitative, quantitative, and observational research methodologies. Chapter 4: The Coding of Quantitative and Qualitative Data Collected presents a detailed overview of the coding and scoring for the Phase 1 quantitative data. Chapter 4 concludes with the qualitative transcription and coding process (NVivo 12), with the abridged version of the codebook appearing in Table 5 and the complete codebook appearing in Appendix A. Chapter 5: Quantitative Data Analysis addressed the first question "Who engages in the HSB utilizing the OEND Clinic?" This chapter presents the data analysis plan and the quantitative data regarding the sample demographics (i.e., age, gender, race, education, occupation, & religion). In addition, a
description of the sample characteristics in terms of mental health, social support, and utilization of SUD services was presented. In order to address the second research question, “What model(s) of addiction do clients hold?” this study utilized the ABI data in a novel way by creating “model of addiction adherence groups” and subsequently calculating and categorizing participants in to medical, moral, or mixed adherence groups. Quantitative comparisons were conducted with the Addiction model as the between-subjects' group. A brief discussion of the significance of the results is presented, including new contributions, placement in current literature, and how it conflicts with or extends previous research findings. Chapter 6: Qualitative Data addressed the question “What insight do qualitative interviews provide into clients’ understanding of their SUD and their HSB?” Thematic analyses examined models of addiction, stigmatization, social support, and motivation to utilize the OEND clinic. A brief discussion of the results concluded the chapter, which was offered in terms of placement in current literature, new and conflicting findings, and significance. Chapter 7: Synthesis of Quantitative and Qualitative Data involved the presentation of the Phase 3 observational data. The presentation of the ethnographic observational approach focused on an understanding of the clients, staff, and workings of this OEND clinic. Observational analyses focused on multiple levels of functioning: client, staff, and the system. Chapter 7 concluded with how the qualitative and observational data support, contradict and advance understanding of the OEND clients' beliefs about SUD. Chapter 8 The Conclusion summarizes the overall findings and integrates them into extant literature. The limitations of the study are noted. Finally, a comprehensive summary of important discoveries and outstanding unanswered questions is offered, as well as future directions.
Chapter 2

Literature Review and Theory

"I've overdosed nine times, and I've narcaned my friends. I've brought them back from stiff grey bodies on the bed, so to me, it is so incredibly important if I can be part of that solution. This (OEND Clinic) has been the answer to so many of my problems for such a long time. I don't have hepatitis, I don't have AIDS, I don't have any of those things, and I've been able to beat all of that because I've been a member and been a client or whatever."

Study Participant CH2

The study of addiction and its conceptualization has changed and evolved throughout history. To fully understand who engages in the health-seeking behavior of utilizing OEND clinics and how clients of these clinics understand their SUD, it is essential to examine available Anthropological literature. First, the history of the opioid epidemic and its causes are explored. Next, the Anthropology of drug use literature is presented, with discussions focused on the dominant present-day models of addiction. Lastly, this chapter discusses relevant theory to this study including the social construction of illness, patient centered examination of suffering, and the Health Belief Model (HBM).

The Opioid Epidemic:

The opioid epidemic began in the early 1990s and continues to be a pressing public health issue (CDC, 2021). With rates of opioid overdose deaths continuing to climb, it is essential to understand the historical and contextual factors that caused this epidemic. Presently, unintentional overdose is the leading cause of injury death in the United States, with over 72,000 drug overdose deaths occurring in 2017 (CDC/NCHS, National Vital Statistics System, Mortality). Of the 72,000 overdose deaths in 2017,
30,000 of them involved synthetic opioids (CDC/NCHS, National Vital Statistics System, Mortality).

The causes of the opioid epidemic are complex, with cultural, economic, and educational factors playing a sizeable role. One of the primary causes of the opioid epidemic in the United States stems from the decision to "treat pain as the fifth vital sign." Initially, opioids used to treat pain were thought to be safe, effective, magic bullets that would enable recovering patients to resume their pre-injury quality of life (Scher et al., 2018). Treating pain effectively and safely, however, proved to be difficult because pain and its severity are entirely subjective. Categorizing pain as the fifth vital sign created the need for fast and effective pain management techniques to control or eliminate pain. The over prescription of opioids led to catastrophic consequences for patients, many of whom developed a physical dependence on their prescriptions. Presently, millions of prescriptions for opioids are written annually (Ohio Drug Overdose Data, 2017). In 2012 in Ohio alone, 793 million doses of opioids were dispensed to patients (Ohio Drug Overdose Data, 2017).

In response to the epidemic, public health practitioners launched guidelines for safe prescription practices in an effort to decrease the number of opioids prescribed. Their work was instrumental in creating and spearheading new “best practices” for pain management in collaboration with the American Medical Association (AMA). These new “best practices” recommendations recognized that it was not safe or in the benefit of the patient to treat pain as the fifth vital sign- a practice which had been in large part responsible for the opioid crisis (Anson, 2016).
Doctor shopping (i.e., seeking treatment from multiple providers for the same problem) also fueled the epidemic (Sansone, 2012). Without a monitoring system in place to track opioid prescriptions, patients were able to amass large quantities of opioids to fuel their SUD. More recently, monitoring systems have been created to put an end to doctor shopping and thwart patients’ efforts at securing multiple opioid prescriptions for the same ailment. Although rates of prescription opioids analgesics have declined, the number of overdoses and deaths continue to increase (Rudd, 2016; NIDA, 2017). The increase in overdose mortality is a direct result of individuals seeking out illicit opioids (i.e., heroin), more readily available alternatives to prescription pills. Over 80% of individuals who use heroin initially abused prescription opioids (NIDA, 2017).

Marketing opioid medications directly to consumers also fueled the epidemic. During 2001 alone, Purdue Pharma spent more than 200 million dollars on a pervasive marketing campaign to infiltrate the pain management market and increase prescription rates of OxyContin (Van Zee, 2009). Purdue Pharma additionally recruited and compensated physicians to educate others and promote OxyContin at large pharmaceutical symposiums (Van Zee, 2009). As such, drug representatives played a role in fueling the epidemic, with most reps incentivized (i.e., gifts and money) to increase OxyContin's sales and widespread distribution in clinical settings.

The widespread improper storage and disposal of prescription opioids also fueled the epidemic. While it is recommended that opioid prescriptions be stored in a locked location (such as a lockbox or cabinet with a lock), this rarely occurs (American Society of Regional Anesthesia and Pain Medicine, 2021). In a recent study examining how patients store and dispose of opioids, researchers found that only 27% of patients stored
opioids in a locked location and 28% of patients had unused opioids stored in their homes (American Society of Regional Anesthesia and Pain Medicine, 2021). The widespread improper storage and disposal of opioid prescriptions allowed drug-seeking individuals to access opioids quickly and easily.

**Ohio's Response to the Opioid Epidemic**

In 2006, to decrease rates of opioid deaths in the state of Ohio, the Ohio Automated Rx Reporting System was established (OARRS; https://www.ohiopmp.gov/2021). OARRS carefully monitored and tracked how addictive prescription drugs were dispensed to patients (Ohiopmp.gov, n.d). Because OARRS enabled physicians to monitor closely the number of prescription drugs provided to a patient in outpatient settings, it became one part of a critical solution designed to prevent patients from engaging in the practice of doctor shopping and opioid abuse. Additionally, OARRS is instrumental as an early identification tool in optimizing patient care. That is, OARRS has the potential to serve as an important signal for drug misuse/overuse (Ohiopmp.gov, 2021).

Both OARRS and physicians' increased awareness of addiction rates played essential roles in controlling the surging opioid epidemic. In 2011, doctors dispensed 782 million oral doses of opioids to patients in Ohio. By 2017, that number had decreased to 568 million doses (Ohio Drug Overdose Data, 2017). Clearly the AMA position papers and public health educational interventions directed at safe opioid prescription practices had begun to have a powerful impact on prescription practices.

In addition to decreasing and monitoring the rates of prescription opioids dispensed to patients, state policies also worked to expand SUD treatment access. In an
effort to expand treatment access to those in need, Naloxone, a medication that reverses opioid overdoses, became widely available. Naloxone, also known as Narcan, is an opioid antagonist that allows individuals who experience an overdose to resume breathing independently. It is a short-acting medication (usually lasting between 30-90 minutes) that has saved countless lives and provided individuals with continued opportunity for recovery from their SUD. Given the severity of the opioid epidemic in the United States, the US Department of Health and Human Services widely recommends Naloxone as a harm reduction tool (LDI/ Cherish Issue Brief). Because of its effectiveness, there has been a strong commitment made to increasing lay access to Naloxone. In order to do this, public health professionals established overdose education and Naloxone distribution (OEND) clinics. The first OEND clinic was established in Chicago in 1996, and by 2014, 30 states had at least one OEND clinic (MMW, 2015). From 1996 to 2014, OEND clinics distributed over 152,283 Naloxone kits to community members and 26,463 rescues were reported (MMW, 2015).

Although opponents of OEND clinics claim that providing Naloxone promotes drug use, there has been no scientific evidence supporting the fact that risky drug use behaviors have increased in individuals with greater access to Naloxone (Walley & Hackman, 2013). These studies further lend support for decreased mortality caused by opioid overdoses in communities where OEND clinics exist (Walley & Hackman, 2013, Penn Leonard Davis Institute of Health Economics, 2019). Gaining a greater understanding of variables that affect the health-seeking behavior (HSB) of OEND clients is important to address the opioid epidemic.
Models of Addiction:

One variable hypothesized to influence client’s engagement in OEND clinics is their models of addiction. Beliefs regarding the causes of SUD have changed and evolved, in part due to changing societal beliefs and the development of new medical technologies (Anderson, 2010). A variety of models have been hypothesized to explain SUD, with some models gaining more widespread popularity and dominance than others (Anderson, 2010). Addiction models shape society's reactions to individuals afflicted by SUD and influence the experiences of those suffering from this disorder (Quintero, 2002). Conceptualizations of addiction have been shown to impact the development of drug policies, drug treatment, and harm reduction public health programs (Health.gov, 2004). Today, there are two dominant explanatory models used to explain SUD: the moral and medical models of addiction. The medical model of addiction characterizes SUD as a disease, whereas the moral model of SUD conceptualizes SUD as a moral failing and a character flaw (Hickman, 1997; Miller, 2007). These models are thought to be competing, yet it is unclear whether they can occur simultaneously and what impact they have on HSBs.

The moral model of addiction was a dominant ideology in the United States during the 19th and 20th centuries and remained the dominant model for many years into the 21st century. According to the moral model of addiction, SUD is rooted in self-regulation failures. Those who subscribe to a moral model of addiction tend to blame, shame, and stigmatize individuals for their SUD. According to the moral model of addiction, SUD is a character shortcoming attributed to a lack of self-control and moral failure. Those who subscribe to the moral model of addiction are more inclined to deny
medical treatment to those suffering from SUD in favor of stiffer penalties, including incarceration and social rejection (as compared to those who subscribe to the medical model of addiction; Corrigan, Kuwabara, & O'Shaughnessy 2009; Palamar, 2012). Drug use may also result from social and environmental influences (Freeman & Dyer, 1993). The moral model of addiction emphasizes behavioral choice as the main cause of an individual’s SUD. Because of this, individuals who suffer from SUD are often stigmatized for their drug use behaviors and are labeled as undeserving of care due to their “moral shortcomings.”

In contrast, the medical model of addiction portrays SUD as a chronic progressive illness in which the individual using drugs has limited agency over their condition. SUD is characterized in a multitude of ways, including but not limited to changes to an individual's neuropathways, damage to the structure of one’s brain, and a possible genetic etiology (Jellinek, 1960; McKim, 2003). According to the medical model, individuals suffering from SUD should be treated with compassion as they embark on their road to recovery and should be treated like any other patient suffering from illness. The medical model perspective argues that individuals suffering from SUD require skilled and compassionate treatment for their illness in order to optimize the likelihood that recovery will be achieved (Marlatt, 1996). Those who subscribe to the medical model view drug use as having roots in brain chemistry, with drug use being a behavioral consequence and response to drug-related triggers (Vrecko, 2016).

While multiple models of addiction have been discussed, the emergence of and wide acceptance of SUD as a disease (i.e., medical model) has occurred gradually in American society. Much of the support for the medical model of addiction is derived
from neuroscientific advances (Racine, 2017). Moving away from the moral condemnation of failures in self-control and recognizing the important role that the brain and neurochemical transmitters play in addiction has changed the landscape of addiction medicine (Racine, 2017). "By reducing the shame and blame felt by those suffering from SUD, the medical model affords a shift of focus from cause and punishment to treatment and compassion for those individuals suffering from SUD" (Health.gov, 2004). Conceptualizing SUD as a disease, the medical model further encourages those suffering from SUD to abstain from all drug use behaviors (Health.gov, 2004). Those who subscribe to a medical model and understand their SUD as a disease may be more likely to seek out medical care for their SUD than those who subscribe to a moral model of addiction (Corrigan, 2004).

Although a more recent popular model used to explain SUD, the medical model has also been criticized for "stripping the social and cultural ties" from SUD and placing the responsibility for management solely in the medical domain (Anderson, 2010). Furthermore, one goal of the medicalization of SUD was to decrease rates of stigmatization, however, unfortunately moral overtones still persist. The medicalization of addiction led to a new source of stigmatization- one in which individuals are characterized as “other” or unlike their non-drug-using peers because of their new diagnosis. It may even be argued that biomedical practitioners want SUD to be characterized as biological because “it separates them from ‘us’” (Conrad & Schneider, 1992). The morality assigned to SUD is reflected in public policies and law enforcement efforts aimed at controlling drug use and the criminalization of the behaviors of those who use illicit substances (Marlatt, 1996).
Anthropology and Addiction:

The public labeling of individuals as “drug addicts” is a relatively new occurrence in American history. In fact, there was little community concern over drug use behaviors in the United States prior to the 19th century (Singer, 2012; Carlson et al., 2009; Midanik, 2004, 2006). The 19th century was characterized by rapid economic, technological, and social change which ultimately led to the global commodification of drugs and increased rates of drug use (Courtwright, 2001; Hickman, 1997; Musto, 2002; Singer, 2012; Suissa, 2009). Subsequently, drug use became a socially acknowledged pathological condition (Singer, 2012).

Simultaneously, during the 19th century, the field of Anthropology began to develop rapidly. (Singer, 2012). Despite developing during the same time that SUD became a recognized pathological condition, Anthropologists did not focus their studies on drug research until the 1970s (Bennett and Cook, 1996; Singer, 2012). “This was because Anthropology was seeking to comprehend normative behavior across cultural settings, rather than what came to be called deviant behavior in sociology” (Singer, 2012). With the growing focus of Anthropology on Western Societies, more scholars began to set their focus on addressing social problems including SUD (Singer, 2012; Rylko-Bauer et al., 2006; Kedia and Van Willigen, 2005). In 1969, Anthropologists Preble and Casey, radicalized the public's view of drug use by employing ethnographic methods to the study of heroin use. Preble and Casey's work showed that heroin users had their own distinct culture and engaged in optimized entrepreneurial behaviors designed to increase the likelihood of obtaining and maintaining their drug supply (Hunt, 2001). Preble and Casey's research revolutionized Anthropology and Addiction research by
contributing to the development of a theoretical perspective on heroin use and by pointing out the utility of ethnographic research methodology (Dembo, 1997). Shortly thereafter, this anthropological perspective became a commonly used lens of inquiry to examine the mainstream US population and their drug use behaviors and habits (Hunt, 2001).

As discussed in Singer’s 2012 article, *Anthropology and Addiction: A Historical Review*, “the core component of the anthropological approach to human interaction with psychotropic drugs is known as the ‘cultural model’” (Singer, 2012). The cultural model emphasizes culturally constituted beliefs, issues of meaning, identity, recognition of social statuses, and cultural values in creating systems of illness classification (Singer, 2012; Butler, 2006; Bennet et al., 1991; Gamburd, 2008). According to the cultural model, the ways in which individuals suffering from SUD and conduct themselves while high is not due to the pharmacological properties of the drug itself, but rather is influenced by societies’ perceptions and concerns regarding their drug use behaviors (Singer, 2012) As noted by M. Marshall in his text *Weekend Warriors: Alcohol in a Micronesian Culture*, “the most important contribution of anthropology made to the drug field was in demonstrating to non-anthropologists the importance of socio-cultural factors for understanding the relationship between [drugs] and human behavior” (Marshall, 1979).

**The Social Construction of Addiction:**

One theoretical perspective that has greatly contributed to the study of SUD is social constructionist theory (Conrad and Barker, 2010). According to social constructionism, “individuals actively participate in the construction of their own social
worlds” (Goffman, 1961; Conrad and Barker, 2010). Because of this, illness experiences are influenced by both social dynamics and individual conceptions of reality (Conrad and Barker, 2010). From this perspective, illnesses have both biological and social consequences (Freidson, 1970). How society labels an illness is influenced by the “historical conditions of culture” and influences which illnesses are stigmatized and which are not (Waxler, 1998). Historically, those who suffer from SUD were characterized as social deviants and thus stigmatized (Conrad & Schneider, 1992). Poor minority drug users experienced higher rates of stigma as compared to wealthy white drug users (Hickman, 1997; Miller, 2007).

According to social constructionism, illnesses like SUD “have both biomedical and experiential dimensions” and often carry cultural meaning (Conrad and Barker, 2010). As discussed above, SUD is a highly stigmatized illness. The stigmatization experienced by patients suffering from SUD may not be limited to external stigma expressed by individuals in their community but may also include experiences of self-stigmatization. Because individuals who suffer from SUD are often acutely aware of society’s definition of SUD and expectations of those suffering from SUD, they “respond to this social definition in a way we might expect…. often, they self-stigmatize” (Waxler, 1998). Self-stigmatization can have damaging repercussions on an individual suffering from SUD and has been shown to negatively impact utilization of health care services while simultaneously increasing rates of anxiety and depression (Corrigan, 2004; Fife, 2000; Patel et al. 2007). Stigmatization of substance users is highly problematic to recovery and serves as a barrier to patient participation in harm reduction programs such as OEND clinics (Corrigan, 2004).
What is important to note, however, is that the stigmatization of SUD does not exist because of the biological dimensions of the disease, but rather due to the social dimensions of SUD (Conrad and Barker, 2012). The social dimensions of SUD and the cultural meaning ascribed to SUD have the potential to impact the ways in which SUD is addressed, how SUD is experienced, and how people respond to those suffering from SUD (Conrad and Barker, 2010).

This study aims to understand how clients of an OEND clinic construct their understanding of SUD (model of addiction) recognizing that each client’s individual experiences and background influence the construction of their addiction model. How society conceptualizes SUD and the meanings attached to SUD impacts clients’ interpretation of their SUD symptoms and beliefs about etiology. As noted by Foucault, societal discourse about an illness (such as SUD) “can influence people’s behaviors, impact their subjective experiences of embodiment, shape their identities, and legitimate medical interventions” (Conrad and Barker, 2010; Foucault, 1975, 1977).

Although the medical and moral models of addiction are the two most commonly constructed explanations for drug use in American society, it is essential to understand that our perception of SUD is not limited to medical and moral interpretations. Instead, contextual and cultural factors allow us to construct models of addiction that encompass socio-cultural factors (i.e., contexts support or protect against drug use), the psycho-dynamic factors (i.e., ego strength developed in childhood fosters effective coping strategies), and the social learning factors (i.e., powerful internal and external reinforcers increase the probability of drug-seeking behaviors). Although multidimensional models
to explain SUD are important, this study focuses on the two dominant and competing models of addiction prominent in American culture: the moral and medical models.

It is also important to keep in mind that the multiple models of addiction discussed above do not necessarily exist independently of one another. Today, the American justice system remains a prime example of the co-occurrence of the medical and moral models of addiction. In many institutions in America (i.e., the government, medical system, and judicial system), competing and often contradictory models of addiction are the norm (White et al., 2012). On the one hand, these systems recognize that addiction's biochemical roots place responsibility for addiction outside the individual's control. On the other hand, institutional policies criminalize drug use (i.e., and users being punished for behaviors directly tied to their illness, jailed for refusing treatment of said illness) with no regard for lack of culpability (Anderson, 2010). Given the ways in which society conceptualizes SUD and how society treats individuals suffering from SUD, it is not surprising that individuals with a SUD diagnosis might subscribe to multiple models of addiction.

In short, illness experiences and beliefs about etiology are socially constructed (Conrad and Barker, 2010). As such, it is increasingly important to study SUD from a patient’s perspective. This study does this by conducting in depth interviews with participants to allow participants to share their personal narratives, providing the researcher with an emic “insider” view. How clients come to make sense of their SUD and create their worldview of addiction (i.e., model of addiction) has powerful positive (i.e., seeking care) and negative (i.e., depressions, suicide) repercussions on the lives of those suffering from SUD. In addition, clients' worldview of addiction can adversely
affect their families, medical practitioners, and community support systems that work
tirelessly to help those suffering from SUD. SUD does not develop in a vacuum but
rather in a highly intricate cultural context. For this reason, it is imperative to understand
what role culture plays in supporting the recovery journey of clients suffering from SUD
(Quintero, 2002).

**Patient Centered Examination of Suffering:**

In order to “bring people's stories to light, in particular the stories of those living
at the social margins," this study utilizes a patient centered examination of suffering
(Witeska-Miynarczyk, 2015). By exploring the SUD experiences of clients of an OEND
clinic, this study highlighted client understanding of what causes their SUD, their
motivations for seeking out Naloxone, and their lived experiences suffering from SUD.
Ethnographic investigations focused on understanding client models of addiction and
HSB through the lens of the sufferer experience (Singer, 2004).

As noted in the above section on the cultural construction of addiction, in the field
of Anthropology, diseases are "seen as both biological and social" (Witeska-Miynarczyk,
2015). Because one of the primary aims of this study was to describe clients'
understandings of SUD from their own perspective, interviews attempted to illicit
participant narratives on topics such as stigmatization, social support, motivation for
HSB, and etiological beliefs about SUD. As noted by Schaler, beliefs and understandings
of SUD are not static but rather are malleable and are subject to manipulation from
external factors (Schaler, 1997). Because of this, patient centered examination of
suffering was an ideal approach to utilize when attempting to give voice to OEND clients
and understand what model(s) of addiction they subscribed to.
This study focused on a key concept in the patient centered examination of suffering: the sufferer’s experience. This project sought to shed light on the lived experiences of those suffering from SUD and their experiences seeking out Naloxone through the use of grounded theory and ethnographic interviews. This study also utilized participant observation ethnography as a means of better understanding the OEND encounter as experienced by the client (Singer, 2012). How people understand SUD greatly influences their experiences of suffering, their experiences of treatment, their experiences of anxiety and depression, and their experiences of stigma and social support. All of these variables were addressed in this research study, and as such, it is critical to utilize a patient centered examination of suffering framework to conduct this study.

**The Health Belief Model:**

The last theoretical framework utilized in this research study, is the Health Belief Model (HBM). The field of anthropology has long been interested in both the study of substance use and health-seeking behaviors (HSBs). The anthropological perspective is positioned to make a unique contribution to public health, specifically in terms of understanding HSBs, because anthropology stresses the importance of holism in examining and treating illness (Campbell, 2011). Public Health and Biomedicine often employ a "multifactorial model of disease" (Curnow & Smith, 1975). In contrast, Anthropology contends that culture impacts disease state and a patient's understanding of their disease and must be considered simultaneously with other factors (i.e., genetics and the environment) when it comes to program and treatment planning (Campbell, 2011). Since the 1940's anthropologists have helped health care providers recognize the critical role that culture plays on the development of optimal health behaviors (Beaglehole,
Understanding how and why individuals choose to utilize OEND clinics is critical for managing the opioid epidemic. Using an anthropological lens, this study examined variables that impact utilization of an OEND clinic and how clients of the OEND clinic conceptualize their SUD.

Figure 1

As can be seen in Figure 1, the Health Belief Model proposes a multitude of variables that impact engagement in HSBs (Rosenstock, 1974). This study draws heavily on the Health Belief Model proposed by Rosenstock and his colleagues (1998). Rosenstock defines health behavior as "any activity undertaken by a person who believes himself to be healthy for the purpose of preventing disease or detecting disease in an asymptomatic stage" (Rosenstock, 1974). Health behaviors are critical to the Health Belief Model because they represent how patients decide to engage in or choose not to
utilize health care. According to Rosenstock (1974), people engage in preventative health care for a variety of reasons, including motivation, perceived susceptibility to illness, perceived severity of illness, stigma, beliefs about treatment efficacy, psychological barriers to action, interpersonal influence, and cues or critical incidents that trigger a response (Rosenstock, 1974; Anderson, 1995). These constructs, do not all impact HSBs equally. Knowing which factors impact decisions to seek care is important for predicting individual behavior and creating effective preventative health initiatives.

The Health Belief Model was chosen as a theoretical framework for this study because it helps explain why individuals chose to participate in a health service (the OEND clinic). The Health Belief Model recognizes that multiple constructs impact health care utilization and predict HSBs, and their impact varies in degree depending on the individual. This study examines different constructs identified as impactful on health care utilization by the Health Belief Model in the case of participants at an OEND clinic. Specifically, demographic variables, client beliefs about models of illness etiology, perceived susceptibility, motivation for program use, social support, and mental health status were examined among OEND clinic clients to determine if they were influential constructs that impacted client willingness to seek out Naloxone (Chrisman, 1977).

Beliefs about SUD etiology (or model of addiction) were of particular interest in this study. As noted by Nancy Walxer in Learning to Be a Leper, individuals “learn how to have a disease from the beliefs and expectations society has for them” (Waxler, 1998). In short- we are socialized to be sick and to be healthy (Waxler, 1998). In addition, how one defines oneself (in this case, either as sick or at fault for their drug use behaviors) can impact how and whether or not an individual accesses health care and subsequently their
illness trajectory (Yanos, 2010). For example, if an individual feels their drug use practices are safe and that they are not at risk for an overdose, they are less likely to seek out the services of an OEND clinic than if they perceive their drug practices to be unsafe making them at risk for overdose. Similarly, if an individual believes their SUD is a disease that needs medical treatment, they may be more likely to utilize SUD treatment programs, including OEND clinics, as opposed to if they viewed their SUD as a lack of self-control. To determine whether or not beliefs about one’s illness impacted health care utilization, this study quantified the beliefs about SUD held by OEND clinic clients through the use of an Addiction Belief Inventory (ABI) (Luke et al., 2002).

In addition, this study examined another construct identified by the Health Belief Model as influential on health-seeking behaviors: interpersonal influence. Interpersonal influence, including experiences of stigma and fear of negative social ramifications, have been shown to negatively impact the HSBs of those who suffer from SUD (Chrisman, 1977; Corrigan, 2004). Experiences of stigma have further been shown to negatively impact patients' health by affecting their illness outlooks, treatment efficacy, and overall well-being (Von Peter, 2013). This study looked at interpersonal influence and its impact on the utilization of OEND clinics from a multitude of vantage points, including experiences of stigma, experiences of social support, and experiences of encouragement to seek out Naloxone.

This study further examined how critical incidents (another construct in the Health Belief Model) might trigger OEND clinic utilization. This study specifically asked participants about their motivation for seeking out Naloxone, including whether or not they experienced an overdose or witnessed another person overdosing. Witnessing an
overdose is a common occurrence among individuals who recreationally use opioids with others, as most overdoses occur in private homes (WHO, 2014). Individuals who use opioids regularly know but often minimize the severity of the risks of their opioid use, so clients were also queried about their perceived susceptibility to an overdose. Beliefs about treatment efficacy were also examined in qualitative interviews. Lastly, this study examined if any psychological barriers to action (an important construct in the Health Belief Model) existed among OEND clients. This was investigated by assessing levels of anxiety, depression, and overall mental distress among OEND clients to determine if there was a correlation between mental distress and their HSB.

The development of a consistent pattern of health-seeking behaviors is something to strive for. Nonetheless, HSBs for all patients, especially those with SUD, vary dramatically. Patterns of illness behavior and health-seeking are as varied as there are patients (Chrisman, 1977). In examining chronic illnesses such as SUD, understanding patient HSBs is complicated because illness identities are often dynamic and long-lasting (Chrisman, 1977). Social conditions, such as experiences of stigma, loss of social support, and perceptions of illness etiology, can also negatively affect those living with SUD (Chrisman, 1977). The model(s) of addiction one subscribes to is (are) hypothesized to be a critical variable that influences whether an individual participates in OEND clinics (Chrisman, 1977; Rosenstock, 1974). This study allows readers to better understand how patients' model(s) of addiction influences them to engage in the life-saving HSB of seeking out Naloxone.

This research draws upon the Health Belief Model as the main theoretical framework for this study. Throughout the United States, proponents of public health have
long championed biomedically inspired health interventions, that while somewhat effective, have fallen short in achieving their goals because these programs often lack an understanding of the political, cultural, social, and economic influences that impact individual vulnerability to disease and illness (Fleckman et al., 2015). By shedding light on the social and cultural variables that affect HSBs, this study has the power to provide greater insight into why clients participate in OEND clinics.

This study's primary aim was to understand who engages in the health-seeking behavior of OEND clinic utilization and what variables impacted their utilization. To understand who engages in the HSB of utilizing OEND clinics and how clients understand their SUD, this study was carefully designed, drawing on theory from both the Anthropological and Public Health perspective (i.e., the cultural approach, the social construction of addiction, and the Health Belief Model). A secondary objective of this study was to give voice to clients’ experiences of SUD. This study did this by using a patient centered experience of suffering approach which included utilizing ethnographic observations to better understand client lived experiences of programmatic use.
Chapter 3

Study Design and Method

Study design
As shown in Figure 2, the study design comprised three distinct phases of data collection.

**Figure 2:**

**Phase 1**
Exhaustive Recruitment of OEND Clients (n=235)
Quantitative Questionnaires

**Phase 2**
Subgroup from P1 (n=61)
Qualitative Interviews

**Phase 3**
Contextual Field Notes (n=0)
30 Hours at Two Research Sites

**Drawing on the Health Belief Model, Phase 1 of this study** involved the collection of demographic and psychological characteristics that impact HSBs (see Surveys section below) from 235 OEND clients who were seeking out Naloxone. Although not all clients recruited for this study had a formal SUD diagnosis, all were actively using opioids. Subsequently, for the sake of simplicity, the term SUD is used for clients with and without a formal diagnosis to simplify the presentation of the material.
The demographic, mental health, and attitudinal data enabled a more careful examination of factors that might influence HSB as identified by the Health Belief Model (Rosenstock et al., 1998). All surveys were self-administered and took approximately 20 minutes to complete, with the investigator present during all surveys to assist clients in completion if needed.

In **Phase 2**, a subset (n=61) of Phase 1 participants was recruited for an in-depth, semi-structured open-ended interview (see Qualitative Interview section below) that addressed several factors identified as impacting HSB by the Health Belief Model including: perceived benefits, perceived barriers, perceived susceptibility, and beliefs about illness etiology (Rosenstock et al., 1998). A stratified sampling strategy based on age, gender, and race was utilized (see Client Recruitment below). Interviews were designed to better understand how models of addiction varied among clients of the OEND clinic and whether or not client beliefs affected their decisions to seek Naloxone. Phase 2 qualitative interviews ranged from 45 minutes to an hour and a half in length.

Finally, **Phase 3** involved no formal subject enrollment but rather informal observations and field notes designed to examine contextual factors and characteristics relevant to the OEND sites (30 hours; see fieldwork assessment). Phase 3 observations provided additional insight into “cues to action” (a variable identified by the Health Belief Model) that might impact OEND clients’ HSBs (Rosenstock et al., 1998). Cues to actions observed during Phase 3 of this study included referral to the OEND clinic from SEP staff, social support provided to clients from OEND clinic staff, and social support from family or friends encouraging OEND clinic use. Taken together, all three phases involved measures designed to assess and better understand multiple factors identified by
the Health Belief Model theorized to impact HSBs including: models of addiction, barriers to health-seeking behavior, mental health status, and social support.

**Sampling:**

Subjects were selected from two clinic sites. The OEND clinics selected were ideal places for subject recruitment because of their collaborative relationship with the local syringe exchange program (SEP). A typical SEP and OEND visit entailed clients visiting the SEP to exchange their used, dirty needles and then proceeding to the OEND clinic to sign up for Naloxone. Clients received their Naloxone training and prescription in a private office adjacent to the SEP, which housed the OEND clinic.

**Recruitment:**

Phase 1 of the study recruited 235 subjects. The study enrollment goals were achieved quickly, with clients of the OEND clinic eager to participate. Subject recruitment occurred three days a week for six months between March and September (3/25/19 and 9/25/19). Clients eighteen years of age or older who walked into the OEND clinic and signed up for Naloxone were alerted to the possibility of participating in this project. Clients were recruited during unscheduled workdays (i.e., "off hours" rather than during the researcher’s OEND Tuesday/Thursday clinics days). Because common practice resulted in clients coming to the OEND clinic to receive Naloxone every day of the week, eliminating the Tuesday/Thursday clinic days did not affect recruitment.

Phase 2 of the study involved recruiting a subset of clients (n=61) from the more extensive Phase 1 sample (N=235). Recruitment efforts were designed to ensure maximum diversification of the sample and comparability to the Phase 1 sample.
In both phases, the study's purpose was explained in detail, voluntary participation was emphasized, and paid compensation was explained per the IRB protocol (see Appendix B – IRB19-00021). Clients who agreed to participate were required to sign an informed consent document, with all clients assigned a unique subject identifier. The ID was written on all questionnaires completed, and a master list of client names and IDs were stored on MetroHealth's RedCap database. Deviation from the self-administration of questionnaires occurred for three clients, two of whom neglected to bring their glasses and one who refused to complete the questionnaires unless it was read to him. In all three instances, participants were read not only the informed consent, but also the questionnaires.

Procedure:

Phase 1 Procedure: The study participants completed all surveys (see Chapter 4, Table 2 for a complete description of measures and variables obtained; see Appendix C for all Phase 1 questionnaires). First, clients completed the demographic questionnaire, which allowed for an examination of both demographic and psychological characteristics (mental health, addiction beliefs) identified by the Health Belief Model as influential on HSBs. Demographic data collected included gender, age, race, marital status, educational attainment, employment, and religious affiliation. Participants were also asked about their experiences with SUD services (services received, services needed, advice for provider) and the number of Naloxone kits received (proxy for OEND engagement). Second, psychological data included participant mental health, social support, and attitudes about SUD. Clients completed the PHQ-4 and the SSQ-6 to gather information on whether mental health factors (i.e., anxiety & depression) and social
support are related to their HSB. Finally, the Addiction Belief Inventory (ABI; Luke et al. 2002) was completed to identify attitudes and beliefs about opioid use and models of addiction (a full description of these instruments is provided in chapter 4).

It should be noted, none of the clients participating in this study reported any concerns or irritation about the use of the word addiction in the study measures and, in fact, often referred to themselves as addicts and junkies. This is particularly important to note because some of the questions asked used what might be considered stigmatizing language. As shown in Appendix C, the ABI scale consistently uses the terms addiction and addict throughout\(^1\). Although not ideal in that these terms are often perceived to be stigmatizing and offensive, the scale was employed to obtain standardized attitude and belief data that appear to influence substance use. As such, this study often refers to models of addiction and SUD because the questionnaires and surveys use this language, as do the study participants. Finally, clients were compensated $10.00 for their completion of the Phase one questionnaires.

**Phase 2 Procedure:** After completion of Phase 1, Phase 2 participants completed a semi-structured, open-ended interview (see table 3 for a complete description of the qualitative interview, descriptions of coding and variables obtained; see Appendix D for Phase 2 Interview). Interviews were designed to understand how models of addiction varied among clients and whether or not their beliefs affected decisions to utilize

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\(^1\) In the field of SUD research, that there has been a shift away from the term addiction toward the term substance use disorder. Although still a term with cultural validity, the term addiction is now understood to propagate stigma toward the individual suffering from SUD (Broyles et al., 2014). Although the terms abuser, abuse, addict, and addiction have been found to propagate stigma toward an individual who suffers from SUD, they are still valid cultural terms. They are often used by individuals who suffer from SUD as well as in reference to SUD etiology (i.e., the concept of models of addiction). Because of this, the term addiction is used intermittently throughout this study. However, it is not used in direct reference to study participants.
services. Interviews ranged from 45 minutes to an hour and a half and were comprised of 37 open-ended questions (24 addressed beliefs about SUD, 6 addressed utilization of the OEND clinic, 2 addressed experiences of stigmatization, and 5 addressed social support). Clients received $20 compensation for interviews.

**Phase 3 Procedure:** Finally, Phase 3 involved no formal subject enrollment but rather informal observations and field notes designed to examine contextual factors and characteristics relevant to the OEND sites (30 hours; see fieldwork assessment). During Phase 3, observations occurred at the individual level (i.e., client, staff), their interactions, and the systematic processes that might affect the OEND experiences. In addition to the everyday functioning of the OEND clinic and the interactions between staff and clients, the researcher observed variables identified by the Health Belief Model including: attitudes and beliefs about SUD, client mental health status, experiences of stigma, and social support. For an in-depth discussion about how observations and field notes help enhance the findings of phase 1 and phase 2, the reader should refer to Chapter 8.

In summary, all three phases of the study involved the assessment of an overlapping constructs identified by the Health Belief model as influential on HSBs. While phases 1, 2, and 3 differ methodologically (quantitative, qualitative, ethnographic observations), all three examine issues of attitudes and beliefs about SUD, psychological distress, and social support. Thus, this study presents a multimethod assessment of variables affecting clients’ HSBs.
Chapter 4: Measures and Coding of Quantitative and Qualitative Data

“You think about it constantly. It becomes the love of your life; you want it in your system because you don’t want to feel what you feel, and it’s just every…. it’s a horrible circle. Your mind constantly craves the drug.”

Study Participant CH9

Measures:

Phase 1 Surveys:

The four questionnaires administered in Phase 1 were as follows: the demographic questionnaire, descriptive data on SUD needs, the Patient Health Questionnaire 4 Item (PHQ-4; Kroenke, Spitzer, Williams, & Lowe, 2009), the Social Support Questionnaire-6 item (SSQ-6; Sarason, Sarason, Shearin, & Pierce, 1987), and the Addiction Belief Inventory (ABI; Luke, Ribisl, Walton, & Davidson, 2002). (see Table 2)

Table 2 Quantitative Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Purpose and Rationale</th>
<th>Outcome Variables</th>
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<td>Demographics</td>
<td>To characterize the participants in the sample</td>
<td>● Gender</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Age</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Race</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Marital status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Religion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Education</td>
</tr>
<tr>
<td>Descriptive Data on SUD needs</td>
<td>To determine how clients understood their SUD needs.</td>
<td>1. Important SUD services participants felt the needed SUD services.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. SUD services participants felt they did not need but were receiving SUD services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Advice participants would give to SUD service providers to improve SUD services</td>
</tr>
</tbody>
</table>
Demographic Variables (see Table 2). A demographic questionnaire was created for this study. Gender was recorded for male, female, male to female transgender, and female to male transgender. Age was recorded for all participants. Race was coded as follows: Caucasian, African American, Asian/Pacific Islander, Hispanic/Latino, American Indian/Native American, and other. Marital status was recorded as single, married, divorced, living as married, separated, and widowed. Clients indicated their employment as unemployed, employed (part-time), employed (full-time). Religion was
an open-ended question to allow for greater diversity of responses. Finally, clients indicated their education level as less than high school, high school diploma/GED, some college, college degree, and advanced degree.

Additionally, clients were further queried on SUD issues, including 1. important SUD services that clients are not receiving but that they felt they needed; 2. the SUD services that clients were receiving that they felt they did not need; 3. the advice clients would give providers to improve SUD services; and 4. number of Naloxone kits received (which served as a proxy of HSBs).

**Psychological Characteristics and Social Support Data.** Quantitative data on clients' mental health status and social support was addressed in the Patient Health Questionnaire-4 (PHQ4; Kroenke, Spitzer, Williams, Löwe, 2011) and the Social Support Questionnaire – 6 (SSQ-6; Sarason et al., 1987). The PHQ-4 is a four-item patient health questionnaire which assesses four different arenas of mental distress: 1. feeling nervous, anxious or on edge, 2. not being able to stop or control worrying, 3. feeling down depressed or hopeless, and 4. having little interest or pleasure in doing things. Patients rated each of the problems on a scale of 0 to 3, with 0 corresponding to not at all and 3 corresponding to nearly every day. The total distress score ranged from 0 to 12, with scores between 9-12 indicating severe distress, scores 6-8 indicating moderate distress, scores 3-5 indicating mild distress, and scores of 0-2 indicating normal levels of distress. Separate total scores were calculated for anxiety and depression. Scores of three or greater on the anxiety subscale and the depression subscale are indicative of psychological concern. Scores on PHQ4 were used to assess the psychological characteristics of individuals who utilized the OEND clinic.
The SSQ-6 was used to determine the breadth of and satisfaction with the social support clients received in their lives. Support was rated on a 6-point Likert scale, with 1 indicating very dissatisfied and 6 indicated very satisfied. The categories of support included: 1) who they count on to distract them from their worries, 2) who helps them feel relaxed, 3) who accepts them totally, 4) who they can count on to care for them, 5) who they can count on to help them feel better, and 6) who they can count on to console them. Two social support scores were calculated: the total number of support people and the average satisfaction rating of support.

**Coding of ABI Composite Data.** The Addiction Belief Inventory (ABI; Luke et al. 2002) addressed beliefs about opioid use and models of addiction. The 30-item ABI required clients to endorse traits on a 4-point Likert scale, with one indicating strongly disagree and four indicating strongly agree. Composite scores included inability to control (4Q), chronic disease (4Q), reliance on experts (3Q), responsibility for action (3Q), responsibility for recovery (3Q), genetic basis (3Q), coping (5Q), and moral weakness (5Q), (Luke et al., 2002). The range of total scores for each category was dependent on the number of questions included, with composite scores ranging from a low of 3 to a high of 20. Eight ABI standard composite scores were used in the initial analyses. (ABI, see Appendix C).

**New Scores from the ABI**

**New Composite Scores.** In addition to the standardly reported composite scores, 3 new ABI derived scores (total medical score, total moral score, and model difference score (Medical-Moral)) were constructed. It should be noted, Luke and colleagues (2002) had suggested that high scores on the ABI subscales of inability to control,
chronic disease, reliance on experts, and genetic basis could be reflective of adherence to a medical model of addiction (Total Medical Model Score). In contrast, high scores on the four remaining ABI subscales of responsibility for action, responsibility for recovery, coping, and moral weakness could reflect adherence to a moral model (Total Moral Model). Both of these scores (Medical & Moral Model) were calculated from the data and used in analyses, with scores ranging from 4 to 16 (low scores indicating less adherence and high scores indicating strong adherence to the model).

The ABI was used in a novel way in this study. A model difference score was created (Medical-Moral) which was used to categorize participants into an adherence group described below. The model difference score was calculated by subtracting the Moral Model composite score from the Medical Model composite score. Positive scores suggested clients endorsed the medical model. Middle ground scores (approximating zero) would be more reflective of a mixed model perspective. Finally, negative scores would be reflective of a moral perspective.

New Adherence Group. Finally, a new categorical variable entitled Adherence Group was created to ascertain whether study participants subscribed primarily to one model of addiction or whether they held contradictory beliefs (i.e., mixed model) about SUD and its etiology. In addition, this adherence group variable enabled the researcher to examine whether clients’ model(s) of addiction affected how treatment was both viewed and utilized. Assignment of clients to adherence group (medical, moral, and mixed) was done based on a statistical analysis of the data. Two approaches were undertaken: one dependent on standard deviation and the other based on percentile (upper/lower 25%). Unfortunately, when using the ± 1 SD approach, the three models'
sample size was relatively small (17% medical, 14% moral, and 69% mixed), so the quartile approach was employed. In the current sample, subjects with a positive difference score (medical composite - moral composite) greater than 1.25 were classified as holding a medical model (24%). Subjects with difference scores ranging between positive and negative 1.25 were assigned to the mixed model group (50%). Finally, participants with difference scores less than -1.25 were assigned to the moral model group (26%).

**Phase 2 Qualitative Interviews:**

To further explore what models of addiction OEND clients subscribed to, a semi-structured interview was developed and administered to participants. The interview comprised 37 open-ended questions: 24 of which addressed beliefs about SUD, 6 of which addressed utilization of the OEND clinic, 2 of which addressed experiences of stigmatization, and 5 of which addressed social support. Comparisons between the Phase 1 quantitative data and the Phase 2 qualitative data regarding models of addiction were conducted. One of the goals of this study was to determine whether the ABI's standardized responses yielded a similar story to open-ended interview responses.

Drawing on the 8 composite scores from the ABI (Inability to control, Chronic Disease, Reliance on Experts, Responsibility for Action, Responsibility for Recovery, Genetic Basis, Coping, & Moral Weakness), an open-ended interview was created as part of this study to allow participants to respond to and express attitudes about SUD in a more open, and reflective manner. For example, the quantitative rating of the ABI statement “addicts use because they cannot cope with life” was queried in the qualitative interview as follows “Some people feel that individuals use substances as coping
mechanisms to deal with bad situations, to lessen depression, or to feel better about themselves. In your experiences, do you think this is true? Why or why not?” All ABI questions were not converted into open-ended interview questions (see Table 2); however, an effort was made to develop interview questions that addressed all eight of the ABI composite scores.

In addition to examining the interviews for themes directly assessed by the ABI, thematic analysis was employed to assess both HSB and barriers to HSB. Motivation for program use was also assessed in the interview by explicitly asking questions about how often the client signed up for Naloxone, what motivated them to sign up, and how prepared they felt to administer Naloxone in an emergency. The interview also addressed barriers to the HSB utilization of the OEND clinic specifically. Clients were asked about individual experiences with stigma and whether these experiences influenced their decision to use the clinic. Clients were also asked to reflect on whether or not the stigma they experienced (perceived or self-inflicted) influenced how they thought about and understood their SUD.

Lastly, to better understand how social support impacts HSB and mental health, clients were queried about how their social support networks affected their HSB participation in the OEND clinic. Clients were asked whether or not they disclosed their OEND clinic use to others, whether their relationships impacted their willingness to utilized the OEND clinic (either positively or negatively), whether they felt supported in their journey to seek out Naloxone, and whether or not anyone used the OEND clinic on their behalf. All of the interviews were recorded and transcribed to allow for detailed coding.
Upon completion of transcription, interview documents were uploaded into the qualitative data analysis software NVivo. A thematic analysis was conducted to uncover patterns and themes from the interview data. Data were coded for ABI themes as well as: motivation for utilization of OEND clinic, barriers to program use, perceptions of preparedness to respond to an overdose, perceptions of the effectiveness of Naloxone, and perceptions of social support.

Themes were developed both deductively (utilizing the interview as a guide) and inductively (from repeated examination of interview data). The researcher read through each interview transcript three times to ensure both hypothesized themes and emergent themes were identified. The themes identified are listed in Table 4. All interviews were analyzed and coded for each identified theme. Upon completion of the first round of interview coding, the researcher revisited each interview taking an additional pass-through to ensure coding was complete. Once coding was complete, each theme was examined individually to determine its prevalence among the 61 coded interviews.
### TABLE 4: Qualitative Analysis

<table>
<thead>
<tr>
<th>Themes Identified</th>
<th>Codes utilized</th>
</tr>
</thead>
</table>
| 1. Individual beliefs about Models of addiction        | • Moral model  
|                                                       | • Disease model  
|                                                       | • Control of SUD  
|                                                       | • No control of SUD  
|                                                       | • Need for formal treatment  
|                                                       | • No need for formal treatment  
|                                                       | • Personal responsibility for recovery |
| 2. Motivation for OEND Clinic Utilization              | • Past trauma  
|                                                       | • Court-ordered  
|                                                       | • Referred by SEP  
|                                                       | • Fam/ Friend encouraged |
| 3. Barriers to Program Use                              | • Embarrassment  
|                                                       | • Stigma  
|                                                       | • Transportation  
|                                                       | • Lack of access  
|                                                       | • None |
| 4. Perceptions of Preparedness to respond to an Overdose| • Preparedness- Yes  
|                                                       | • Preparedness- No |
| 5. Perceptions of Effectiveness of Naloxone            | • Perceived effective  
|                                                       | • Perceived ineffective |
| 6. Experiences with Stigmatization of Drug Use          | • Perceived stigma  
|                                                       | • Medical provider stigma  
|                                                       | • Family friend stigma  
|                                                       | • Self-stigmatization  
|                                                       | • Impact stigma- Yes  
|                                                       | • Impact stigma- No |
| 7. Motivation for Drug use | • Coping  
|                           | • Fun  
|                           | • Interpersonal influence  
|                           | • Prescription opioids  
|                           | • Physical dependence  
|---------------------------|--------------------------- |
| 8. Perceptions of Social Support | • Perceived social support  
|                           | • Perceived lack of social support  
|                           | • Social support impact OEND clinic use  
|                           | • Social support NOT impact OEND clinic use  
|                           | • Social support needed  
|---------------------------|--------------------------- |
| 9. Miscellaneous | • Formal SUD Diagnosis (Yes)  
|                           | • Formal SUD Diagnosis (No)  
|                           | • Formal SUD Diagnosis (unsure)  
|                           | • OEND clinic Program advice  
|                           | • Personal risk for OD (Y)  
|                           | • Personal risk for OD (N)  

In summary, the qualitative data were used to help gain a better understanding of how OEND clients frame their SUD and whether models of addiction affect HSB. More specifically, participants' narratives addressed the following questions:

3. What insights do Interviews provide into Clients' Understanding of their SUD and their HSB?

3A: Do Clients Hold Distinct and Potentially Conflicting Models of Addiction?

3B: What are the Causes Underlying the SUD?

3C: How do the Interview Themes and Codes Enhance our Understanding of the Models?

3D: What does the Interview Tell us About stigmatization?

3E: What does the Interview Tell us About Social Support?
Phase 3: Field Observation

Phase 3 of this study did not involve formal client recruitment but rather participant observation. From an anthropological perspective, the third phase of the project is a critical part of research on the lived experience. During this phase of the study, the researcher was immersed in the client’s experience at the OEND clinic and came to fully appreciate both the challenges faced in managing SUD and the barriers encountered along the road to recovery. While observing the clients' lived experience surrounding OEND clinic utilization is important, observing OEND clinic staff and their interaction with the client is critical as well. Participant observation allowed the researcher to observe variables such as approximate time clients spend at an OEND clinic visit, how often clients requested referrals to SUD treatment, and whether there were any discrepancies between experiences reported in the in-depth interviews and actual interactions at the clinic.

Direct observations helped strengthen this ethnography by providing insight into client decisions to utilize the OEND clinic, which may not have been gleaned from interview data. For example, through field notes, the researcher documented observations of the clients’ experiences when receiving Naloxone. By observing clients of the OEND clinic and their interactions with clinic staff, the researcher was able to pick up on subtle “unintentional communication” (Raikhel, 2009) that occurred between clients and staff members. This included, but was not limited to, tone of voice, physical posture, gestures, and facial expressions. These nuances observed in client staff interactions cannot be captured through interview and questionnaire data alone. The
researcher’s presence at the OEND clinic was not novel or unusual to the clients or staff. Clients and staff were both comfortable with the researcher observing clinic interactions. The researcher documented both formal (client education and receiving of Naloxone) and informal (client and staff casual conversations) interactions.

During the OEND clinic observations, the researcher made concerted efforts to remain neutral and impartial to client staff interactions. At times, if staff were overwhelmed with the number of clients requesting Naloxone, the researcher had to step in to help train and distribute the medication to clients. This may be both a limitation and strength of the observational data. For example, serving clients during the observational data collection may have acted as a distraction to the researcher’s observational efforts, hindering the ability to sit back and observe client staff interactions. In contrast, the researcher’s ability to shift fluidly in and out of the actor and observer roles strengthened the observations by allowing the researcher to become immersed entirely in the client staff experience.

The timeline for the data collection for this study was eight months (see Table 5).

**Table 5: Timeline for Data Collection** (3/25/19 and 9/25/19).

<table>
<thead>
<tr>
<th>Phase 1: Recruitment for Quantitative Measures (N=300)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phase 2: Recruitment for Formal Qualitative Interviews (N=64)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phase 3: Informal Observation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
</table>
Research Feasibility:

This research was feasible largely due to the researcher’s employment at the OEND clinic prior to initiating this study. The researcher was uniquely positioned to forge a strong professional relationship with the OEND clinic program manager and the medical director, both of whom fully supported this research. This job allowed the researcher to obtain meaningful community-based clinical experiences while in graduate school and laid the foundation for the development of this research.

In terms of facilitating access to this project's client population, the researcher’s employment status was quite beneficial. The researcher’s employment at the clinic provided first-hand knowledge of the ins and outs of how the clinic operated, which locations were the busiest, the types and quality of relationships clients had with staff members, and the difficulties/barriers clients encountered accessing services.

Although employment at the OEND clinic proved to be beneficial to this study in many ways, it also created a potentially problematic power dynamic between the researcher and the study participants. Study participants were aware of the researcher's employment status at the OEND clinic. As such, study participants may have agreed to enroll in the study in an attempt to please the researcher, who they depended on for access to Naloxone. In an attempt to balance the power dynamic between researcher and subject, the researcher stressed the voluntary nature of study participation emphasizing that there would be no negative repercussions on program participation or Naloxone access if a client refused to enroll in the study.

Lastly it is important to discuss the researcher’s positionality. The researcher was a white, educated, young female who did not have a personal history of SUD. “Studying
the unfamiliar” gave the researcher many advantages in this study (Berger, 2015). First, because the researcher did not share in the experience of SUD, study participants were able to take on the role of SUD “experts” (Berger, 2015; Berger and Malkinson, 2000). Participants’ ability to take on an authoritative role in the discussion of SUD was one way to empower and embolden them to speak freely, creating an honest, authentic narrative. Furthermore, because the research did not have personal struggles with SUD, she was able to bring a different, novel viewpoint to the discussion of drug use and its causes.

Although not having a personal history with SUD benefited the research in some ways, it also meant that she could not fully understand study participants’ experiences and struggles. While some study participants may have taken the researcher’s inexperience with SUD as nonthreatening and a means for them to display their authoritative knowledge, others may have felt that her status as a white educated female made her unrelatable.
Chapter 5: Quantitative Data Analysis

“Honestly, every time I have used, I’ve cried because I know I’m feeling, and it’s like fighting my own demons constantly. I feel guilty even when I’m doing it; I’m not even enjoy it. It’s more like I don’t want to get sick, and here I am again doing the same stupid shit.”

Study Participant H36

Data Analysis Strategy

The data analysis strategy involved chi-square analysis for categorical variables (i.e., gender, race, marital status, education, occupation, and adherence group) and univariate/multivariate analysis of variance for continuous variables (i.e., age, number of kits, PHQ-4 (anxiety, depression, overall mental distress), SSQ-6 (breadth and satisfaction with social support), and ABI composite scores). As there was some concern that gender differences may emerge in HSBs, all analyses were conducted comparing males and females in this sample. All data analysis was presented using the research questions to organize the presentation of the data.

Data Analysis Outline:

This chapter answers the question **Who Engages in the Health Seeking Behavior Utilization of the OEND Clinic.** Section 1A, presents a complete description of the demographic data from the OEND sample. Section 1B, presents a description of the mental health (distress, anxiety, & depression) and the social support (number of supports & satisfaction). Finally, section 1C, presents descriptive data on SUD services (i.e., number of kits, needed service, unneeded services, & advice to service providers).

Addressing the first question: **Who Engages in the Health Seeking Behavior Utilization of the OEND Clinic** is critical for contextualizing the sample and ascertaining whether any contextual factors played a role in OEND clients' HSB.
In addition, this chapter addressed the second question “What Models of Addiction do Clients Hold? And Do Clients’ Model(s) of Addiction Affect OEND Clinic Utilization?” Section 2A, examines how clients understand their Addiction Belief. In section 2B, a newly created Model of Addiction variable was employed to examine whether clients adhere to a singular or mixed model of addiction. Finally, 2C addresses whether model of addiction is related to demographics, mental health, social support, and willingness to engage in the OEND clinic (HSBs).

Question 1: Who Engages in the Health Seeking Behavior Utilization of the OEND Clinic (see Table 6)?

1A: What are the Demographics of Clients who Use the OEND Clinic? Phase 1 of this study was designed to address the question “Who engages in the HSB utilization of the OEND clinic?” Chi-square analyses examined gender differences in the sample demographics. As can be seen in the table below, our males and female participants did not significantly differ in race, marital status, religion, education, and employment.

Table 6: Demographics of Phase 1 Sample

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ( \bar{x} ) (sd)</td>
<td>39.8 (12.2)</td>
<td>36.0 (9.5)</td>
<td>38.3 (11.4)</td>
</tr>
<tr>
<td>Caucasian n (%)</td>
<td>122 (85)</td>
<td>78 (85)</td>
<td>200 (85)</td>
</tr>
<tr>
<td>Marital Status Single n (%)</td>
<td>99 (69)</td>
<td>55 (60)</td>
<td>154 (65.5)</td>
</tr>
<tr>
<td>Religion n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>53 (37.1)</td>
<td>37 (40.3)</td>
<td>90 (38.3)</td>
</tr>
<tr>
<td>Other</td>
<td>10 (7.0)</td>
<td>9 (9.9)</td>
<td>19 (8.1)</td>
</tr>
<tr>
<td>None</td>
<td>80 (55.9)</td>
<td>46 (50.0)</td>
<td>126 (53.6)</td>
</tr>
<tr>
<td>Education n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than High School</td>
<td>24 (17.0)</td>
<td>23 (25.3)</td>
<td>47 (20.3)</td>
</tr>
<tr>
<td>High School Degree</td>
<td>76 (53.9)</td>
<td>32 (35.2)</td>
<td>108 (46.5)</td>
</tr>
<tr>
<td>Some College or Higher</td>
<td>41 (29.1)</td>
<td>36 (39.5)</td>
<td>77 (33.2)</td>
</tr>
</tbody>
</table>
In an effort to determine whether or males and females differed in terms of age, a univariate analysis of variance was conducted. A significant gender effect was obtained (F=1, 234) = 6.24 p<.01), with male participants older than female participants (males=40 years and females = 36 years; see Table 6). In summary, the majority of study participants were approximately 38 years of age, unemployed, Caucasian, non-religious, and male.

The study sample is consistent with the OEND clinic client population in some ways and not in other ways. The study sample is comparable in terms of age, but not racial or gender composition. A higher percentage of Caucasian (85%) males (61%) comprised the study sample as compared to the racial (65%) and gender (50%) distribution of the general OEND clinic clients.

1B: Mental Health Status and Perceived Social Support of OEND clients.

Another variable identified by the Health Belief Model that impacts HSBs are psychological characteristics. This study examined the mental health and social support of OEND clients. Study participants completed both the PHQ4 and SSQ6.

**PHQ:** Since gender differences play a prominent role in mental health disorders, it was retained as a factor in PHQ analyses from the outset. Three separate univariate analyses (depression, anxiety, and overall mental health) were conducted to examine differences as a function of gender (see Table 7). As hypothesized, significant gender effects were obtained. Females endorsed higher rates of anxiety, depression, and overall mental distress than did males, minimum F (1, 234) = 4.30 p<0.04. Despite the fact that

<table>
<thead>
<tr>
<th>Employment n (%)</th>
<th>Unemployed</th>
<th>Part Time</th>
<th>Full Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>97 (70.3)</td>
<td>18 (13.0)</td>
<td>23 (16.7)</td>
</tr>
<tr>
<td></td>
<td>66 (72.5)</td>
<td>12 (13.2)</td>
<td>13 (14.3)</td>
</tr>
<tr>
<td></td>
<td>163 (71.1)</td>
<td>30 (13.1)</td>
<td>36 (15.7)</td>
</tr>
</tbody>
</table>
females endorsed higher levels of mental health issues than males, all study participants endorsed significantly higher levels of anxiety, depression, and distress compared to the general population norms on this measure (Lowe et al., 2010).

**Table 7: Mental Health and Social Support Reported by Client**

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Females</th>
<th>F (1, 234)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHQ 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7.7 (3.7)</td>
<td>8.8 (3.2)</td>
<td>5.44 p&lt;0.01</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4.0 (1.9)</td>
<td>4.5 (1.7)</td>
<td>4.30 p&lt;0.05</td>
</tr>
<tr>
<td>Depression</td>
<td>3.7 (2.0)</td>
<td>4.3 (1.8)</td>
<td>4.48 p&lt;0.03</td>
</tr>
<tr>
<td><strong>SSQ6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>4.9 (1.3)</td>
<td>4.9 (1.3)</td>
<td>0.09 p&lt;0.76</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>2.5 (1.8)</td>
<td>2.9 (1.9)</td>
<td>2.60 p&lt;0.11</td>
</tr>
<tr>
<td># Support</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SSQ6:** To understand whether gender affected both satisfaction and breadth of social support (number of social support outlets), two separate univariate analyses examined differences between males and females (see Table 7). No significant gender differences were observed for breadth of social support, F (1, 234) = 2.60, p <0.11 or for satisfaction with social support, F (1, 234) = 0.09 p<0.76. That is, males and females were comparable in their reported number of social supports and satisfaction with social support. Males reported an average of 2.5 social support outlets and females reported an average of 2.9 social support outlets. Both males and females endorsed an average rating of 4.9 out of 6 in terms of satisfaction with social support. While participants reported being highly satisfied with the social support they received, their breadth (number of people they can rely on) of social support was somewhat limited (2.5).

Taken together, the mental health and social support data revealed that clients who make use of the OEND clinic are highly distressed, anxious, and depressed compared to the general population. Additionally, while they are satisfied with the social
support they receive from people in their lives, the social support people available are somewhat limited in number.

1C: Data from Clients on Utilization of SUD Services. Feedback on substance use disorder services was also collected in Phase 1. Data collected including 1. Number of Naloxone kits received, 2. Services not received, 3. Advice given to medical professionals to improve SUD services, and 4. Services received for their SUD but not needed.

Table 8: Feedback on SUD services and Number of Kits Used

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>F</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># kits n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>46 (34.6)</td>
<td>28 (33.7)</td>
<td>74 (34.3)</td>
</tr>
<tr>
<td>2</td>
<td>20 (15.0)</td>
<td>16 (19.3)</td>
<td>36 (16.7)</td>
</tr>
<tr>
<td>3</td>
<td>19 (14.3)</td>
<td>17 (20.5)</td>
<td>36 (16.7)</td>
</tr>
<tr>
<td>4</td>
<td>7 (5.3)</td>
<td>8 (9.6)</td>
<td>15 (6.9)</td>
</tr>
<tr>
<td>5</td>
<td>5 (3.8)</td>
<td>6 (7.2)</td>
<td>11 (5.1)</td>
</tr>
<tr>
<td>6-15</td>
<td>25 (18.8)</td>
<td>4 (4.8)</td>
<td>29 (13.5)</td>
</tr>
<tr>
<td>16-50</td>
<td>10 (7.6)</td>
<td>4 (4.8)</td>
<td>14 (6.5)</td>
</tr>
<tr>
<td># not received n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>16 (11.3)</td>
<td>17 (18.5)</td>
<td>33 (14.1)</td>
</tr>
<tr>
<td>1</td>
<td>102 (71.8)</td>
<td>46 (50.0)</td>
<td>148 (63.2)</td>
</tr>
<tr>
<td>2</td>
<td>20 (14.1)</td>
<td>22 (23.9)</td>
<td>42 (17.9)</td>
</tr>
<tr>
<td>3</td>
<td>3 (2.1)</td>
<td>6 (6.5)</td>
<td>9 (3.8)</td>
</tr>
<tr>
<td>4</td>
<td>1 (0.7)</td>
<td>1 (1.1)</td>
<td>2 (0.9)</td>
</tr>
<tr>
<td>Advice given n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>34 (23.9)</td>
<td>20 (21.7)</td>
<td>54 (23.1)</td>
</tr>
<tr>
<td>1</td>
<td>91 (64.1)</td>
<td>54 (58.7)</td>
<td>145 (62.0)</td>
</tr>
<tr>
<td>2</td>
<td>14 (9.9)</td>
<td>14 (15.2)</td>
<td>28 (12.0)</td>
</tr>
<tr>
<td>3</td>
<td>0 (0.0)</td>
<td>3 (3.3)</td>
<td>3 (1.3)</td>
</tr>
<tr>
<td>4+</td>
<td>3 (2.1)</td>
<td>1 (1.1)</td>
<td>4 (1.7)</td>
</tr>
<tr>
<td># receiving but don’t need n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>124 (87.3)</td>
<td>84 (91.3)</td>
<td>208 (88.9)</td>
</tr>
<tr>
<td>1</td>
<td>17 (12.0)</td>
<td>8 (8.7)</td>
<td>25 (10.7)</td>
</tr>
<tr>
<td>2</td>
<td>1 (0.7)</td>
<td>0 (0.0)</td>
<td>1 (0.4)</td>
</tr>
</tbody>
</table>

Analysis of variance revealed no gender differences in the number of Naloxone kits receive, p>0.89. Clients received an average of four Naloxone kits. The mean
number (4) of Naloxone kits is quite misleading in this sample due to the great variability of kits requested by program participants. An examination of the frequency distribution revealed that the majority of this sample (75%, n=162) received four or fewer Naloxone kits, consistent with our mean. Moreover, a third of the sample received only one kit and 25% received more than four (range of 5 to 50) kits.

Seventy-five percent of the clients made recommendations about ways to improve SUD service with 25% making no recommendations. Client recommendations for SUD service improvement included: better access to treatment services (43%, n=77), better emotional/social support services (27%, n=48), greater efforts at destigmatizing SUD (8%, n=15), and better mental health care services (6%, n=10), with 16% (n=29) of participants reporting that improvement of SUD treatment services was not feasible. Gender was not a significant factor influencing the recommendations given to medical providers for improvement of SUD services.

The majority of the OEND clients (86%, n=201) indicated that they needed additional services to treat their SUD. Of the total study population, 62.5% (n=147) indicated needing at least one additional service, 23% (n=54) indicated needing at least two additional services, and 14.5% (n=34) indicated they were receiving all the services they needed. The most requested services included increased access to SUD treatment services (54%, n=109: i.e., Medication Assisted Treatment, inpatient, outpatient, rehabilitation), support services (17%, n=43: i.e., housing support, transportation, legal help, food stamps), general mental health services (16%, n=32), general physical health services (10%, n=20), and motivation to seek help (1.5%, n=3). These data lend further credence to the pressing need for additional services that OEND clients have to combat
SUD. As expected, significant gender effects for the number of services not received emerged, ($\chi^2 (4) = 12.18 \ p<0.02$). Female clinic clients were both more inclined to be satisfied and less satisfied than their male counterparts with the SUD services received (see Table 8).

As a whole, 88% (n=207) of the clients reported that all the SUD services they were receiving were needed. Only, 12% (n=28) of the clients indicated they were receiving one service that was not necessary. Unnecessary services included: general medical treatment (n=3), SUD treatment services (n=20: MAT, inpatient, IOP, detox), support services (n=3), and mental health treatment (n=2) (see Table 8). Taken together, these findings suggest OEND clients need additional services to treat their SUD.

In summary, the quantitative data from Phase 1 provides a clear answer to the question **Who Engages in the Health Seeking Behavior Utilization of the OEND Clinic?** The majority of clients engaging in the HSB of the OEND clinic were 38-year-old males who were unemployed, Caucasian, and non-religious. Compared to the general population, they were highly distressed, anxious, and depressed, with females more so than males. While quite satisfied with the social support they received from people in their lives, the number of social support people in the clients’ life was somewhat limited. On average, clients had used four Naloxone kits. The majority of clients made recommendations about how to improve SUD services and thought that the services they were receiving were necessary for their SUD recovery.

**Question 2:** “What Models of Addiction do Clients Hold?"

2 A. Clients’ Addiction Beliefs: Drawing on the data from the Addiction Belief Inventory (ABI), a multivariate analysis of variance was conducted on the eight
composite scores from the ABI (inability to control, chronic disease, reliance on experts, genetic basis, responsibility for actions, responsibility for recovery, coping, and moral weakness) with gender as the between-subject factor. An overall significant multivariate effect for gender was obtained $F (8, 225) = 2.63$ $p<0.01$. Follow-up univariate analyses revealed significant gender effects for chronic disease, reliance on experts, responsibility for recovery, and coping, minimum $F (1, 234) = 3.7$ $P<0.05$. As shown in Table 9, females perceived their SUD to be a more chronic disease, were more likely to rely on experts, felt more responsibility for their recovery, and were more inclined to use drugs for coping than were males in the current sample. In addition, the pattern of adherence across the eight composite scores was quite similar for males and females, with both genders endorsing responsibility for recovery the most and genetics the least. Average sample composite scores were higher than the scale mean of 2.0, suggesting that as a whole, the OEND clients endorsed higher than average addiction beliefs.

Table 9: ABI Composite Scores

<table>
<thead>
<tr>
<th></th>
<th>Male (n=143)</th>
<th>Female (n=91)</th>
<th>F (1, 234)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical Model $\bar{x}$ (sd)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>11.70 (2.00)</td>
<td>12.54 (2.11)</td>
<td>9.25, $p&lt;.001$</td>
</tr>
<tr>
<td>Inability to control</td>
<td>2.72 (0.99)</td>
<td>2.81 (1.06)</td>
<td>0.48 $p&lt;0.49$</td>
</tr>
<tr>
<td>Chronic</td>
<td>3.17 (0.80)</td>
<td>3.37 (0.73)</td>
<td>3.70 $p&lt;0.05$</td>
</tr>
<tr>
<td>Reliance</td>
<td>2.93 (0.84)</td>
<td>3.17 (0.86)</td>
<td>4.67 $p&lt;0.03$</td>
</tr>
<tr>
<td>Genetic</td>
<td>2.39 (0.78)</td>
<td>2.55 (0.86)</td>
<td>2.25 $p&lt;0.13$</td>
</tr>
<tr>
<td><strong>Moral Model $\bar{x}$ (sd)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>11.91 (1.73)</td>
<td>12.46 (1.54)</td>
<td>6.06, $p&lt;.02$</td>
</tr>
<tr>
<td>Actions</td>
<td>2.66 (0.82)</td>
<td>2.60 (0.92)</td>
<td>0.34 $p&lt;0.56$</td>
</tr>
<tr>
<td>Recovery</td>
<td>3.34 (0.79)</td>
<td>3.57 (0.68)</td>
<td>5.14 $p&lt;0.02$</td>
</tr>
<tr>
<td>Coping</td>
<td>2.99 (0.72)</td>
<td>3.35 (0.66)</td>
<td>14.29 $p&lt;0.01$</td>
</tr>
<tr>
<td>Weakness</td>
<td>2.57 (0.60)</td>
<td>2.53 (0.69)</td>
<td>0.22 $p&lt;0.64$</td>
</tr>
</tbody>
</table>
2B: Do Clients Adhere to a Single Model of Addiction? The novel twist in this study was how the ABI measure was used to determine whether OEND clients endorsed one model of addiction to the exclusion of others. Two new composite scores were generated from the ABI measure. The **medical model composite** score was created by summing the ratings on the following composite scores: inability to control, chronic disease, reliance on experts, and genetic basis. The **moral model composite** score was created by summing the ratings on the following composites' ratings: responsibility for actions, responsibility for recovery, coping, and moral weakness. Scores from these new composites ranged from 4 to 16, with low scores indicating less adherence to the model and high scores indicating strong adherence to the model (see Table 9). The overall multivariate analysis of two modal composite scores revealed a significant gender effect, $F (1,231) = 5.61 \ p<0.01$, with both univariate analysis significant as well, minimum $F (1,234) = 6.06 \ p<0.01$. Females endorsed higher adherence to both the medical and moral models of addiction than their male counterparts (see Table 9).

To examine individual differences in model adherence among study participants, clinics patients were assigned to either the moral group, the medical group, or a combined group based on their medical and moral ABI composite scores. Based on a frequency analysis, subjects with a positive difference score (medical composite- moral composite) greater than 1.25 were classified as holding a medical model. Subjects with difference scores ranging between positive and negative 1.25 were assigned to the mixed model group. Finally, participants with difference scores less than -1.25 were assigned to the moral model group. Chi-square analysis revealed no significant gender differences in addiction model group assignment (see Table 10). In our sample, 24% (Male=32;
Female= 25) were assigned to the medical model group, 50% (Male=70; Female=46) were assigned to the mixed group, and 26% (Male=41; Female=20) were assigned to the moral model.

Table 10: Gender Differences in Models of Addiction

<table>
<thead>
<tr>
<th></th>
<th>Males (n=143)</th>
<th>Females (n=91)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Model n (%)</td>
<td>32 (22.4)</td>
<td>25 (27.5)</td>
<td>57 (24.4)</td>
</tr>
<tr>
<td>Mixed Model n (%)</td>
<td>70 (49.0)</td>
<td>46 (50.5)</td>
<td>116 (49.6)</td>
</tr>
<tr>
<td>Moral Model n (%)</td>
<td>41 (28.7)</td>
<td>20 (22.0)</td>
<td>61 (26.1)</td>
</tr>
</tbody>
</table>

2C: Does Clients’ Model(s) of Addiction Affect OEND Clinic Utilization?

Given that one of the primary research questions was whether or not adherence to a particular model of addiction impacted health-seeking behaviors, individual difference analyses were conducted with adherence group (Medical, Moral, & Mixed) as the between-subject variable. In other words, did the three adherence groups differ in the following variables: 1. Number of Naloxone kits received 2. Recommendations for medical professionals to improve SUD services, 3. Services they are receiving but feel are unnecessary for their SUD, and 4. any SUD services they need but are currently not receiving.

The multivariate analysis of adherence group differences in the number of Naloxone kits received, satisfaction with social support, breadth of social support, number of services received but don’t need, and recommendations offered for improvement of services was non-significant (see Table 11). Adherence group model did
affect depression, anxiety, overall mental distress, and number of SUD service participants were not receiving. Participants who endorsed the medical model of addiction were more anxious, more depressed, and more distressed than clients who adhered to a mixed or moral model of addiction. In addition, clients who adhered to a moral model of addiction were significantly more inclined to indicate they were not receiving enough services compared to those who endorsed a mixed or medical model of addiction (see Table 1).

Table 11: Does Model of Addiction Affect Mental Health, Social Support, or Use of SUD Services

<table>
<thead>
<tr>
<th></th>
<th>Medical</th>
<th>Mixed</th>
<th>Moral</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>4.64 (1.76)</td>
<td>3.87 (1.95)</td>
<td>3.41 (1.98)</td>
<td>6.07 p&lt;0.01</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4.78 (1.59)</td>
<td>4.09 (1.91)</td>
<td>3.90 (1.93)</td>
<td>3.66 p&lt;0.03</td>
</tr>
<tr>
<td>Total</td>
<td>9.38 (3.02)</td>
<td>7.94 (3.60)</td>
<td>7.31 (3.60)</td>
<td>5.44 p&lt;0.01</td>
</tr>
<tr>
<td>Social Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average satisfaction</td>
<td>4.84 (1.41)</td>
<td>4.81 (1.29)</td>
<td>5.18 (1.05)</td>
<td>1.48 p&lt;0.23</td>
</tr>
<tr>
<td>Average number</td>
<td>2.86 (1.92)</td>
<td>2.55 (1.76)</td>
<td>2.60 (1.95)</td>
<td>0.42 p&lt;0.66</td>
</tr>
<tr>
<td>Number Naloxone Kits</td>
<td>3.88 (4.51)</td>
<td>5.31 (7.97)</td>
<td>3.87 (4.76)</td>
<td>1.29 p&lt;0.28</td>
</tr>
<tr>
<td>Number Recommendations</td>
<td>1.23 (1.35)</td>
<td>1.00 (1.30)</td>
<td>1.00 (0.74)</td>
<td>0.98 p&lt; 0.38</td>
</tr>
<tr>
<td>Given</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Services Don’t</td>
<td>0.16 (0.37)</td>
<td>0.11 (0.35)</td>
<td>0.08 (0.28)</td>
<td>0.77 p&lt;0.47</td>
</tr>
<tr>
<td>Need</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Services Not</td>
<td>1.19 (0.72)</td>
<td>1.01 (0.63)</td>
<td>1.34 (0.87)</td>
<td>4.51 p&lt;0.01</td>
</tr>
<tr>
<td>Receiving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion of the Quantitative Data. The Phase 1 findings from this study are important for several reasons. First, these results highlight the important relationship between SUD and mental health problems. All OEND clients who participated in this research study endorsed high levels of anxiety, depression, and overall mental distress as compared to the general public (Lowe et al., 2010). Research has shown that untreated mental distress can lead to increased rates of treatment avoidance; a problem which is
quite common among those who suffer from SUD (Henderson, Evans-Lacko, & Thornicroft, 2013). Understanding the OEND clinic clients’ mental health status is imperative for increasing their HSB not only for SUD services, but also for the supplementary medical treatment they might need.

Second, while the expected gender difference in mental health problems (i.e., females more stressed and depressed than males) was obtained, the extraordinary rate of mental health problems for the male clients at the OEND clinic is something that warrants clinical attention (Lowe et al., 2010). Health care providers should pay closer attention to all clients' mental health issues, regardless of gender, as mental health problems place clients at increased risk for SUD and relapse. Mental health conditions like depression and anxiety appear to make clients more vulnerable to their drug use's harmful effects because the presence of mental health problems often creates a roadblock or impediment to seeking the care clients desperately need (Komiya, Good, & Sherrod, 2000; Lindinger-Sternart, 2014).

A third point of note in these data concerns the racial composition of this sample and its impact on HSBs. Of the OEND clinic clients who participated in this study, 61% identified as male, and 39% identified as female. Eighty-five percent of all participants identified as Caucasian. This sample demographic finding is striking for two reasons. One, it is not representative of the county demographics as a whole (64% Caucasian). Two, it is not representative of the city of Cleveland’s demographics (33% Caucasian and 67% Minority; Census.gov) where the OEND clinic resides. This finding may suggest that Caucasian males participating in this study do not feel comfortable seeking SUD
treatment in the neighborhoods in which they reside or with their primary health care provider.

The quantitative data from the ABI added some clarity to the second question about whether models of addiction influence client’s decisions to engage in HSB. Clients at the OEND clinic endorsed a variety (i.e., medical, moral, and mixed) of models of addiction as they came to understand their SUD. In addition, all clients endorsed personal responsibility as an important causative agent in their SUD and placed less emphasis on genetics. Gender differences emerged, with women needing more support from experts, using drugs more for coping, and feeling more responsible for their SUD than males. Contrary to this study’s prediction, Adherence Group (i.e., which model of addiction clients ascribed too) appeared to have little effect on OEND utilization but was related to mental health outcomes. Clients who identified with the medical model of addiction were more distressed, anxious, and depressed than clients who identified with the mixed and moral model. Clients who believe their SUD's etiology is outside their control and in the medical community's hands may feel a lack of agency that complicates their mental health issues (i.e., learned helplessness). That said, there are still many unanswered questions remaining after examining the quantitative data. While the quantitative data provides answers to our first two questions, they fail to provide clear insight into why the OEND clients are distressed. In Chapter 6, qualitative findings based on clients’ narrative accounts of their models of addiction are presented.
Chapter 6 Qualitative Data

“You don’t just catch a disease by picking something: you know what I mean. It starts off as a voluntary choice, but there’s many times I’ve gone to the dope man crying because I didn’t want to get high, but I knew I was going to get high.”

Study Participant CH21

Phase 2 data were collected via a semi-structured interview (see Appendix D) and was analyzed using thematic analysis and coding (see Table 4). By way of reminder, the NVivo 12 software was used for thematic coding and analysis, allowing for the identification and organization of salient and repeated themes that emerged in the interviews with the clients.

Of specific interest to this investigation were ABI themes and variables identified at influential on HSB by the Health Belief Model (Rosenstock et al., 1998). More specifically, narratives coded for clients’ model(s) of addiction, stigma experience, social support received, motivators and barriers to program utilization, and perceived susceptibility to overdose.

Question 3: What insights do qualitative interviews provide into client’s understanding of their SUD and their HSB?

3A: Do Clients Hold Distinct and Potentially Conflicting Models of Addiction?

![Figure 3 Models of Addiction: Single Question Approach](image)
As can be seen in figure 3, when specifically asked, “Do you believe drug abuse is a disease, why or why not? The preponderance of clients reported believing their SUD was a disease adhering strongly to the Medical Model. Sample clients’ statements supporting the medical model of addiction include:

“Yes, I do. Because, and we’re only speaking about my belief, because of what it does to me, my belief is that it does like a cancer, it eats you. And it destroys. I also believe it’s contagious.” (Client CH12)

“Absolutely, because it’s like any other disease. It’s eats you away. It eats your life away and tears you apart like any other disease like an infection. It’s hard to get rid of.” (Client H4)

3B: What are the Causes Underlying SUD?

![Bar chart showing the causes of SUD]

Figure 4 Causes of SUD

As can be seen in Figure 4, many clients understood their SUD from a medical perspective, although, their understandings and conceptualizations of the causes of their SUD were not uniform. The three reported primary causes of their SUD included: 1. the brain chemistry underlying SUD, 2. the behavioral control underlying SUD, and 3. the genetics underlying SUD, with clinically useful dimensions highlighted below. Thus, the qualitative interview data added to our understanding about models of addiction and the diversity of etiological beliefs. The interview data revealed the belief that not only is
SUD a disease that warrants medical attention, but that clients have diverse perspectives on how the disease operates and should be best addressed by treatment. Sample clients’ statements were selected to highlight the diversity of beliefs, causes, and treatments held by clients.

**SUD as a Brain Disease.** The idea that SUD affects an individual’s brain was mentioned in many of the interviews. Some of the participants went so far as to discuss how their substance use affected their brains' neurotransmitters and neural pathways. For example, one client stated that substance abuse is:

“Routed in your neurotransmitters and [in order to achieve sobriety] you just have to reroute them, and that takes time.” (Client CH 58)

Several other participants were less specific about brain physiology but still acknowledged that changes in their brains might be occurring as a function of their SUD. They contended their brain function was no longer “normal” but could not identify how their brain changed from a medical perspective. Although many clients acknowledged their SUD was a disease, it was surprising to hear many clients simultaneously speak about their SUD in a derogatory and self-stigmatizing tone reporting that drug use made them weak and worthless. Contending their SUD was indeed a disease, one participant went on to explain it as follows:

“I think it messes with the chemicals in your brain. I think it’s like addictive. I don’t know; I don’t know medical terms and stuff. I think it is a disease. It’s overpowering your thinking, your thoughts, your physical. I think it is a disease because it makes you weak, sick.” (Client CH46)

**SUD as a Mental Health Problem.** Not only did the OEND clients widely endorse the medical model and its focus on brain science as a means for understanding their SUD, but the interviews also revealed that some clients focused on mental health
rather than brain chemistry as an explanatory factor. By way of illustration, when asked about their beliefs about SUD as a disease, one study participant stated:

“The I do. I think it’s a mental disorder. I think things happen to one’s brain and thought process. Yes, I do believe it’s a mental disorder and should be treated as a mental disorder with psychiatric meds.” (Client H8)

Another stated:

“The mind is broken, and once you pick up and once you put it into your system, your brain doesn’t think normally, your brain doesn’t react normally, so I believe that it is a disease. I would say mental health is a disease.” (Client CH9)

**SUD as a Behavioral Control Problem.** In many instances, clients quickly acknowledged the important role that behavioral control can have on a person’s mental/physical health, especially when grappling with SUD. The concept of control emerged in client interviews in two ways. First, a subset of clients felt that their disease could be personally controlled, whereas others felt like they had no control over their drug use. One participant even compared their drug use to the lighting of a fuse, where once lit, they would lose control because their brains are not wired the same way as a “normal” person. Control, both the exercising of and loss of, was a concept regularly discussed by study participants, with control being the key ingredient necessary to achieve recovery from their SUD. For example, when discussing SUD as a disease, one participant noted:

“I feel like it’s like wired in your head. I don’t know... I do believe it’s a disease just because... I feel like I can’t stop. The disease is not able to be cured, but it’s able to be controlled.” (Client CH47)

In the interviews, study participants who subscribed to a medical model of addiction spoke of their helplessness in the face of their SUD. They felt strongly about their lack of control but simultaneously recognized the need for control if there was any
hope of recovery. To illustrate the sense of complete lack of self-control, one of the participants stated:

“I didn’t choose the drugs; the drugs chose me” (Client H33).

**SUD as an all-Consuming Disease.** From the interviews, it was clear that drug use consumed participants’ lives. From the moment clients woke up until they went to sleep, their primary mission was to maintain “wellness.” This wellness goal was synonymous with avoiding withdrawal, only accomplished by using opioids. Participants described their SUD as an evil, all-powerful spirit/force that took hold and consumed their being, altering their thoughts, behaviors, emotions and destroying their everyday lives. One participant’s response perfectly captures the pervasive nature of the disease.

“You know I have cancer, and that’s a disease, and they tell me it [drug use] is [a disease] because I can’t control it. Once it enters your body, it controls you. It decides where it’s going. That’s kind of how drugs are. They enter your body and grab control. It’s a disease of our mind for thinking. I don’t think like an average person who doesn’t use drugs because my wiring is different. I think like based upon motive and opportunity [to get drugs]. I try to remain a good person, but I have to think about... it’s just about all drugs. It’s like your brain is on this tape recorder drug, drug, drug, drug, drug, and you have to change that.” (Client H34)

**SUD Necessitates Comprehensive Treatment for Recovery.** Not only did clients speak about their inability to control drug use, arguing they were powerless over their addiction, but they also contended that their lack of self-control would doom them to failure without better access to medical and social support treatments on their road to recovery. Interviews made it clear that most clients believed they needed help from others (medical, family, & friends) to solve their drug use problems, with little confidence that they could solve their drug use problem alone. One participant reflected
this learned helplessness stance regarding their ability to overcome and combat their drug addiction.

“The same mind that created the problem can’t fix it- so if you are sitting there thinking you have some type of control, I don’t know, the same mind that created the problem is not going to fix it. That is the best way I can describe it.” (Client CH45)

**SUD as Genetic.** Another explanation offered by many participants suggested their SUD was inherited or passed on through the genes. Respondents frequently cited that other family members suffered from SUD (although not necessarily opioid use) and felt strongly that family history predisposed them to develop their SUD. When talking about SUD as an illness, many of the clients spoke to the genetic nature of their SUD as a fait accompli.

“Yes, I think it’s a disease. I think it’s a hereditary disease. Everybody on my mom’s side of the family... they’re just like normal people. Everybody on my dad’s side is like maniacs. Drugs. Where the hell did you meet him, mom? I mean like, geez, thanks. Yeah, I think it’s hereditary, and it’s passed down.” (Client CH45)

Another stated:

“My mother’s side of the family all have some sort of problem with alcohol or drugs. I do believe part of that is it is in your genes, it is. That’s my belief.” (Client, CH49)

Interestingly, several clients acknowledged the possibility of being addicted to substances from birth. In other words, many clients were astutely aware that opioid use during pregnancy by their mother could predispose them to drug use later in life.

**MORAL MODEL.** Although 79% of interview participants reported they believed their SUD was a disease, 11.4% (n=7) participants reported believing their SUD was due to a moral failing, personal weakness, or character flaw rather than a disease. In terms of the moral model of SUD, participants conceptualized their drug use behaviors in
two main ways: either as a result of individual bad choices made or as a personal weakness. There were many examples of self-stigmatization that appear at the heart of participants choice-based SUD narratives. For example, both choice and personal weakness were revealed in this participant’s response:

“I just don’t think it’s a disease. I don’t know; I think it’s a choice. I think it’s a series of bad choices, so that’s why I don’t think it’s a disease. I never have. I just don’t think people are predisposed to it. I think it’s something I can control. I think I’ve just failed.” (Client CH10)

That same participant adamantly opposed the idea of SUD as a disease and stated:

“I never have [thought of SUD as a disease]. I think I’m weak. Being weak about it- if I man up and do it, I can maybe get it done.” (Client CH10)

Another participant expressed anger about people conceptualizing SUD as a disease. More specifically, the client expressed frustration over a disease explanation because he felt that it allowed people to rationalize drug use as an acceptable behavioral response. The participant stated:

“Oh, it’s a disease? It’s ok? No. It’s not ok; it’s on you. You know you’re the one making the choice. You know you’re the one doing whatever it takes [to get high] you know so, that’s kind of how I feel about that.” (Client CH18)

Clients who opposed the disease model (although few in the qualitative portion of the study) spoke out passionately about why they felt that the use of opioids should not be classified as a disease. For example, when asked if they felt their SUD was a disease, one participant noted:

“You know I used to. Now, not so much. I think it’s more a lack of will power and just laziness. So, yea, it’s just will power, it’s not a disease” (Client H25)

Another client stated:

“I just don’t think it was a disease. I don’t know... I think I made a choice. I think it’s a series of bad choices. That’s what I think. I don’t think it’s a disease.”
As can be seen from the client quote, one compelling reason clients could not agree with the disease model stems from their inability to place SUD in the same context as other diseases. Clients often did not recognize the role poor decision-making and life choices play in other disease states. Clients found it hard to endorse a belief that argues illness may arise because of bad behavioral choices (i.e., consuming fatty foods often results in heart disease, misuse of drugs causes SUD/overdose). This is quite surprising since many adult illnesses and hospitalizations are caused by or can be exacerbated by poor behavioral choices (i.e., drug use, drinking, smoking, poor diet; Syddal et al., 2015). Nonetheless, these interview responses point out the difficulty some clients have with accepting and classifying SUD as illness. For example, when asked if they felt that SUD was a disease, one participant stated:

“Not in particular, no. I believe it starts with the choices you make. Nobody made us pick up that pill, or pick up that drug and snort it, or shoot it in our veins; we made that choice. A disease you don’t have a choice from, you either have a disease, or you don’t have a disease. You don’t wake up and say you want cancer today. You know what I mean? It’s the same thing; that’s what I’m getting at. You didn’t wake up and say, I want to be addicted today, but through the choices you made, it did lead you to have an addiction. I think once it grabs a hold of you, it becomes an issue, and it becomes a force of habit type deal. It’s breaking the habit, finding alternative methods to get rid of the things you’re experiencing and the things that are making you use.” (Client CH37)

One respondent even harshly suggested that the responsibility for SUD resides in bad decision-making, and it is ultimately the client’s responsibility to change their life course. Blame, self-stigmatization, and lack of empathy can be seen in the two short, simple statements below, with one client stressing individual culpability by saying:

“I think everybody is responsible for their own destiny, period. It’s that simple if you want a better life, then make better choices.” (Client H12)
And another detailing the negative feelings individuals with SUD often feel:

“*We’re filled with anger; we’re filled with shame, we’re filled with doubt, we’re filled with self-pity, you know all of those emotions....*” (Client CH9)

While few participants outright classified their drug use as a moral failing (as compared to an illness), all participants adhering to the moral model of addiction tended to believe they had control over their drug use behaviors and simply needed to make the decision (i.e., a choice) to quit using drugs. These two elements of behavioral control and proactive choice emerged in the interview with clients who endorsed medical model adherence, with both factors perceived by all clients as necessary conditions for their recovery. A majority of study participants, regardless of what model of addiction they subscribed to, discussed the need to “be ready” to take the steps necessary to quit or that it was necessary to “want to quit” before recovery could be achieved.

**MIXED MODEL.** Finally, while 79% of interview participants endorsed the medical model and 11% endorsed a moral model, only 10% of respondents indicated mixed feelings to the question of whether SUD was a disease. The quote below demonstrates clearly how some client views their SUD as both a moral failing and categorizes it as a disease. Specifically, this client suggests that their SUD affected both the brain and the decision-making process.

“It [SUD] is a weakness because once you start the drug and you like it so much even though you know what it does to you, you’ve got a weak side to you, and your brain is telling you what to do. Your brain is used to doing drugs and doesn’t operate the same without it. When you’re sober, your brain works right. It doesn’t make you do things like when you’re on drugs.” (Client H22)

Another client displayed their uncertainty about the causes of their SUD by stating:
“I mean, I made the choice to do the junk initially, but when that imaginary line is crossed, and I went from refusing to use to my brain can only think to use, it’s over. It’s not like I’ll eat this apple instead of these chips. It’s not like that. I can’t explain it. It’s like this internal... I don’t have control. That drug has control as long as that drug is sitting there, and I know it’s there and it’s accessible to me. Once I put it in my body, it’s over with...” (Client H34)

Clients’ indecision about how to classify their drug use is clearly articulated in one participant’s response when they said:

“At the time, I thought I was weak to the drug, but when I learned I had a disease, it made it much easier to accept than to sit back and say I’m weak. If we went out to a party and there was drinking... I can’t be around alcohol, whereas you can be... I guess sometimes I look at it like I’m weak-minded. But when you sit back, go to meetings, and listen to people in recovery, they don’t make you believe you’re weak-minded... just that you have a problem and you can’t be around that type of stuff. It’s a disease; you’re not weak. I kind of go with both. Sometimes I still feel like I’m weak and wish I could be strong.” (Client H23)

Using the qualitative data to answer the question “Do Clients Hold Distinct and Potentially Conflicting Models of Addiction?” a resounding yes would be answered.

Nonetheless, the majority of the OEND clients endorsed the medical model of addiction. Despite adhering to a singular model, these clients were not homogenous in their understanding of the causes for their SUD. Their heterogeneous understanding can be boiled down to three main causes contributing to the disease of SUD: brain-based disease, genetic, and behavioral control. In all cases, clients who believed that the medical model best explained their SUD also contended as an all-consuming and necessitating a variety of treatments.

3C: Do Participants Report Subscription to Multiple Models of Addiction in their Narrative Interview?

Focusing on the global themes/codes shared throughout the interview provided insight into the diversity of beliefs held by clients. Although few clients endorsed the mixed model on the single question approach, a more careful examination of the deductive theme - “individual beliefs about models of addiction”- revealed a very
different picture (see table 12). Ninety-two percent (n=56) of interview participants reported conflicting statements regarding their beliefs about SUD. For example:

“I’m having a hard time with that because back then, I didn’t feel that way. I just thought people were full of it, and then I feel like God kind of slapped me with some truth to my face and said, you’re going to experience it now. Unfortunately, from the moment I wake up, that’s the first thing that is on my mind is what can I do to find a fix? Like honestly, I don’t think you’re born with it; I think it’s something you create on your own. But at the same time, it’s really hard to answer that question because, at times, I feel like I’m not ok- something’s wrong with me, and I feel like I can’t function. It’s like I feel like it can become a mental disease if you can’t control your use. But before, I didn’t think like that, so I didn’t have that disease.” (Client CH36)

Participants believed that choice and personal responsibility played a large role in their drug use. The majority indicated that bad choice(s) led to their SUD. Reasons for using drugs included: for fun, to appease their curiosity, interpersonal influences, physical dependence, prescription opioids, or coping with trauma. All but one participant claimed they were personally responsible for their SUD and subsequent recovery. After a systematic analysis of the interview data, it became clear that most subjects embraced a mixed disease model. Subjects recognized they were ill and had no control over their drug use while simultaneously concluding that they made bad life choices, which led to their physical dependence on opioids. Illustrations of the mixed model approach included:

“It’s a choice and a chemical change in the brain” (Client H26)

and

“I believe it is a disease, but, at first I don’t think it is, but once you become addicted, it’s a disease.” (Client CH21)

3D: Participant experiences of stigmatization Stigma was a pervasive and powerful theme in clients’ narratives. Stigmatization occurred in several forms: self-
stigmatization, perceived-stigmatization, stigmatization by health care providers, and stigmatization by friends and family.

Figure 5: Types of Stigmatization Experiences

**Self-stigmatization.** Even though a majority of clients reported that SUD was a disease, strong evidence for self-stigmatization emerged in their narratives. A self-critical stance characterized by self-loathing and lacking in reflective compassion was prevalent. The clients regularly referred to themselves as weak, blamed themselves for their drug use habits, and referenced feelings of embarrassment and guilt when discussing their drug use. The quotes below speak to numerous character flaws mentioned in the narrative. For example, an illustration of the amplification of the character weaknesses associated with drug use can be seen in the following statement.

“In most cases when you start using drugs, you are weak in some area. There’s no doubt about it. I mean, the strongest of people have weaknesses.” (Client CH12)

Additionally, the following excerpt demonstrates self-stigmatization.

“Because I have the right support system and feel like they are backing me up, and I still mess up. I am a failure! I am failing myself and failing many others.” (Client CH36)
Thus, clients were often their own worst critics by engaging in self-stigmatization, finding fault with themselves when they were down and out. Not only did they engage in self-stigmatization, but they frequently described experiences of perceived stigmatization as well.

**Perceived Stigma.** Forty-two percent of the clients reported incidence of perceived stigmatization in their qualitative interviews. Perceived stigma often deters SUD patients from engaging in health-seeking behaviors (Hammarlund et al., 2018). Two noteworthy client excerpts address the issue of perceived stigmatization uniquely. For example, one client emphatically expressed anger and annoyance when he thought a bystander viewed him in a negative light.

“It makes me so mad when people just assume I am a druggie.” (Client CH10)

More heart-wrenching is the anger at others for judging the client’s self-worth coupled with the self-doubt about whether recovery was possible. Perceptions of judgement and loss of faith by others had a negative effect on the confidence of participants.

**Participant:** Even when you get sober, they are out there looking at you like ... how long is he going to make it this time? Because there are so many repeated attempts... (sigh)

**Interviewer:** How does that make you feel?

**Participant:** At the time, it pisses you off because you are wholeheartedly into it. You really don’t want to use no more, but it is always in the back of my mind. I never know if I will pick it back up again. I don’t want to today (pause), but I
don’t know about tomorrow or the next day. Because I have proved it to myself a hundred times already. (Client CH17)

Judgment from others and self-doubt appear to torment the client (CH17), almost ensuring with certainty a relapse into the world of drug use. A third form of stigmatization often cited was the judgment felt from the medical and health care community.

**Stigmatization from Medical Providers.** Thirty-six percent (n=22) of participants reported stigma in their encounters with the health care professionals who were supposed to help champion the clients on their road to recovery. Stigmatization experienced at the hands of the healthcare community deterred these clients from seeking medical treatment or harm reduction treatment for their SUD. Commonly cited experiences included: physicians refusing to treat their pain, feelings of embarrassment, experiences of being treated as less than human, and feeling like they didn’t deserve care because they suffered from SUD. Sample client quotes are quite informative.

**Participant:** Ya, once they find out you’re an addict, their attitude changes toward you, and you can see the differences. But, (Hospital) knows you’re an addict, I don’t know if they have in their thing (records system) and they treat you different because of it.

**Interviewer:** Does this stigma deter you from seeking medical care?

**Participant:** Yes, it does cuz you know if you tell them the truth (about your addiction), they will treat you different.

(Client CH11)
**Stigmatization from Family and Friends.** Family and friends are often considered the bedrock of support for most people; however, this was true of the clients in the OEND clinic. More than 41% of the clients reported experiencing stigma from friends and family. Commonly stated themes centered on rejection, name-calling, and despair/hopelessness. For example:

“My family disowned me, I’m the black sheep. I accept that.” (Client CH14)

Furthermore, when asked about stigmatization experiences related to drug use, one client stated:

“Well ya, that happens all the time. People always say “Junkie,” “Trash,” “that is disgusting you shoot your arm...” And yes, so-called friend and associates say that (to me), not my enemies.” (Client CH24)

Finally, all clients reported stigma as having a devastating impact on their journey to recovery. Self-stigmatization and stigma from others, particularly those in their social support networks, served to exacerbate the cascade of negative events that destined clients to fail to engage in HSB along their journey to recovery. In the presence of stigma, clients often disguise their struggles and concerns over their SUD, with maladaptive behaviors hindering their recovery. As seen in the comments below, the shame and pain associated with SUD often prevent access to treatment:

“No. I usually lie to them. I usually lie to them because I’m embarrassed. It’s pathetic. I’m embarrassed about getting high and then screwing my life up.” (Client CH46)

Another participant stated:

“It sort of scares the hell out of me to go to a doctor. I’m not open about this [drug use]. It’s my own little dirty secret that I keep completely to myself, you know what I mean?” (Client CH19)
When asked whether their experiences with stigma at their medical appointment made it, so they did not want to seek out the care they needed, one client responded:

“Ya exactly. I was down there at the (Hospital), and the man lied and didn’t treat me like a human being ... he didn’t treat me like I would treat any human being...” (Client CH 12)

Another client stated succinctly stated:

“Stigma made me feel hopeless. I’m trying not to dwell on that shit” (Client CH22).

These narrative examples point out clearly that stigmatization has a powerful impact on clients’ utilization of the OEND clinic, with approximately 36% to 48% of clients reporting experiencing some form of stigma. The interviews provided a clear window into the varied and powerful experience of stigmatization. Clients report varied examples of stigmatization: self-stigmatization, perceive stigmatization, provider-based stigmatization, and stigmatization from friends/family. While half of the participants reported stigmatization did not affect their HSB, more than 35% reported that stigmatization made it more difficult to engage in HSB.

3E. Participant Perceptions and Satisfaction with Social Support? A consistent theme through all interviews was that clients needed additional social support. Eighty-nine percent of study participants (n=54) indicated they needed additional forms of social support in their lives. For example, one participant stated:

“But when you are by yourself, you are so much more vulnerable...and your disease can get to you easier because you don’t have nobody to talk to...and thoughts come to your mind, and you don’t have nobody to identify with. Most addicts feel unique in a room. Nobody feels this way or went through what I went through. It’s just me. Why me, God? When you’re alone, you are much more vulnerable.” (Client H23)
The qualitative interview data indicate that although happy with some of their social support, participants were in desperate need of support pertaining to their SUD. Participants cited familial support, governmental support (by way of decriminalization and better access to treatment), support from friends, support from medical professionals, and support from other individuals using drugs as critical to the success of their recovery. As one study participant put it

“No man is an island. That’s how I look at it. We need each other.” (Client CH20)

Finally, social support seemed to play a dual role for the OEND clients. On the one hand, social support appeared to offer encouragement to the clients along their recovery journey. On the other hand, clients often reported feeling guilty about how their SUD negatively affected their social relationships.

“It’s important to have support around you. They motivate you and keep you from not doing that stuff. Then, if you got people who love you and you’re doing drugs, you can see that you’re beating them up and hurting them, and you’re also hurting yourself.”

(Client CH 115)

3F: Participants’ Motivation to Use OEND Clinic

The majority of clients (72%) reported feeling supported in their use of the OEND clinic from their families, friends, or clinic staff. When asked if anyone in their lives encouraged or discouraged their use of OEND clinics, one participant replied:

“Oh, encourage me, yes. You know the whole program; needles, condoms, and the cleaning. You guys care about us and think our lives matter, you know.” (Client CH45)

Support clients felt for use of the OEND clinic may in part explain repeated clinic utilization, with 2/3rd of the study participants reported having returned to the OEND
clinic for multiple Naloxone kits. Participants reported only positive experiences with OEND clinic visits and cited very few barriers to accessing Naloxone. If barriers were cited, the most commonly cited included: patient embarrassment/stigma (12%) and transportation (3%). Although most participants felt they had access to OEND clinic services, approximately 15% (n=9) cited a lack of additional SUD treatments as a barrier to recovery.

The primary motivator for OEND clinic use was past trauma, with the majority of clients citing personal overdose or bearing witness to an overdose as a decisive factor for seeking out Naloxone. Referral agencies (i.e., the syringe exchange program (SEP) and the court system) additionally accounted for engagement with the OEND clinic.

![Figure 6: Motivators for OEND Clinic Use](image)

Lessons learned from OEND participation were also noted. Clients indicated that they felt prepared to respond to an overdose after receiving training on Naloxone use from the OEND clinic. Eighty-seven percent (n=53) of interviewees felt prepared to save a life in the event of an overdose after receiving their training from the OEND clinic, with one client reporting saving over 20 individuals' lives with the Naloxone received
from the OEND clinic. When asked if there was ever a reason they did not want to sign up for Naloxone, one participant responded:

“No, because I know that stuff works.” (Client H26)

Perceptions of support from OEND clinic staff, friends, family, and perceived effectiveness of Naloxone to save a life when experiencing an overdose appear to play a role in whether a client uses an OEND clinic.

**Concerns About Overdose.** The interviews were quite helpful in understanding whether the OEND clients felt personally at risk for an overdose. Surprisingly only 54% of clients (n=33) indicated that they thought they were at risk for an overdose. For example, one client stated in a matter of fact fashion:

“You know you’re going to overdose. You’re going to die.” (Client CH 67)

Responding to the question of whether they personally are at risk for an overdose, a second participant stated:

“Personally? Always. I never know this batch from the next batch. One could be stronger one could be less strong. I might get five batches in a row that are less strong, and then I get one strong one. I take that big dose from the strong batch, and then BOOM! You never know when that’s going to happen or if it could happen. I just don’t want to be another statistic.” (Client CH37)

Alarmingly, 43% (n=26) of clients indicated that they did not feel like they were at risk for an overdose even though they regularly used opioids. Two clients (3%) did not respond to this question. **Why clients did not feel they were at risk included:** 1: they hadn’t overdosed to date, 2. they were “smart” about how they used, 3. they only used to get well, or 4. they didn’t use “excessively” like other people. For those participants not feeling at risk for an overdose, HSB (i.e. Naloxone treatment) were motivated by care and compassion (i.e., wanting to save other individuals from overdose). Although signing
up for Naloxone to save others indicates empathy and caring toward others suffering from SUD and is commendable, the failure to recognize and acknowledge the personal risk for opioid overdose is a dangerous misconception that should be addressed among OEND clientele.

**Qualitative Summary.** In summary, the qualitative data addressed several questions. First, do clients adopt different model of addiction? The straightforward answer to the singular question was yes; over 79% of the clients endorsed the disease model, 11% endorsed the moral model, and 10% endorsed the mixed model. While the majority answered affirmatively to the question “Do you consider your SUD to be a disease,” there was less consensus on the causes for this insidious disease. Four primary causes were noted: brain disease, mental health problems, genetics, and behavioral control problems.

In addition, all clients spoke in their narratives about the all-encompassing nature of the disorder and the necessity of treatment. Despite the high percentage of clients who endorsed the medical model as primary in their response to the singular model of addiction question, the thematic and code analysis of the global interview data revealed a distinctly different picture. This time the majority of the clients (92%) reported conflicting statements regarding their beliefs about SUD throughout their interview, with a mixed model of addiction more commonplace.

In terms of factors that influenced HSB, the narrative interviews revealed powerful data on the stigmatization experienced by clients in the OEND clinic. Stigmatization appeared in four forms: self-stigmatization, perceived stigmatization, stigmatization by health care providers, and stigmatization by friends and family. For
1/3rd of the sample, stigmatization negatively affected their HSBs, with clients less able to navigate the road to recovery in part due to stigmatization. Narrative data further demonstrated the importance of social support for clients’ recovery from SUD. Friends, family, practitioners, and staff who encouraged and supported clients in their SUD journey positively affected clients’ willingness to engage in treatment. Motivations to utilize the OEND clinic were quite numerous, with past drug-related trauma the most powerful factor. The risk of death due to drug overdose was somewhat influential in clients’ participation in the OEND clinic, but primarily as it related to others and not the self.

The importance of digging deep to understand the lived experience of the OEND client through the methodological tool of the narrative was supported in Phase 2 of the project. Using the qualitative coding program NVivo 12, this study allowed for the uncovering of themes and codes that enhanced contextual understanding of how patients diagnosed with SUD experience treatment at OEND clinics. The qualitative interview data collected with clients at the OEND clinic highlight the importance of ethnographic methods to elicit comprehensive patient narratives. These narratives shine a light on the brief triumphs, trials, tribulations, and tragic suffering of clients' lived experience of SUD- a key goal of patient centered examination of suffering.

One of the most important findings from the narrative analysis was that clients at the OEND clinic embraced multiple models of addiction simultaneously. That said, utilizing a single question approach may mislead clinicians into believing that clients adhere to one model at the exclusion of the other. When outright asked if they believe SUD is a disease, the majority of clients (79%) said yes. However, the OEND client
narratives were riddled with conflicting statements (92% of clients reported conflicting statements about causes of disease) reflecting adherence to a mixed model of addiction. This ethnographic investigation championed the social constructionist perspective of addiction as having both biological and experiential dimensions, as well as being laden with cultural meaning (Witeska-Miynarczyk, 2015). While there was no doubt that clients of an OEND clinic medicalized (or moralized) their SUD, biocultural factors were hard at work as well. Narrative descriptions reported by clients frequently referenced how “bad choices” negatively influenced their social lives and their social relationships, all the while adversely affecting their biological makeup (i.e., brain & health).

The richness and the pervasiveness the stigma experienced by the OEND clients was also captured in participant narratives. Although no clients cited experiences of stigma while seeking Naloxone, they noted the negative impact stigma had on their general medical HSB and drug use behaviors. The hand of stigma was wide-reaching, with participants noting experiences of stigma from family and friends, from medical practitioners, and even experiences of self-stigmatization. The data reported about stigma in the clients’ narratives highlights the importance of the sufferer experience— a key concept of patient centered examination of suffering. Here we see how cultural norms and the social meaning assigned to SUD (i.e., the widespread prevalence and acceptance of treating individuals with SUD disrespectfully) impact health interventions' effectiveness (Morgan-Trimmer & Wood, 2016). Many participants argued the stigma they experienced was a strong deterrent to seeking medical care, even in instances where they knew they desperately needed treatment. Fortunately, all clients participating in this study reported feeling supported in their use of the OEND clinic, which may in part
explain their HSB and program utilization. Active participation in the OEND clinic is critical to the health of clients with SUD as it provides them with continued opportunity for recovery.

Clients engaging in the HSB of OEND clinic utilization appear to be a diverse group. Narrative analysis revealed they are especially diverse in their understandings and experiences of SUD. Recognizing the diversity of experiences of those suffering from SUD underscores the reality that no one model of addiction can capture the total essence of the disorder. SUD is a complex disorder resulting from various interrelated factors (Carlson, 2006; Carlson et al., 2009; Hunt & Barker, 2001). Addressing the problems of stigmatization (self, perceived, other) is one important step along the road to recovery.
Chapter 7: Integrating the Quantitative, Qualitative, and Observational Data

Chapter 7 presents the observational data, followed by an integration of all study Phases which involved three forms of data: quantitative, qualitative, and observational (i.e., Chapters 5, 6, and 7). The integration chapter focuses on common themes depicted in the chapters, ways in which the data diverge, and unanswered questions.

Contextualizing the Project with Observational Data: Thirty hours of formalized observation occurred at the OEND clinic. The goal of this observational data was to strengthen the data already collected and provide insight into client experiences at the OEND clinic that may not have been gleaned from Phase 1 and Phase 2 data. Observational data allowed for a more complete understanding of clients’ experiences at the OEND clinic and their relations with and interactions with the OEND staff.

For example, working at the OEND clinic provided a window into the differing underlying motivations for participation in an OEND clinic. Some clients came to the OEND client, not for themselves, but rather they sought out Naloxone in an effort to prevent someone they loved from succumbing to an overdose. Observations also revealed that a majority of OEND clients were inclined to seek services to address the risks associated with their own SUD. By way of illustration, some conversations observed between clinic staff and clients centered on clients fears of loved ones dying or the trauma they experienced witnessing a loved one overdose (and in some cases die) whereas other conversations centered on fears about their own mortality or reports on their own overdose experience. Clients frequently thanked staff members for providing them with Naloxone saying it saved their life and expressing gratitude for the clinic services. Clients were highly vocal about their motivation for program utilization-
confiding in OEND staff about their personal struggles with SUD, as well as the struggles of their families and friends. The researcher’s clinical experiences and observations at the OEND clinic made it acutely apparent, that at a minimum, there are two different OEND clinic patient groups, each with their own underlying motivation for participation. The first, individuals suffering from SUD who are trying to prevent their own death due to opioid overdose. The second, individuals not suffering from SUD themselves, but motivated to save someone’s life and assist someone else on their road to recovery. Clients frequently made it clear which patient group they belonged to- citing the struggles they experienced due to their SUD as a factor influencing their HSB of seeking out Naloxone or making it a point to tell staff that they do not personally use opioids but are getting the Naloxone for a friend or family member. As can be seen, these two unique goals lead to differing perceptions of whether or not an individual seeking out Naloxone is actually engaging in HSB. It seems safe to say that individuals who seek Naloxone as a means of preventing their own death due to overdose are engaging in an HSB, even if recovery from their SUD is not their primary goal.

One of the most important observational data obtained in Phase 3 concerned relationship data or what was described as social support throughout Phases 1 and 2 of this study. Rapport between staff and clients, client willingness to share intimate details of their lives with staff, and staff sensitivity to emotional/behavioral disclosures was witnessed during the 30-hour observational data collection window as well as during the time the researcher spent as a staff member of the clinic. OEND clinic staff were extremely respectful to clients as evidenced by their nonjudgmental approach, willingness to listen to clients even when shift had finished, warmth and concern (i.e.,
tone of voice, smile, caring statements), and ease with which they established rapport they had with clinic patients. Clients regularly came to the OEND clinic to speak to staff about personal problems, including homelessness, legal trouble, experiences of past overdoses, relationship issues, and many more. Clients appeared comfortable with the OEND clinic staff and often asked for advice that did not directly relate to their SUD.

OEND program staff appeared to serve as an important source of social support for OEND clients. During visits to the OEND clinic, clients frequently expressed gratitude for staff support, often thanking them for caring about them, acknowledging the importance of their nonjudgmental care, and confiding in staff about their insecurities and vulnerabilities. Additionally, clients frequently asked staff for help- both in terms of their SUD and treatment needs and in terms of any social services they were lacking. Their willingness to ask for assistance (in a wide variety of forms) demonstrated their recognition of a problem(s) they could not solve on their own and their willingness to reveal their vulnerability to another person (i.e., OEND staff) (Keith-Lucas, 1972).

Vulnerability, is an integral part of a trusting relationship (Wiesemann, 2017). Observations of clients’ frequent displays of vulnerability with OEND staff demonstrated not only their trust in them, but additionally provided staff with opportunities to act as social support for clients.

The vignette below illustrates the supportive nature of OEND staff and the comfort clients felt asking staff for help:

The OEND clinic, although run by a local county hospital, is partnered with and run out of an Urban Alcohol and Drug Abuse Outreach Program on the west side of the city of Cleveland. A few blocks from the hospital, the Outreach Program is housed on a
busy street and is surrounded by low income housing facilities, boarded up businesses, and vacant lots. The building, previously the location of a funeral home, is a square brick structure with large white pillars framing its front.

In addition to the OEND clinic, a Syringe Exchange Program (SEP), operates out of the building. The building’s driveway, where the syringe exchange mobile unit parks, is a combination of gravel, weeds, and the occasional piece of garbage. On any given business day, the SEP van arrives at the Outreach Program between 9 and 9:30, often with multiple clients impatiently waiting to exchange their dirty needles for clean ones. The SEP program is run by two middle aged men who have not only established rapport with the SEP clients, but also have past personal experience with substance use disorder.

“Good morning!”

They cheerfully shout to clients as they pull into the drive.

“Give us a minute to set up.”

Clients wait eagerly to exchange their needles, grumbling about the van being late. The OEND clinic staff, who arrived at 9, exit the building and hop on the van to sit with the SEP employees. Although there is an office in the Outreach Program building for the OEND clinic staff to conduct clinic, staff members often sit on the SEP van in order to ensure all SEP clients are offered Naloxone. SEP staff regularly refer exchange clients to the OEND clinic, however, sometimes a few extra words of encouragement are necessary.

“How’s your day going?”

The OEND staff member asks a middle-aged Caucasian man who frequents the exchange and the clinic.
“Not bad, not bad, my neighbor OD’ed and is in the hospital, I’m outta clean rigs, and I think I have an abscess, but what are you gonna do? They called me when that guy was OD’in. I had to run down the street to bring them the Narcan. Those fools, I keep tellin them to get it for themselves but they don’t want to come up here. They’re just being lazy.”

Replied the client. A look of concern washes over the OEND staff member’s face.

The SEP staff asks the man how many needles he is there to exchange, tells him to dump them in the sharp’s container, and hands them a bag of clean needles and other first aid products. Condoms, antibiotic ointment, alcohol wipes, Band-Aids, cookers, tourniquets, and fentanyl test strips are frequently distributed out of the van. After the exchange is complete the OEND staff member turns to the client:

“Your neighbors are lucky you were there and had the Narcan to help them out. Are they alright? How many doses did it take to revive them? Do you need more Narcan? I want to make sure you have enough doses in case someone OD’s around you again. Let’s go inside and get you some more Narcan”

The staff member hops out of the van and walks with the client into the large brick building. The building is dimly lit, and smells faintly of mold and cigarettes. A buzzer goes off inside indicating people have entered the building, and the client and staff member turn left into the small dingy room with accordion doors that serves as the OEND clinic space. The client is required to fill out a refill form in order to get additional doses of Narcan, which he does begrudgingly saying…

“Why do I always have to fill this thing out? My answers never change. You know that. You know me. I’m here all the time. Ugh can I skip the second page?”

The OEND staff laughs and nods her head.

“As long as you fill out the first page and indicate when the rescue occurred I’ll let it slide this time. Don’t forget to sign the consent to treat and privacy practices forms. I know the paperwork is a pain but it helps our program keep its funding so we can provide Narcan to people for free.”
The client grumbles his appreciation and fills out the forms.

“If you weren’t giving me free Narcan, and you weren’t so nice I wouldn’t be filling this out”

The client gripes. Begrudging the process is a common occurrence at the OEND clinic. Clients are grateful for the clinic services, but feel the paperwork is repetitive and unnecessary. Often, clients are on the verge of withdrawal, and having just exchanged their needles, are eager to leave the clinic site to shoot up. Clients also struggle with issues of transportation, often taking the bus, riding a bike, or “bumming a ride” from a friend impatiently waiting in the parking lot. Client visits to the clinic are short. Often under 10 minutes. Clinic forms have been shortened three times over the course of three years in an effort to accommodate clients’ frustrations and need for efficiency. Data collection, however, is imperative to the continued success and funding of the OEND clinic. At a minimum, the clients must fill out their personal information (full name and birth date) and let the staff members know if and when they rescued a person with their Naloxone.

Visits for new clients are often take more time, and involve client education. When a new client enters the clinic, they are trained on five basic topics: what occurs during an over dose, risk factors for an over dose, how to identify an overdose, how to respond to an overdose with Naloxone, and how to refill their Naloxone once it is used or expired. Pamphlets in the kits also provide clients with information educating them about opioid overdoses and the steps to reverse an overdose with Naloxone. After a client returns to the clinic multiple times, they are no longer required to participate in the educational training. Repeat clients are always asked if they have any questions about how to use the Naloxone, but they rarely ask any.
Their lack of questions does not appear to be due to a lack of trust of OEND clinic staff. In fact, they frequently ask staff about access to treatment programs, medication assisted treatment, and support groups. In their short visits to the clinic, they often share personal information about the traumas they have experienced, the interpersonal struggles they face, and the disappointment they feel that their lives turned out this way.

As the OEND staff finishes providing the gentleman with Narcan, a young woman walks into the office.

“Hey can I get some Narcan?”

She asks, as she sits down at the round table. She proceeds to fill out the required paperwork while the staff member prepares her kit. Once handed her kit she asks:

“Hey, can you help me? I’m pregnant. I need help getting off this stuff and no one will take me once they find out I’m pregnant. You can’t detox off this stuff when you’re pregnant it could hurt the baby. I can’t get in anywhere. I never imagined this would be my life.”

The OEND staff member smiles sympathetically and pulls out a huge binder setting it on the desk. She is concerned for the woman, and assures her she will do her best to find her the help that she needs. She proceeds to open the binder and pull out information on support groups, MAT, mothering groups, and the phone number for the Hospital’s Mother and Child Dependency program. The clinic staff encourage the woman to call the Mother Dependency program on the spot and even offers to talk to the hospital staff for her if she is uncomfortable.

It is not unusual for the OEND staff to make phone calls on the spot to help their clients get into treatment programs. They also often offer clients HIV and Hepatitis C
testing and can direct them toward treatment if their tests come back positive. The clinic sees approximately 15 people that day. Clients hail from diverse backgrounds, some from urban environments, and others traveling up to an hour, from rural areas to get to clinic. Men and women of all different ages, races, and socioeconomic backgrounds utilize the clinic. Together with the SEP staff, the OEND staff work together to create a harm reduction system that reduces the harmful effects of their clients’ SUD. Clients return back to the clinics frequently after achieving sobriety, thanking the staff for their support and tough love. New clients frequently hear about the program through word of mouth, and are referred to the clinic by friends who had positive experiences with staff members.

As illustrated by the vignette above, not only was the OEND clinic a source of personal support for clients, but also it **provided patients with treatment referrals**, including inpatient treatment, intensive outpatient treatment, medication-assisted treatment, and detox treatment services. Onsite at the OEND clinic, staff created, managed, and updated a large binder full of SUD and related resources that were made available to clients upon their request. Even when clients did not explicitly request treatment information, OEND staff often anticipated clients’ treatment needs and queried clients about unmet service needs. Offers of treatment information and assistance were heartfelt and presented to clients in a supportive, unpressured, and nonjudgmental manner (i.e., no belittling of clients about their SUD).

Client exchanges with the OEND staff tended to be brief and friendly (i.e., patients typically spend under ten minutes at the clinic) unless discussions of complex personal problems occurred. Approximately 95% of the time, clients of the OEND clinic stopped by the program office to pick up their Naloxone after exchanging dirty needles
for clean ones. Unfortunately, these same clients were frequently in a rush to leave the clinic to use opioids to stave off withdrawal symptoms and were not shy about letting OEND clinic staff know about these stressors. This observation highlights that **engagement in the OEND clinic and receipt of Naloxone does not mean the clients are committed to the recovery journey.** That said, clients were required to receive overdose training the first time they received Naloxone but were not retrained during subsequent visits to the clinic. Also, since the clinic has no formal system to track whether or not they had been trained in the past, some clients may have received Naloxone without receiving training on how to use the medication (although there are instructions provided in the Naloxone kit). Thus, the observations of the OEND clinic clients reflected a **mixed model of commitment to combatting their SUD.** Some clients spoke to staff members about wanting to “be normal again” or “wanting to get off the drugs,” whereas others did not. Clients were not afraid to ask clinic staff for help and sought social and emotional support from staff members. Clients of the OEND clinic often reflected feelings of gratitude toward OEND clinic staff, with this message reflected in the statement below:

> “You guys are awesome like you guys are really awesome. If it wasn’t for you guys, the needle exchanges, and the OEND clinic, you would probably have a lot more overdoses, a lot.” (Client CH11)

Clients of the OEND clinic valued the support they received from clinic staff and the services provided to them to reduce the harmful effects of drug use on their lives. They felt understood, accepted, and supported, which stands in stark contrast to how clients feel when discussing their SUD with traditional healthcare providers.
The important role that **stigmatization plays in clients’ navigation of SUD understanding and treatment** emerged as a theme through clinic observations. Interestingly, when speaking to the OEND clients who suffer from SUD, it was often unclear if they regarded themselves as sick or at fault for their drug use. Some clients at the OEND clinic engaged in self-stigmatization, often blaming themselves for their drug use and using derogatory words like “junkie” and “addict” to describe themselves. Additionally, these same clients could be seen projecting the blame for their problems on others (i.e., they make me want to use drugs) or reverting to the illness model (i.e., I am sick, I can’t help it) in an effort to excuse themselves for their SUD. The **coexistence of multiple models of addiction** (i.e., moral and medical) appeared to contribute greatly to the clients’ state of internal conflict and confusion about how to understand their chronic heroin use.

**Integration of the Quantitative, Qualitative, and Observational Data**

In an effort to arrive at a more complete understanding of who utilizes the OEND clinic, the information gleaned from all three phases (quantitative, qualitative, and observational) of this project was integrated. The focus of this integration was not to examine methodological variations, but rather to more precisely address the following issues: 1. Clients’ Model of Addiction, 2. Mental Health status of Clients using the OEND Clinic, 3. Social Factors Motivate OEND Use, and 4. Stigmatization Experienced.

**Model of Addiction:** A strong definitive statement can be made about whether clients at the OEND clinic hold singular or multiple models of addition. Using Chi-Square analyses, concordance or stability of the client’s model of addition group as dictated by the ABI and the Qualitative Interview was examined. While the Chi-square
analysis compare both the models clients reported subscribing to and the methods used to yield the reported models, the focus is on stability of the model. A methodological comparison of quantitative and qualitative measures would necessitate the inclusion of a substantially larger sample and is therefore beyond the scope of this study. Rather, this chapter addressed the question of whether clients’ model(s) of addiction remain stable when probed for in different ways (Phase 1 ABI measure versus Phase 2 interview). As shown in Table 12, there is some concordance across Phase 1 and Phase 2 categorization, with 30% of participants noted for the medical group, 35% noted for the mixed group, and 57% noted for the moral group. A significant Chi-Square for group, $\chi^2 (4) = 9.90$, $p<.05$, indicated greater stability for the morality group than the medical group.

**Table 12: Comparison of ABI and Interview Data**

<table>
<thead>
<tr>
<th>Quantitative Model</th>
<th>Interview Model*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence Group</td>
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</tr>
<tr>
<td></td>
<td>Mixed</td>
</tr>
<tr>
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<td>Moral</td>
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<tr>
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</tr>
<tr>
<td>Total</td>
<td>15 (25%)</td>
</tr>
<tr>
<td>Medical</td>
<td>27</td>
</tr>
<tr>
<td>Mixed</td>
<td>2 (33%)</td>
</tr>
<tr>
<td>Moral</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
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</tr>
<tr>
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<td>7</td>
</tr>
<tr>
<td>Mixed</td>
<td>3</td>
</tr>
<tr>
<td>Moral</td>
<td>4 (57%)</td>
</tr>
<tr>
<td>Total</td>
<td>14 (23%)</td>
</tr>
</tbody>
</table>

*Interview is based on a single question approach

*Blue diagonal represents agreement across the Quantitative and Qualitative Classification

From the quantitative data, 52% of the clients endorsed a mixed model of addiction, indicating they felt their addiction was due to both internal (i.e., personal
choice) and external (i.e., biological/illness) factors. When the data were examined using the total qualitative narrative, 92% of clients spoke of the important role that both internal and external factors play in their SUD. That most study participants viewed their addiction as incorporating a mixed (i.e., medical & moral) conceptualization suggests that the data gleaned from both quantitative questionnaires and qualitative interviews are somewhat consistent, with the observation data also speaking to a mixed model understanding of clients’ SUD. That said, the single question approached utilized in the open-ended interviews questions pointed strongly to the rigidity with which most clients apply the medical model to their conceptualization of their SUD, with this illness model often negatively influencing their personal agency.

**Mental Health.** All three phases of the study supported the case that clients who use the OEND clinic services are extremely anxious, depressed, and distressed. This mental health effect was more pronounced for the female than the male clients. The Phase 1 data revealed an association between mental health issues and model of addiction, with clients who endorsed the medical model evidencing greater psychological distress, anxiety, and depression than clients who endorsed the moral or mixed model. No data to support or refute this finding emerged in the interview or the observational data. Suffice to say, mental health issues must be addressed for all clients with SUD, as they tend to be extreme and influence clients’ perceptions of deservedness of care.

Support for the relationship between the medical model of addiction and mental health issues might reflect clients’ limited sense of self-control and agency over their (Keeton et al. 2008).
**Social Support.** Minor differences in clients' understanding of the need for and satisfaction with social support were observed in Phase 1, Phase 2, and Phase 3 data as a function of addiction model. While the SSQ-6 data indicated that clients at the OEND clinic were generally satisfied with the social support they received, narrative data revealed a different story. Interview data with clients indicated that they felt they were not receiving adequate services to treat their illness and needed better access to medical, behavioral, and social support services. Dissatisfaction was based in part on the limited number of people available to provide social support. What appears to be a lack of consistency in the SSQ-6 and narrative findings may not be that at all. Instead, it may reflect the long-recognized fact that not all social support is created equal. Some social networks are beneficial and contribute to health, whereas others are harmful and negatively affect health (Thompson & Ontai, 2000). Additionally, perceived social support is critically important in the context of healthcare-seeking (Vogel & Wei, 2005) as the presence of powerful social support can greatly enhance the likelihood of HSB.

**Barriers to Treatment – The role of Stigma.** Understanding the barriers to treatment is but one of the many purposes of this study. Barriers can come in all shapes or sizes, with model of addiction, mental health, social support, and stigma all playing an important singular and interactive role in the process. Stigma is one of the most powerful factors affecting HSB. Clients at the OEND clinic endorsed a complicated mix of stigma experiences that appeared to impact their behaviors in positive and negative ways. All three phases of data collection supported the pervasiveness of stigma and various types of stigma. The narrative data provided a clearer picture of how all forms of stigma could come together to form insurmountable obstacles that destined the client to setbacks along
the road to recovery. The OEND clients’ narratives spoke loudly about the ways in which emotional states (i.e., patient embarrassment, anxiety, depression), stigma (i.e., self-loathing, judgments by others), and environmental obstacles (i.e., poverty, lack of transportation, lack of education) made the recovery journey seem uninviting, overwhelming, and insurmountable.

In summary, the data from the present investigation suggest that clients of the OEND clinic have complicated understandings of their SUD. Most clients are quite likely to adopt both a medicalized and moralized view of their substance use, accepting responsibility for their disease and shame for their inability to manage it successfully. Their engagement in the OEND clinic, while not necessarily indicative of a strong desire to overcome addiction, represents one-step forward along the road to recovery. Pursuing a prescription for Naloxone is a unique health-seeking behavior in that the individual is seeking a short-term health service rather than treatment for an illness. In a society where personhood and moral worth is based on an individual’s capacity for self-control, it is important to understand what promotes the utilization of harm reduction programs to manage drug use (Gowan, 2012).

Furthermore, this study offers evidence for the fact that how a client understands their SUD, interprets their illness experiences, assigns meaning to their illness, and self-stigmatizes can affect the development of one’s self-esteem (either positively or negatively, depending on the stigma they perceive as associated with their disorder) (Yanos, 2010). Confronting self-stigmatization is critical for both the patient and the treatment provider when addressing SUD. By understanding how clients make sense of their illnesses, we may be better positioned to assist clients in adopting new social roles
and beliefs about their diagnosis that are beneficial for the recovery process (Yanos, 2010).
Chapter 8

Conclusion

“The purpose of anthropology is to make the world safe for human differences.”
— Ruth Benedict

Summary of Findings

This study describes who engages in the HSB utilizing OEND clinics and how personal (i.e., gender, age, ethnicity, and education) and contextual (i.e., experiences of stigma, social support, models of addiction, and mental distress) factors affect engagement. The OEND clinic in Cleveland, Ohio, was an ideal location for conducting this study because of the high number of program participants and the high rates of opioid overdoses occurring in Cuyahoga County.

The study sample of 235 participants was approximately 38 years of age, predominately male (61%), Caucasian (85%), High School educated (67%), unemployed (69%), and non-religious (54%). Clients were highly anxious, depressed, and distressed. In addition, they reported only a few avenues of social support but were quite satisfied with the little support they had. This study examined what motivates individuals to engage in HSB of OEND clinic utilization, noting that client motivating variables are as complicated as understanding the nature of SUD. This conclusion will focus on the complexity of the clients’ suffering from SUD and their multifaceted views of SUD, stigma, and social support, and motivation for program use.

Clients of the OEND clinic held complicated worldviews of addiction. From the narrative data it is clear that the majority of the clients appeared to adhere to a mixed model of addiction. In contrast, from the single question (“Do you believe SUD is a
disease?"), the same clients appeared to strongly endorse a medical model of addiction. After a detailed examination of the narrative data, it became clear that the majority of these clients endorsed more than one model of addiction, made seemingly conflicting statements about the causes of their SUD, and their own perceived responsibility for the SUD. The data from this study point to the fact that most clients hold a mixed model of addiction. Participants recognized that both medical (biological) and moral (choice) variables play a role in the underlying causes of their SUD (and possible barriers for treatment). These findings are consistent with the work of Hammer et al. which discuss how “the addicted view addiction” and the importance of narrative medicine in effectively treating those with SUD (Hammer et al., 2012). Beliefs about SUD etiology have the potential to impact client emotional wellbeing, self-efficacy, feelings of self-worth, and willingness to seek help for their SUD. When clients hold multiple and competing models of addiction, they often struggle to rework their beliefs to arrive at a unified theory about SUD (Meurk et al., 2014). As noted by Hammer et al., at present there is little evidence to support the utility of a “unified theory” of addiction. In fact, attention to diversity of SUD experiences and beliefs is an important means of reducing stigma and improving relationships between those with SUD and their health care providers (Hammer et al., 2012).

This study hypothesized that **Model of Addiction** would be related to the HSB of OEND clinic utilization. More specifically, clients who adhere to a medical model would better use OEND services as seen by their kit utilization than clients who adhered to a moral model. No gender differences in the HSB were predicted. Although it was hypothesized that clients with a medical model would engage in greater treatment
utilization (i.e., greater number of kits received) than those with a moral model, this hypothesis was not supported. The ABI adherence model was not predictive of the number of Naloxone kits received by participants. Most clients (75%) received 3 or 4 kits during the OEND program. Limited variability on this outcome measure may in part explain the failure of this variability to differentiate clients as a function of addiction model. That said, the narrative data were explored for possible explanations for this null finding.

The narrative data were examined first for differences in pattern of adherence model and second for individual differences in motivation/barriers to service utilization. While the ABI data suggested variability in the pattern of adherence in terms of the type of the addiction model (¼ medical, ¼ moral, ½ mixed), no such pattern was observed in the single question interview data. The singular question approach revealed that 79% of the participants contended their SUD was a disease and endorsed adherence to the medical model of addiction. This discrepancy in findings between ABI and narrative data illustrates the importance of in-depth interviewing and ethnographic research to “provide rich, holistic insights into people’s world views and actions” (Reeves, 2013). It further highlights how the reliance on one source of data, to the exclusions of others (i.e., questionnaires or interviews), can in no way provide a complete understanding of a clients’ insight and perceptions of their SUD.

Using the narrative data to support and augment the ABI findings proved to be an important step in this study. The strategy of moving beyond the data obtained from the ABI measure and single question interview approach was a fruitful one. Conducting a thematic analysis of the clients’ narrative data in search of themes and codes about
models of addiction highlighted the value of client lived experience. The narrative data was riddled with conflicting judgmental and self-stigmatization-statements about SUD. The OEND clients were in no way fully on-board with the tenets of the medical model of addiction. Instead, they appeared highly conflicted about the role that sickness (i.e., disease) and personal choice (i.e., moral) play in understanding their SUD. How clients were asked about their addiction (i.e., ABI, single question approach, or comprehensive narrative interview) influenced the response generated. Whether this difference reflects the malleability of beliefs of addiction as suggested by Schaler (1997) or whether it reflects differences in comfort clients have in talking about their addiction is unclear. That said, beliefs about SUD appear malleable and subject to internal and external factors, including but not limited to gender, age, interpersonal relationships, and experiences of stigma.

Given the clients who frequent this OEND clinic come from varied backgrounds and have diverse drug use histories, it is not surprising that they might hold a mixed set of beliefs about what causes their SUD. That social and cultural context influences clients' SUD beliefs were further underscored by these data (Luke et al. 2002). Context or the settings in which clients were asked about their beliefs about SUD (interviews, casual conversations, & questionnaires) appeared to impact responses. The use of interviews and observations allowed for a more comprehensive understanding of the OEND clients’ perceptions of SUD within the context of service provision. Less can be said about whether model of addiction has an impact on treatment utilization since all participants in the study are actively participating in the OEND clinic (HSB). In order to determine the
impact of addiction model on HSB, the number of Naloxone kits clients received was used as a proxy for program engagement.

Utilizing a Cultural approach throughout this study was helpful in understanding OEND clinic patients’ beliefs about their SUD because the emphasis is on the role of beliefs in creating a schema for illness (Conrad and Barker, 2010; White et al., 2012; Brown, 2016). One of the main goals of this study was to examine OEND clients’ beliefs about SUD and their tendency to classify their SUD as either a disease or moral failing. Addition, the study examined whether client’s beliefs about SUD impacted their HSB (i.e. kit utilization). The cultural approach was useful to explain how beliefs about SUD gleaned from the ABI were helpful for the creation of ABI adherence groups. The cultural approach additionally lends support to the use of qualitative interview methodology in conjunction with ABI data to determine participant subscription to a disease, moral, or mixed model of addiction. This methodology was further useful to examine participant motivation for program use.

The cultural approach additionally, recognizes that medical interventions (such as OEND clinics) are built based upon cultural knowledge and theories of causation (Brown, 1998). When individuals are treated for SUD in the field of biomedicine (including at OEND clinics) there is an implied assumption that patients and practitioners agree on a medical model of addiction. The medical model of SUD includes a specific set of diagnostic criteria that patients must meet in order to receive a SUD diagnosis. As seen in this study's findings, not all OEND clients subscribe to this medical model of addiction nor do they universally agree about SUD etiology. Lack of a consensus regarding etiology and causes underlying SUD may lead to confusion surrounding health
seeking behaviors particularly as it relates to compliance. As noted by Kleinman, when there is a lack of consistency in locally shared ideas about illness, there is no “common ground for patients and practitioners to understand each other in their encounters” (Kleinman, 1988). The existence of multiple models of addiction contributes to the diversity of understandings of how to treat individuals suffering from SUD (i.e. as a patient or as a “junkie”) and the expectations society places on those who are suffering from SUD (i.e. individuals who should seek medical treatment or individuals who should be ashamed and blamed for their drug use).

In addition to recognizing the influence that culture has on beliefs about the causes of SUD, this study emphasizes the polysemic meaning of illness (Kleinman, 1988). The integration of the qualitative and quantitative findings strongly support the notion that patients’ understandings of SUD are often complex, variable, and riddled by multiple meanings (a finding highlighted specifically by clients who subscribe to both a moral and medical model of addiction). The variety of meanings attributed to opioid use disorder and its symptoms are evident in client narratives in this study (i.e. moral and medical meanings). The meanings associated with SUD are additionally immersed with cultural consequence and support the use of the cultural construction of addiction framework. For example, in the past, SUD was a symbol of weakness of character and moral abhorrence. Today, opioid use is still highly stigmatized, with those who use drugs and those who treat individuals with SUD both quite likely to engage in this less than helpful behavior. Not only are their serious health consequences associated with SUD use that both a challenge to recover, but so too there is often a pattern of blaming and shaming associated with SUD disorder that increasing the probability of relapse.
One important study finding is that SUD means different things to different people, with this difference in meaning attributable to SUD affecting mental health status, treatment options, and ultimately prognosis. A medical practitioner who views SUD as a disease might focus on how to best treat SUD symptoms and cure their patients. Conversely, individuals suffering from SUD may focus on their lack of self-control, the negative social ramifications of their drug use, and the risk of dying due to overdose. The qualitative interviews conducted with the OEND clients revealed quite clearly that the medicalization of addiction has not always helped patients deal with their experiences of suffering (Kleinman, 1988). In fact, patients of the OEND clinic repeatedly report experiences of stigma from medical providers as a strong deterrent from seeking care.

The importance of the social construction of illness and the social production of health is quite helpful in understanding the present study findings. This study sought to understand how clients of an OEND clinic constructed their understanding of SUD using the ABI and open-ended interviewing. Participation in the OEND clinic is one way in which individuals “socially produced health” (i.e., they took the necessary protective steps to prevent death due to opioid overdose). This study specifically examined what variables motivated participants to seek Naloxone at the OEND clinic, with these motivators including experiencing or witnessing an overdose, social support from family and friends, a referral from the local SEP, and court-ordered program participation. Having a clearer understanding of the diversity of motivating forces impacting OEND clinic utilization will help practitioners facilitate the social production of health (i.e., overdose prevention) among OEND clinic clients.
The Health Belief Model (HBM) has been quite helpful for understanding the findings from the current investigation. According to Rosenstock’s HBM (1974) health-seeking behaviors (HSBs) are complicated and influenced by many variables. This model theorizes that individuals utilize preventative health care services for many reasons, including perceived susceptibility to illness, the severity of an illness, beliefs about treatment efficacy, stigma, and interpersonal influence, with no one factors affecting HSBs equally (Rosenstock, 1974; Anderson, 1995). Data from this project shows that OEND clinic clients were motivated to sign up for Naloxone for many reasons. Consistent with past research (D’Amico et al., 2013; TIP, 1999; Sobell et al., 1993; Tucker et al., 1994), critical life events were a motivating factor in more than 65% of the OEND clients seeking out Naloxone. Interview data revealed that most clients had witnessed an overdose or experienced an overdose themselves. This information typically came to light when participants were asked about their motivation for OEND engagement or their beliefs about their personal risk for overdose. Clients perceived the risk associated with opioid overdose as severe and did what they felt was necessary to prevent death due to overdose. Witnessing an overdose frequently served as a “cue to action,” which triggered client participation in the OEND clinic. Participants further cited external “cues to action” such as encouragement from family and friends or referral from the local SEP as motivating factors influencing their program participation.

According to the HBM, perceived susceptibility or perceived risk is an additional variable that influences health-seeking behaviors. Clients of the OEND clinic were completely cognizant that their SUD has serious consequences, both short-term (i.e., loss of job, friends) and long-term (i.e., death). More than 54% of clients realizing they were
at risk for death due to opioid overdose, and many others reporting fears about not wanting to “be another statistic.” Understanding that their SUD was a risk factor for overdose and ultimately death was highly motivational in participants’ decision-making process as they sought out Naloxone treatment. The narrative data referenced past drug-related trauma (i.e., personal overdose experiences or witnessing an overdose) as one of the main reasons for participation in OEND clinics. Both quantitative and qualitative data revealed that clients recognized the dangers associated with opioid use and the utility of Naloxone for personal recovery.

Clients also touched on the perceived benefits of OEND clinic utilization in the open-ended interviews. Narrative data provided supplemental information regarding the importance of Naloxone, with clients viewing Naloxone as an efficacious, easy, and safe way to resuscitate a loved one, friend, or acquaintance experiencing an overdose. The perceived benefit of signing up for Naloxone served as a motivating factor for OEND program utilization, even when clients did not feel they were at risk for an overdose. Clients cited using the Naloxone to save family members, friends, and even strangers as a highly motivating variable that influenced their participation in the OEND clinic. They also acknowledged that confidence in their ability to revive someone experiencing an overdose served as a powerful motivator influencing program utilization.

Understanding the role that stigma and social support plays in the development of, maintenance of, and recovery from SUD was an important issue addressed by this study. The stigma data from the narrative interview provided strong evidence that people suffering from SUD experience many types of stigmas (Bos et al., 2013). Data from the narrative interviews also revealed that clients at the OEND clinic experienced stigma in
many domains of their lives, including from medical providers, friends, family, and acquaintances. Interestingly, clients did not cite experiences of stigma at the OEND clinic; instead, they emphasized that the clinic and its staff were powerful sources of social support. Social support was strongly related to engagement in health-seeking behaviors (Nyamathi et al., 2000). Participants stated that the care they received at the OEND clinic was compassionate and nonjudgmental, with an increased likelihood of returning to the clinic attributed to positive experiences they had with program staff. More than a quarter of the clients reported that the SEP actively referred them to the OEND clinic. The synergistic relationship between SEP and OEND clinics lends further support to the important impact that positive external incentives have on motivation in terms of HSBs (TIP, 1999). As noted in the Treatment Improvement Protocol developed by the Center for Substance Abuse and Mental Health Services Administration, “supportive and empathetic friends, rewards, or coercion of various types may stimulate motivation for change” and may serve as cues to action to increase HSBs (TIP, 1999). Referral to the OEND clinic by SEP staff is only one example of a positive external encouragement discovered in phases 1 and 2 of this study.

Just how important positive and negative external incentives are for clients’ understanding of SUD and HSB was addressed in this study. Stigmatization can have negative (i.e., enhance shame, self-destructive behaviors) and positive effects (i.e., avoidance of stigma) on the HSBs of clients suffering from SUD. Participants in this study seemed eager to utilize the OEND clinic. This utilization behavior stood in stark contrast to their pattern of avoidance behaviors with other SUD health care services (i.e., seeing a physician in the emergency room, going to detox, or participating in inpatient or
medication-assisted treatment). The fact that the OEND clients reported unilateral support by OEND clinic staff may partially explain why clients appeared committed to managing their SUD through investment in this clinic program. Their greater positivity about the OEND program as compared to other SUD programs may in part reflect differences in experiences of stigmatization. Many clinic clients reported experiencing stigma from their medical providers whereas they did not with their OEND clinic providers. Consistent with the literature (Corrigan, 2004), the OEND clients stated they would avoid traditional medical treatment and engage in lower rates of HSBs in situations where they felt stigmatized by their medical provider. The contrast in levels of stigma reported at OEND clinics (0) versus general medical treatment (36%) may explain why participants were motivated to seek out Naloxone for their SUD at this OEND clinic rather than in other medical settings. Furthermore, since OEND clients revealed a lack of comfort regarding requests for SUD services in traditional medical settings, participation in judgment-free OEND clinics should increase the likelihood of HSBs, decrease stigmatization, and improve the likelihood of recovery from SUD (Polloni et al., 2005).

Higher rates of OEND utilization as compared to clinical SUD services may partly be due to the lack of stigmatization experiencing at OEND clinics, it may also be due to their perception of OEND clinics as a casual “nonmedical” social service. Because OEND clinic clients recognized their drug use as problematic (although not necessarily a disease) it is quite possible that they may have felt more comfortable seeking help from the nonjudgmental SEP and OEND clinic staff rather than from a more formalized medical care facility. Increased participation in OEND clinics may have in part stemmed from greater access to services, something not often seen in private SUD medical
treatments facilities. Clients of the OEND clinic could drop in during hours convenient for them and quickly receive supportive, nonjudgmental care and leave with their Naloxone free of charge. This is not true of inpatient, detox, or outpatient SUD treatment services, which are often less affordable, less accessible, and more stigmatizing.

Taken together, the Health Belief Model appears to be an ideal model for explaining clients’ participation in the OEND clinic. OEND clients engaged in the HSB of seeking Naloxone regardless of their model of addiction. Understanding what motivates clients to seek out and utilize a Naloxone treatment program is critical because it is linked to the clients’ recovery journey of life-altering change (TIP, 1999). From previous research conducted in the field of addiction medicine, we know that motivation is a complex, multifaceted, and ever-changing trait (TIP, 1999) that is instrumental to behavioral change. It is influenced by internal personality factors, social interactions, individual understandings of illness, experiences of distress, critical life events, recognition of harmful consequences, and positive or negative external incentives (TIP, 1999).

Although the Health Belief Model can explain many of the motivating factors for OEND program utilization, it cannot account for all motivating variables. For example, the Health Belief Model assumes that engagement in medical services is primarily designed to promote healing or “solving” a health problem. While engagement in the OEND clinic is motivated by clients’ desire to prevent death due to overdose, it is often not due to client motivation to achieve sobriety. Typically, OEND clients’ main goal is to promote life longevity, not necessarily to promote health through abstinence from drug
use. Teasing apart the difference between prolonging life and promoting health further through additional narrative data would have been beneficial to this study's findings.

In addition, the HBM does not consider the emotional component of health-seeking behaviors (Champion & Skinner, 2008). For example, the HBM does not consider whether or not experiences of fear of death due to overdose were a primary motivating factor in participation in the OEND clinic. Research suggests that fear is a critical variable impacting health-seeking behaviors, especially when it enhances variables identified as important by the HBM, such as perceived susceptibility and severity of an illness (Witte, 1992; Rogers and Prentice-Dunn, 1997; Champion & Skinner, 2008).

Data from this study support the notion that explanatory models (models of addiction) “alone are not good predictors of people’s observed patterns of health-seeking behaviors” (Kleinman, 1988). However, they are essential for illustrating individuals’ understandings of illness etiology, perceptions of treatment efficacy, and ultimately one’s illness trajectory. As noted by Kleinman, Eisenberg, and Good (1978), explanatory models are often quite helpful in facilitating sensitivity in physician-patient interactions with these models critical for informing the development of and efficacy of public health programs.

No one theory of health-seeking can fully explain the behaviors of OEND clinic clients. For example, many theories of health-seeking behaviors stress the concepts of “illness behaviors” and “the sick role.” These concepts imply that “formal medical care is a central feature of people’s help-seeking behaviors, even though most illnesses do not reach a doctor” (Chrisman, 2013). This appeared to be the case for many of the OEND
clinic clients. Although not formally trained in biomedicine, OEND staff provide medical service to clients. Furthermore, clients of the OEND clinic may be more comfortable with these allied health professionals and never seek out formal medical care in a clinical setting as a means to procure HSB.

Theories of health seeking behavior also often incorporate the idea of the sick role. The sick role, a term coined by Parsons, implies that a sick individual is exempt from social responsibilities, is not responsible for their illness, and should engage in health seeking behaviors to recover from their illness (Parsons, 1951). Those who suffer from SUD may or may not take on a “sick role” depending on how they define their condition. Because society often stigmatizes SUD as a character flaw, those suffering from SUD are typically not absolved from responsibility for their condition or exempt from social roles in the same ways as those with less stigmatized illnesses. As noted by Nancy Waxler, the stigmatization of an illness is often more reflective of the social meaning assigned to a disease, rather than the biological processes of the disease itself (Waxler, 1981). Even with mounting biomedical evidence that supports the claim that SUD is a chronic brain disease, society’s broader understanding of SUD as a moral failing impacts how individuals suffering from SUD are treated, how and whether or not they seek out medical care, and the social expectations placed on them by society.

These study findings support the notion that motivation for OEND program use is complex, with a variety of factors (i.e., social support, stigma, mental health) influencing utilization practices in unique ways for clients. Program design appears not to be universally appealing to all clients. Since “one size does not fill all,” programs should be comprised of a diverse set of interventional strategies that have the power to
influence HSBs. Not all strategies are universally motivating for all clients; nonetheless, one or more of the smorgasbord of strategies will allow clients to move forward towards their recovery goals. By employing a holistic understanding of clients’ motivation for program utilization (Polloni et al., 2005, Seal & Thawlett, 2005), OEND programs have the potential to increase program utilization and decrease rates of death due to overdose. OEND programs capitalize on every opportunity to provide individuals with access to Naloxone and are essential tools for combating death due to overdose (SAMHSA, 2020). Understanding client motivation for OEND clinic use is the first step needed to increase global rates of Naloxone access.

Although model of addiction was not related to naloxone utilization in this study, it was related to clients’ emotional distress. Clients who ascribed to the medical model were more anxious, depressed, and indicated they lacked adequate services as compared to clients who adopted a moral or mixed addiction model. While past research argued medicalization of SUD should decrease rates of stigma and negative perceptions (Kvaale, Haslam, Gottdiener, 2013), this was not the case in this study. The medicalization of SUD appeared to cause clients to feel as though they are damaged goods, different and defective. This internalization of feelings of being different and not belonging may have contributed to diminished emotional feelings, low self-esteem, and loss of hope described in narratives by the clients in this study and other studies in the literature (Kvaale, Haslam, Gottdiener, 2013; Livingstone and Boyd, 2010, Richmand and Leary, 2009; Wright et al. 2000).

Medicalization of SUD appeared also to result in significant emotional distress, stereotyping, and stigmatization. Stereotyping of those who suffer from SUD has been
shown to increase the rates of stigma, including experiences of self-stigmatization and feelings of “otherness” (Kvaale, Haslam, Gottdiener, 2013). Experiences of self-stigmatization and stigma have been shown to negatively impact individuals suffering from all mental health disorders, especially those with SUD. Stigma may increase feelings of shame, hopelessness, self-doubt, anxiety, and depression. In this study, stigma may explain why participants subscribing to a medical model had higher rates of anxiety, depression, and mental distress than those who subscribed to a moral or mixed model (Kvaale, Haslam, Gottdiener, 2013). These negative consequences of the medicalization of SUD explain why so many of the study participants spoke of self-stigmatization in their narratives.

Important quantitative and qualitative data addressed and answered the question: who engages in the health-seeking behavior of utilizing OEND clinics to address their SUD. White, males approximately 38 years of age, were the most frequent users of the OEND clinic. These clients were highly anxious and depressed but reported being satisfied with the limited social support they had. Quantitative and qualitative data supported the finding that most clients endorsed mixed models of addiction (i.e., medical & moral). In addition, model of addiction and understanding of SUD was impacted by a variety of factors, including social interactions (both positive and negative), experiences and perceptions of stigma, individual beliefs about SUD, experiences of distress, critical or traumatic life events, recognition of harmful consequences of individual behavior, and social support (TIP, 1999). This study strongly supports the multidisciplinary and collaborative approach needed for enacting harm reduction programs. Additional
information about how those suffering from SUD understand their illness is critical to the fight against the opioid epidemic.

Anthropologists have long acknowledged the importance of considering a diverse array of variables (i.e., ethnicity, education, culture) when trying to understand the optimization of HSBs; however, little is known about HSBs in the context of OEND clinic utilization. Because individuals suffering from SUD present with a complicated mix of personal and environmental barriers to treatment, specialized treatment facilities like the OEND clinic are critical to combat the opioid epidemic. This study showed that motivation for OEND clinic participation was dynamic and fluctuating, highlighting the importance of individual experience. This study additionally highlighted the importance of perceived support from SUD treatment providers-as is indicated by OEND clinic utilization and underutilization of SUD general medical treatment.

**Importance of Study and Generalizability of Findings**

Despite access to Naloxone and a decrease in overdose deaths in 2018, rates of opioid overdose deaths have continued to rise since 2019 (Cuyahoga County Medical Examiner’s Office, 2020). Overdose deaths have been amplified by countrywide lockdown measures due to the COVID-19 pandemic, making access to SUD treatment even more critical and challenging than before (AMA, 2020). In Ohio, opioid overdose deaths have noticeably increased (7.8%; Columbus Dispatch, 2020). In October of this year, 19 overdose deaths were reported in Cuyahoga County alone, propelling the county toward its highest incidence of overdose deaths in three years (Cuyahoga County Medical Examiner’s Office, 2020). To combat this epidemic, the American Medical Association has urged states to remove any barriers to SUD treatment while simultaneously
increasing access to harm reduction initiatives such as syringe exchange programs and Naloxone access (AMA, 2020). Engaging clients in programs like the OEND clinic seems critical to support the AMA campaign. In addition, understanding who participates in OEND clinics and what personal and contextual factors support Naloxone utilization is an imperative first-step toward supporting the AMA’s recommendation and preventing overdose deaths.

Effectively reducing death due to opioid overdose requires an integrative and collaborative approach, with the utilization of OEND clinics just one piece of the solution. For the successful implementation of OEND programs, staff must gain a more thorough understanding of who is currently utilizing their services and why. Combining the quantitative and qualitative data from this study revealed that no one variable is the driving force behind OEND clinic utilization. Instead, it highlights the complexity of variables (social support, mental health status, experiences of stigma, perceived susceptibility to death due to overdose, and models of addiction) that influence motivation for seeking out Naloxone.

Limitations:

This study has many strengths, however there are some limitations worth noting. No single study can fully address all factors that influence an individual’s decision-making regarding seeking Naloxone for their SUD. Furthermore, this study was a cross-sectional sample of clients who decided to pursue Naloxone at one point in time. Relying on a single time point in data collection is less than ideal, particularly for clients who combat illness-related issues. Following clients longitudinally, as they continue to reutilize OEND clinic services and navigate their recovery journey would provide greater
insight into how and why client’s motivation for program use changes and evolves over time and what variables affected any changes in motivation. While phase 2 participants (the 61-client subgroup) provided an opportunity for an in-depth examination of clients’ experience in health-seeking behaviors and SUD, it is somewhat limited in scope due to the sample size.

Perhaps the largest limitation in this study stems from the lack of a control group (i.e., client group not engaged in treatment). All participants in this study were actively seeking Naloxone for their drug use. Although this study queried my participants about barriers to program utilization, all of these participants were active participants in the OEND clinic. Understanding how models of addiction affect treatment utilization might be better examined in SUD groups who are currently participating in treatment programs compared to groups not currently enrolled in treatment. Unfortunately, this study was unable to recruit study participants who did not utilize OEND clinics because of time and logistical constraints.

An additional limitation of this study is one of participant bias. Participants completed both quantitative questionnaires and the qualitative interview as part of this study. Their responses to these questionnaires had the potential to be unduly influenced. The participants knew the researcher as a staff member at the OEND clinic. It is possible clients felt undue pressure to participate because they did not want to disappoint or anger the researcher, particularly if they needed future services. In order to address this, the researcher stressed the voluntary nature of the study, ensuring clients their participation in the OEND clinic would not be impacted by refusal to participate in the study.
Finally, the questionnaires and interviews relied on participant self-report, which is prone to reporter biases, including participant exaggeration, lack of honesty, embarrassment, fear of stigma, and altered response presentations to conform to what participants thought the researcher wanted to hear. While the researcher reassured participants, encouraged honest answers, and reminded participants of the ability freely withdraw at any point throughout the study, nonetheless, clients may have felt unduly pressured. While participant bias could have called into question these data, the inclusion of multiple sources of data (quantitative, qualitative, and observation) strengthen the confidence in any one piece of data. This is particularly true, since most of the data converge on a similar theme regarding complex models of addiction.

**Study Strengths**

Although this study is not without its limits, it has many strengths worth noting. First, this study contributes to the Anthropology of drug use by examining how those who suffer from SUD navigate coexisting and sometimes conflicting models of addiction on their journey to recovery. Through this multi-method study, relationships between beliefs about substance use etiology, client mental health, and social support were identified. Furthermore, this study provides a comprehensive description of OEND clinic demographics, including gender, ethnicity, age, educational attainment, and marital status. Findings from the present investigation provide important insight into the unique and overlapping experiences these individuals have as a function of participation in an OEND clinic.

By ethnographically examining OEND clinic patients’ understanding of their SUD, this research highlights from a client’s perspective how they navigated coexisting
conflicting models of addiction in the context of an OEND clinic. Although Anthropology has contributed to the emic understanding of how those with SUD experience SUD treatment in the US, no studies have been conducted on how those with SUD experience treatment at OEND clinics. OEND clinic clients’ beliefs about SUD were flexible, adaptive, and negatively affected their mental health. Participants’ narratives provided a rich source of information illustrating their lived experiences of SUD. The importance of the user’s unique perspective of SUD can only be understood through a multidisciplinary, multi-methodological approach. The personal connection and reflection on research findings with staff and clientele have allowed for stronger and context informed conclusions based on various sources of data.

In addition to the valuable qualitative findings gleaned from this study, a novel quantitative approach to understanding models of addiction was developed. The Addiction Belief Inventory was developed to “evaluate and assess personal beliefs about addiction and substance use problems” (Luke et al., 2002). To build on Luke and his colleagues' findings, this study used the ABI in an innovative and novel way by developing and calculating scales that allowed for the categorization of study participants into a medical, moral, or mixed model of addiction- a methodological contribution of this study. By quantifying and creating a new ABI adherence score, this study utilized information extracted from participant ABI responses to show the existence of competing coexisting beliefs. The calculation of this new ABI adherence score supported the finding that a singular model of addiction does not hold among the OEND clinic clients. While qualitative interview findings established a majority of clients endorsing a mixed model of addiction, the new ABI adherence score allowed this study to systematically determine
and quantify client preference for one model versus the other. The ABI adherence scores also allowed this study to capture the full range of the spectrum of beliefs clients held about SUD causes that would not have otherwise been captured. In the future, it may also allow for a more in-depth examination of whether (or not) model preference impacts the health-seeking behaviors of OEND clinic clients. Future research should continue to explore the utility of the ABI adherence scores in a larger sample of clients to better understand its utility.

In summary, this study highlighted the importance of OEND clinic clients’ individual experiences and how their identity as an OEND clinic patient is shaped by the model(s) of addiction they hold. This study's data offer mixed support for the utility of models of addiction for understanding health-seeking behaviors. While the quantitative data speak to the importance of models of addiction for understanding mental health issues faced by clients, model of addiction was not related to how often the clients sought out Naloxone. Integrating the data obtained from quantitative and qualitative measures helped understand how complex models of addiction were (single model of addiction not supported), with mixed model influencing satisfaction with social support, experiences of anxiety and depression, and experiences of stigma and motivations/barriers to treatment.

Future Directions:

In summary, this research focused on understanding individual conceptions of SUD and the mitigating factors that influence health-seeking behaviors. One of the primary goals of this study was to better understand how to improve program effectiveness and save people’s lives. This research highlights, the importance of and necessity of collaborative practice (across a variety of fields, including Anthropology and
Public Health) to improve individual health outcomes and strengthen the effectiveness of harm reduction programs. OEND clinics' success appeared to lie in the compassionate and supportive program staff that reaches out and supports clients on their recovery journey from SUD. Health professionals must consider their clients' local context and individual experiences if they hope to deliver impactful and effective services to all who seek treatment. This research project addressed the OEND clients’ beliefs, desires, and worries regarding their SUD and treatment options and attempted to identify strategies for improving health outcomes for those who suffer from SUD.

Future research should continue to focus efforts on understanding and addressing the factors that affect treatment utilization of clients with SUD. For example, it would be valuable to compare the data of OEND clinic clients who feel that they are at risk for overdose versus those who do not feel they are at risk for overdose. This comparison would help provide additional insight into client motivation for program utilization. Additionally, valuable information could be gleaned from a longitudinal examination of program utilization to determine how and if client motivation for program use changes over time. Future research should also consider examining whether variables examined in the Health Belief Model can predict who utilizes the OEND clinic’s services versus those who do not. By understanding variables that contribute to OEND clinic use and variables that discourage OEND clinic use, public health practitioners are armed with the knowledge they need to improve access to Naloxone and improve SUD outcomes on a community level.

The findings of this study have a number of policy implications for the treatment of SUD. First, the findings of this study support the need for context centered strategies
to treat individuals suffering from SUD, rather than focusing on issues of abstinence and compliance (Conrad & Barker, 2010). Participants in this study demonstrated diversity in beliefs about the etiology of SUD and experiences of drug use. Because of this, interventions aimed at increasing the HSB of those with SUD must consider context and variation of the lived experience of those they are attempting to treat.

This study further gave voice to sufferers’ experiences and perspectives. By focusing on illness narratives and individual beliefs about SUD this study has the potential to led to important clinical reforms. This study highlights the importance of narrative medicine or “medicine practiced with the skills of recognizing, absorbing, interpreting, and being moved by stories of illness” (Charon, 2006). Focusing on patient narratives, allows medical providers to treat patients more holistically, better comprehend patient suffering, provide more effective care, and improve empathy- all of which have the potential to positively impact patient outcomes and lead to clinical reforms (Conrad and Barker, 2010; Shakir & Vannatta et al.)

Finally, policy responses to medical problems are influenced by how the medical problems are defined and framed in society (Conrad and Barker, 2010). The emphasis of SUD as a chronic brain disease in the field of biomedicine has the potential to diminish the importance of social factors that contribute to SUD. SUD is a highly stigmatized disease, and is laden with cultural meaning. How individuals understand and define their experiences of SUD is influenced by society’s response to SUD. As such, understanding models of addiction and the etiological beliefs of those who suffer from SUD has the potential to enrich policy decisions moving beyond medicine’s deterministic logic toward a context focused, individualized SUD treatment plan.
### Table 1: Objectives and Research Questions (Full Version)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Questions</th>
<th>Data Used to Address</th>
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</table>
| Understanding who engages in the utilization of OEND clinic and what factors affect this HSB | 1. Who engages in HSB?  
   a. What is the demographic of the clientele who came to the OEND?  
   b. Does Anxiety, Depression, and social support affect engagement in OEND clinics?  
   c. How do clients understand their SUD needs? | Phase 1 Data  
   - Demographic  
   - Mental Health  
   - Social Support  
   - ABI Scale Scores  
   - New ABI Scores |
| 2. What models of addiction do clients hold?  
   a. How do clients understand their addiction behaviors?  
   b. What model(s) do they ascribe to in conceptualizing their SUD?  
   c. Do models of addiction relate to their demographics, mental health, social support, and willingness to engage in the OEND clinic? | | |
| Understanding how OEND clients frame the understanding of their SUD and whether their model of addiction affects HSBs | 3. What insight do qualitative interviews provide into clients’ understanding of their SUD and HSB?  
   a. Do clients hold distinct and potentially conflicting models of addiction?  
   b. What are the causes underlying the SUD?  
   c. How do the interview themes and codes enhance our understanding? | Phase 2  
   - Models of addiction  
   - Stigmatization  
   - Social Support  
   - Motivation to Use OEND  
   - Barriers |
<table>
<thead>
<tr>
<th>Understanding of the models?</th>
<th>3D: What does the interview tell us about stigmatization?</th>
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<tbody>
<tr>
<td>3E: What does the Interview tell us about social support?</td>
<td>3F: What does the interview tell us about motivation to use OEND clinic?</td>
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<tr>
<td>Interview Topic Area</td>
<td>Interview Question</td>
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<td><strong>Beliefs about SUD</strong></td>
<td>1. Growing up, were their members of your immediate family who used drugs and alcohol?</td>
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<td>2. When did you first start using drugs? What substances have you used and are you concerned with substance use disorder issues for any of these substances?</td>
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<td>3. Have you ever been diagnosed with substance use disorder?</td>
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<td>4. How were you initially introduced to drugs and what led to your use of opioids?</td>
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<td>5. Some people feel like those addicted to drugs and alcohol can control their drug use or learn to control their using where others do not feel this is possible? Can you briefly explain how you feel about this issue and why?</td>
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<td>6. Do you think individuals who suffer from substance use disorder can use drugs socially if they receive treatment for their substance use? Why or why not?</td>
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<td>7. Some individuals feel that drug problems can only get worse while others feel they can get better.</td>
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<td>What is your opinion on this statement?</td>
<td>6. Recovery is a continuous process that never ends</td>
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<td>8. What are your opinions on an individual’s ability to heal from substance use disorder? Is it possible?</td>
<td>7. To be healed, addicted persons have to stop using all substance</td>
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<tr>
<td>9. Do you think individuals suffering from substance use disorder have to stop using all substances in order to achieve recovery or just their substance of choice?</td>
<td>8. Drug abuse is a disease</td>
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<td>10. Do you believe drug abuse is a disease? Why or why not?</td>
<td>9. Addicts are not capable of solving their drug problem on their own</td>
</tr>
<tr>
<td>11. Some people believe that addicts are not capable of solving drug problems on their own but instead must seek out professional help. How do you feel about this statement? Do you agree or disagree and why?</td>
<td>10. An addict must seek professional help</td>
</tr>
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<td>12. Do you think it is necessary to rely on addiction experts for help and guidance in order to achieve recovery from substance use disorder? Why or why not?</td>
<td>11. A recovering addict should rely on other experts for help and guidance</td>
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<td>13. Do you think individuals should be held responsible for things they do while high or drunk? Why or why not?</td>
<td>12. An addict should not be held accountable for things they do while drunk/ high</td>
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<td></td>
<td>13. It is not an addict’s fault they use</td>
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<tr>
<td>Question</td>
<td>Response</td>
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<tr>
<td>14. Addicts are not responsible for things they did before they learned about their addiction</td>
<td>15. Addicts are responsible for their recovery</td>
</tr>
<tr>
<td>14. Who is responsible for an addict’s recovery and why?</td>
<td>16. Only the addict themselves can decide when to stop using drugs</td>
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<td></td>
<td>17. Ultimately, the addict is responsible to fix him/herself</td>
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<td>27. Addicts are personally responsible for their addiction</td>
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<td>15. Some people think addicts made a choice to use and their drug use is a sign of personal weakness. How do you feel when you hear this statement? Do you agree or disagree?</td>
<td>26. Abusing drugs is a sign of personal weakness</td>
</tr>
<tr>
<td>16. The causes of substance use disorder are quite complicated. What do you think causes people to become addicted to drugs? Are they addicts from birth? Is addiction inherited?</td>
<td>18. Some people are addicts from birth</td>
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<td></td>
<td>19. Drug addiction is inherited</td>
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<td>20. Children of addicts who drink or use drugs will become alcoholics/addicts</td>
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<td>17. Some people feel that addicts use substances as coping mechanisms to deal with bad situations, to</td>
<td>21. An addicted person uses alcohol/drugs to</td>
</tr>
<tr>
<td>Question</td>
<td>Statement</td>
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| lessen depression, or to feel better about themselves. In your experiences do you think this is true? Why or why not? | avoid personal problems  
22. People use drugs/alcohol to feel better about themselves  
23. People use substances to lessen their depression  
24. Addicts use because they cannot cope with life  
25. Addicts use substances to escape from bad family situations |
| 18. Do you think substance use disorder is a serious problem? Is something that needs to be addressed actively in the medical community? In the legal community? Or will it go away on its own? | 10. An addict must seek professional help  
11. A recovering addict should rely on other experts for help and guidance |
| 19. Some people believe you are an addict or you aren’t, whereas others believe there are degrees of substance use disorder? How do you understand substance use disorder and why? | 18. Some people are addicts from birth |
| 20. It is not uncommon to hear people say individuals suffering from substance use disorder are at fault for their drug use and that relapse is a personal failure. What do you think about this statement? How does it make you feel? | 28. Relapse is a personal failure  
30. It is their fault if an addict relapses |
| 21. Why do you think people start abusing drugs? | 29. Addicts start using because they want to |
| 22. Do you think people are responsible for their own addiction? Please explain. | 23. It is not an addict’s fault they use |
| 23. Some people feel that those suffering from substance use disorder cannot be helped because they have to decide for them self to stop using drugs and they are ultimately responsible for fixing them self. Do you believe this is true? Why or why not? | 16. Only the addict themselves can decide when to stop using drugs |
| 24. Do you think individuals who have parents who suffer from substance use disorder will also suffer from substance use disorder themselves? Why or why not? | 20. Children of addicts who drink or use drugs will become alcoholics/addicts |

**Utilization of OEND Clinic**

<p>| 1. How many times have you utilized the OEND clinic? |
| 2. What motivated you to come sign up for Naloxone? Was there a specific event that triggered your participation? |
| 3. Where there any reasons you did not want to visit the OEND clinic? What were they? Why did you feel that way? |
| 4. What can the OEND clinic staff do to address any barriers to program use? Or to help people feel more comfortable coming into our clinics? |
| 5. Do you feel like you are at risk of an overdose? Why or why not? |
| 6. Do you feel adequately prepared to save someone’s life with Naloxone after being trained at the OEND clinic? Is there something more you think staff should do? |</p>
<table>
<thead>
<tr>
<th><strong>Stigma</strong></th>
<th>1. How has stigma impacted the ways in which you think about substance use disorder?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Has the stigma you have experienced ever made you feel uncomfortable seeking out medical care such as detox, medication assisted treatment, or even OEND clinic services?</td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td>1. Who if anyone, knows about your engagement in the OEND clinic?</td>
</tr>
<tr>
<td></td>
<td>2. Has anyone in your social network impacted your willingness to utilize the OEND clinic (either positively or negatively)? If so how?</td>
</tr>
<tr>
<td></td>
<td>3. Does anyone in your social network (i.e. family or friends) utilize the OEND clinic services as well? If yes, what do you think motivated them to sign up? Are they using the program on your behalf or on their own? If no, why do you think they don’t use the program? Have you ever asked them to participate with you?</td>
</tr>
<tr>
<td></td>
<td>4. Have you ever experienced any negative feedback from your family and friends about your utilization of the OEND clinic? If so what was said and why?</td>
</tr>
<tr>
<td></td>
<td>5. Do you feel supported in your use of the OEND clinic? If yes, does the support you experience help empower you to seek out medical treatment? If no, why?</td>
</tr>
</tbody>
</table>
## Appendix A: Code Book for Qualitative Interview

**Themes, Codes, and Code Definitions used for NVivo Thematic Analysis**

<table>
<thead>
<tr>
<th>Themes Identified</th>
<th>Codes utilized</th>
<th>Code Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Individual beliefs about Models of addiction</td>
<td>• Moral model</td>
<td>Referring to SUD as a personal weakness, moral failing, or character flaw.</td>
</tr>
<tr>
<td></td>
<td>• Disease model</td>
<td>Reference to SUD as an illness, disease, or sickness, inherited</td>
</tr>
<tr>
<td></td>
<td>• Control of SUD</td>
<td>Reference to personable ability to control of SUD</td>
</tr>
<tr>
<td></td>
<td>• No control of SUD</td>
<td>Reference to inability to control of one’s SUD</td>
</tr>
<tr>
<td></td>
<td>• Need for formal treatment</td>
<td>Reference the belief that they need formal medical treatment to address their SUD- including detox, MAT, Naloxone, inpatient care, IOP, etc.</td>
</tr>
<tr>
<td></td>
<td>• No need for formal treatment</td>
<td>Reference to the belief that they can solve the problem of SUD without formal medical treatment- through the power of their own will.</td>
</tr>
<tr>
<td></td>
<td>• Personal responsibility for recovery</td>
<td>The individual indicates it is solely their responsibility to recover from their drug use</td>
</tr>
<tr>
<td>2. Motivation for OEND Clinic Utilization</td>
<td>• Past trauma</td>
<td>Participant indicated they first participated in the OEND clinic due to past trauma (personal OD, witnessing a friend or family member)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>OD, witnessing an OD death, etc.)</strong></td>
<td><strong>OD, witnessing an OD death, etc.)</strong></td>
<td></td>
</tr>
<tr>
<td>• Court ordered</td>
<td>• Court ordered</td>
<td></td>
</tr>
<tr>
<td>Participants indicated they first signed up for Naloxone because they were ordered by the courts</td>
<td>Participants indicated they first signed up for Naloxone because they were ordered by the courts</td>
<td></td>
</tr>
<tr>
<td>• Referred by SEP</td>
<td>• Referred by SEP</td>
<td></td>
</tr>
<tr>
<td>Participants indicated they initially signed up for Naloxone because they were encouraged to or referred to the OEND clinic by the SEP staff</td>
<td>Participants indicated they initially signed up for Naloxone because they were encouraged to or referred to the OEND clinic by the SEP staff</td>
<td></td>
</tr>
<tr>
<td>• Fam/ Friend encouraged</td>
<td>• Fam/ Friend encouraged</td>
<td></td>
</tr>
<tr>
<td>Participants indicated they initially signed up for Naloxone because they were encouraged to do so by their family or friends.</td>
<td>Participants indicated they initially signed up for Naloxone because they were encouraged to do so by their family or friends.</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Barriers to Program Use

<p>| • Embarrassment                                                      | • Embarrassment                                                      |
| Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to issues of embarrassment | Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to issues of embarrassment |
| • Stigma                                                            | • Stigma                                                            |
| Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to fears or experience of stigma | Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to fears or experience of stigma |
| • Transportation                                                    | • Transportation                                                    |
| Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to issues of transportation | Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to issues of transportation |</p>
<table>
<thead>
<tr>
<th></th>
<th>Lack of access</th>
<th>Participants indicated hesitation, refusal, or inability to use OEND clinics in the past due to lack of access</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>Participants indicated no hesitation, refusal, or inability to use OEND clinics in the past</td>
</tr>
</tbody>
</table>

4. Perceptions of Preparedness to respond to an Overdose

<table>
<thead>
<tr>
<th></th>
<th>Preparedness-Yes</th>
<th>Participants indicated they were prepared to respond to an overdose utilizing Naloxone after the training they received from the OEND clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparedness-No</td>
<td>Participants indicated they were not prepared to respond to an overdose utilizing Naloxone after the training they received from the OEND clinic</td>
</tr>
</tbody>
</table>

5. Perceptions of Effectiveness of Naloxone

<table>
<thead>
<tr>
<th></th>
<th>Perceived effective</th>
<th>Participants indicated they believed Naloxone was an effective method to save an individual from an overdose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perceived ineffective</td>
<td>Participants indicated they believed Naloxone was an ineffective method to save an individual from an overdose</td>
</tr>
</tbody>
</table>

6. Experiences with Stigmatization of Drug Use

<p>|  | Perceived stigma | Stigma that they sensed, felt, or anticipated from |</p>
<table>
<thead>
<tr>
<th>Stigma Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical provider stigma</td>
<td>Stigma they experienced regarding their SUD from their medical providers</td>
</tr>
<tr>
<td>Family friend stigma</td>
<td>Stigma they experienced regarding their SUD from their family and friends</td>
</tr>
<tr>
<td>Self-stigmatization</td>
<td>Negative self-talk and stigma they projected on themselves because of their SUD</td>
</tr>
<tr>
<td>Impact stigma-Yes</td>
<td>Participant indicated that the stigma they experienced influenced their perceptions of SUD or their willingness to seek medical care</td>
</tr>
<tr>
<td>Impact stigma-No</td>
<td>Participant indicated that the stigma they experienced did not influence their perceptions of SUD or their willingness to seek medical care</td>
</tr>
</tbody>
</table>

7. Motivation for Drug use

<table>
<thead>
<tr>
<th>Motivation Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping</td>
<td>Reference to SUD as a coping mechanism for past traumas or a means to escape from their lives</td>
</tr>
<tr>
<td>Fun</td>
<td>Reference to SUD as a fun thing to do, and the</td>
</tr>
<tr>
<td>Interpersonal influence</td>
<td>SUD due to friends or family use or influence</td>
</tr>
<tr>
<td>Prescription opioids</td>
<td>SUD as a result of being prescribed opioids</td>
</tr>
</tbody>
</table>
### 8. Social Support

- **Physical dependence**: Continued drug use to address withdrawal symptoms due to physical dependence on drugs.

- **Perceived social support**: Reported experiencing social support in their lives (especially as pertaining to the challenges they faced due to their SUD).

- **Perceived lack of social support**: Participants reported a lack of social support in their lives (especially pertaining to the challenges they faced due to their SUD).

- **Social support impact OEND clinic use**: Participants reported the social support they experienced as having an impact on their participation in the OEND clinic.

- **Social support NOT impact OEND clinic use**: Participants reported the social support they experienced did not have an impact on their participation in the OEND clinic.

- **Social support needed**: Participants reported feeling the need for social support in their lives (especially pertaining to the challenges they faced due to their SUD).

### 9. Miscellaneous

- **Formal SUD Diagnosis (Yes)**: Diagnosed with SUD by a medical practitioner.
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal SUD Diagnosis (No)</td>
<td>Never diagnosed with SUD by a medical practitioner</td>
</tr>
<tr>
<td>Formal SUD Diagnosis (unsure)</td>
<td>Unsure if diagnosed with SUD by a medical practitioner</td>
</tr>
<tr>
<td>OEND clinic Program advice</td>
<td>Participants offered advice for improvement of OEND services</td>
</tr>
<tr>
<td>Personal risk for OD (Y)</td>
<td>Participants reported feeling personally at risk for experiencing an overdose</td>
</tr>
<tr>
<td>Personal risk for OD (N)</td>
<td>Participants reported feeling they were not personally at risk for experiencing an overdose</td>
</tr>
</tbody>
</table>
NOTIFICATION OF INITIAL APPROVAL

Date: March 20, 2019
From: Ann Avery, M.D.
To: Joan Papp
CC:

Key Personnel:
Emily Metz
Joan Papp
Maureen Floriano

Department Chair:
Charles Emerman  Emergency Medicine

Re: Study # IRB19-00021  The Influence of Models of Addiction on Health Seeking Behaviors: A Case Study at an Opioid Overdose Education and Naloxone Distribution Clinic

Link: IRB19-00021
Renewal Period: 12 Months

EMR Note Required: Not Required

Risk: Not Greater Than Minimal Risk

I am pleased to inform you that the above referenced protocol was approved on 3/20/2019. Approval of the protocol and the consent form(s) is for the period of 3/20/2019 to 3/19/2020.

Expedited Regulatory Category:


Regulation 45CFR46.109(e) requires that the Institutional Review Board review all studies "not less than once per year". The Institutional Review Board will attempt to notify investigators in advance of impending expiration, but it remains the responsibility of investigators to remain aware of the study expiration date and to submit a Continuing Review Application in a timely manner.

No deviations from the Approved Protocol may be initiated without MetroHealth Institutional Review Board review and approval, except when necessary to eliminate apparent immediate hazards to the participant. Any such change must be reported promptly (within 24 hours) to the IRB via the eIRB reportable event application.

All Reportable Events or Unanticipated Problems that occur with this study must be reported to the Institutional Review Board within ten working days (from the time they become known to the Principal Investigator). Internal Subjects deaths must be reported to the IRB immediately (within 24 hours) of the Investigator or study team becoming aware of it. For any questions on reporting Adverse Events or Unanticipated Problems, please call the IRB Office (216-778-7575) or consult the MHS eIRB SOPs.

If applicable, all approved Consent Forms may be found on the Documents Tab of your approved Study (use only those listed under Approved Consent Forms). These are the only forms you are permitted to use to consent subjects. Subjects must be given a signed and dated copy of the consent prior to their participation.

All research conducted in The MetroHealth System must be conducted according to applicable Federal, State, and Local regulations and MetroHealth Policies and IRBs. In addition, investigators are required to follow Good Clinical Practices (GCPs) as outlined in the ICH Guidelines. This is a requirement not only of the MetroHealth Institutional Review Board but also of The MetroHealth System. If you are not familiar with these guidelines, you can find a copy of them on the IRB Home Page under General Information for Investigators.

If your study is selected for audit by the IRB, the study files and your conduct of the study will be assessed against all MetroHealth IRB SOPs, Federal, State, and Local Regulations governing research, Institutional policies, and GCPs.

This study is next subject to continuing review on or before 3/19/2020, unless it is closed before that date. Please inform the IRB promptly when your study is completed. To close this study, you will need to complete and submit a Continuing Review which will serve as your final report to the IRB. On the
Continuing Review form question 1.2, select Completed/Closed then complete the forms and submit them to the IRB. Please contact the IRB Office at 216-778-5459 if you have any questions or need assistance.

All pediatric research is reviewed under the applicable regulations at 45CFR46.404-408 and the parallel FDA regulations if applicable.

Comments:
Even though this study has been approved by the IRB, there may be other approvals needed before you can start your research. You may not start your study until you have a signed contract with your sponsor (if applicable). The contract language on subject injury must be consistent with the consent form language. If it is not, you will need to submit an Amendment to the IRB before starting your study.

Approved Documents:

<table>
<thead>
<tr>
<th>Name</th>
<th>Version</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>interview transcript.pdf</td>
<td>0.01</td>
<td>3/20/2019 11:28 AM</td>
</tr>
<tr>
<td>IRB19-00021 audio consent V2 clean version.docx.pdf</td>
<td>0.01</td>
<td>3/20/2019 11:28 AM</td>
</tr>
<tr>
<td>IRB19-00021 ICF V2 clean.docx.pdf</td>
<td>0.01</td>
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<td>IRB19-00021 Recruitment script.docx.pdf</td>
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</tr>
<tr>
<td>Measures.pdf</td>
<td>0.01</td>
<td>3/20/2019 11:28 AM</td>
</tr>
</tbody>
</table>

Sincerely,

Ann Avery, M.D.

MetroHealth Institutional Review Board, Chairperson
Appendix C: Phase 1 Quantitative Questionnaires

IRB #: IRB19-00021
Date Approved: 3/20/2019
Expiration Date: 3/19/2020 11:59 PM

Demographics:

Directions: Please complete the following questions.

1. Gender □ Male □ Female □ Male to female transgender □ Female to male transgender

2. Age ______________________

3. Race □ Caucasian □ African American □ Asian or Pacific Islander □ Hispanic/ Latino □ American Indian/ Native American □ Other ______________________

4. Marital Status □ Single □ Married □ Widowed □ Divorced □ Living as Married □ Separated

5. Education □ Less than high school □ High school diploma/ GED □ Some College □ College Degree □ Some Advanced Degree □ Advanced Degree

6. Employment □ Unemployed □ Employed (part time) □ Employed (full time)

7. Religious affiliation ______________________

8. In terms of your substance use/ substance use disorder what is the most important service that you are not currently receiving that you think you need:

______________________________

9. Are there any services you are currently receiving for of your substance use/ substance use disorder that you do not feel that you need?

______________________________

10. What advice would you give service providers to improve services for substance use/ substance use disorder?

______________________________

11. How many times have you received a Naloxone kit from Project DAWN?

_______
Addiction Belief Inventory:

**Directions:** Please read each of the statements below and rate your level of agreement to each statement, in relation to opioid use, using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. An addicted person can control their use
2. Addicts can learn to control their using
3. Addicted persons are capable of using drugs socially
4. Treatment can allow addicts to use socially
5. A drug problem can only get worse
6. Recovery is a continuous process that never ends
7. To be healed, addicted persons have to stop using all substances
8. Drug abuse is a disease
9. Addicts are not capable of solving their drug problem on their own
10. An addict must seek professional help
11. A recovering addict should rely on other experts for help and guidance
12. An addict should not be held accountable for things they do while drunk/high
13. It is not an addict’s fault they use
14. Addicts are not responsible for things they did before they learned about their addiction
15. Addicts are responsible for their recovery
16. Only the addict themselves can decide when to stop using drugs
17. Ultimately, the addict is responsible to fix him/herself
18. Some people are addicts from birth
19. Drug addiction is inherited
20. Children of addicts who drink or use drugs will be come alcoholics/addicts
21. An addicted person uses alcohol/drugs to avoid personal problems
22. People use drugs/alcohol to feel better about themselves
23. People use substances to lessen their depression
24. Addicts use because they cannot cope with life
25. Addicts use substances to escape from bad family situations
26. Abusing drugs is a sign of personal weakness
27. Addicts are personally responsible for their addiction
28. Relapse is a personal failure
29. Addicts start using because they want to
30. It is their fault if an addict relapses

**PHQ-4 Four Item Patient Health Questionnaire for Anxiety and Depression**

**Directions:** Please read the following questions and indicate how often you have been bothered by the following problems:

<table>
<thead>
<tr>
<th>Over the last two weeks, how often have you been bothered by the following problems?</th>
<th>Not at all</th>
<th>Several Days</th>
<th>More than half the days</th>
<th>Nearly everyday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling nervous, anxious or on edge</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Not being able to stop or control worrying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling down, depressed or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**SSQ: Social Support Questionnaire**

**Directions:** The following questions ask about people in your life who provide you with help or support. For each question please indicate the number of people whom you can count on for support in the manner described. Then indicate the satisfaction you feel with their support.

<table>
<thead>
<tr>
<th>1. Who can you count on to distract you from your worries when you feel under stress?</th>
<th>Initials for up to 4 people:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a How satisfied are you with their support?</td>
<td>Very Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?</th>
<th>Initials for up to 9 people:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a How satisfied are you with their support?</td>
<td>Very Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Who accepts you totally including both your worst and your best points?</td>
</tr>
<tr>
<td>3a</td>
<td>How satisfied are you with their support?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Who can you really count on to care about you, regardless of what is happening to you?</td>
</tr>
<tr>
<td>4a</td>
<td>How satisfied are you with their support?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Whom can you really count on to help you feel better when you are feeling generally down in the dumps?</td>
</tr>
<tr>
<td>5a</td>
<td>How satisfied are you with their support?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Whom can you count on to console you when you are very upset?</td>
</tr>
<tr>
<td>6a</td>
<td>How satisfied are you with their support?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Phase 2 Qualitative Interview

IRB #: IRB19-00021
Date Approved: 3/20/2019
Expiration Date: 3/19/2020 11:59 PM

Ethnographic Interview

**INTRODUCTION:** (READ) In this interview I will be asking you questions about your beliefs about substance use disorder and your participation in Project DAWN. These questions will cover many aspects of your experience here at Project DAWN including: motivation for program use, beliefs about what causes substance use disorder, legitimacy of harm reduction treatment, social support, etc. Understanding how people interpret substance use disorder is one of the main purposes of this study. How individuals come to the decision to seek out Naloxone and whether or not it is impacted by their beliefs about substance use disorder is another goal of this study. I hope to learn about your unique individual experiences. In the future, this data will be used to help us reach more individuals at risk of overdose, as well as improve staff members’ understanding of the obstacles to seeking treatment.

There are no right or wrong answers to the questions I will be asking you. None of your personal information will be shared with anyone outside of the research team. Your name will not be included in transcription to protect your privacy.

**Beliefs about Substance Use Disorder:**

1. Experiences with drugs vary from one person to the next. I am trying to understand your experiences and opinions. Growing up, were their members of your immediate family who used drugs and alcohol? (list all members, substances used, & appropriate use or abuse)
2. Each of us has our own history with drug use. When did you first start using drugs? What substances have you used and are you concerned with substance use disorder issues for any of these substances?
3. Have you ever been diagnosed with substance use disorder?
4. How were you initially introduced to drugs and what led to your use of opioids?
5. Some people feel like those addicted to drugs and alcohol can control their drug use or learn to control their using where others do not feel this is possible? Can you briefly explain how you feel about this issue and why?
6. Do you think individuals who suffer from substance use disorder can use drugs socially if they receive treatment for their substance use? Why or why not?
7. Some individuals feel that drug problems can only get worse while others feel they can get better. What is your opinion on this statement?
8. What are your opinions on an individual’s ability to heal from substance use disorder? Is it possible?
9. Do you think individuals suffering from substance use disorder have to stop using all substances in order to achieve recovery or just their substance of choice?
10. Do you believe drug abuse is a disease? Why or why not?
11. Some people believe that addicts are not capable of solving drug problems on their own but instead must seek out professional help. How do you feel about this statement? Do you agree or disagree and why?

12. Do you think it is necessary to rely on addiction experts for help and guidance in order to achieve recovery from substance use disorder? Why or why not?

13. Do you think individuals should be held responsible for things they do while high or drunk? Why or why not?

14. Who is responsible for an addict’s recovery and why?

15. Some people think addicts made a choice to use and their drug use is a sign of personal weakness. How do you feel when you hear this statement? Do you agree or disagree?

16. The causes of substance use disorder are quite complicated. What do you think causes people to become addicted to drugs? Are they addicts from birth? Is addiction inherited?

17. Some people feel that addicts use substances as coping mechanisms to deal with bad situations, to lessen depression, or to feel better about themselves. In your experiences do you think this is true? Why or why not?

18. Do you think substance use disorder is a serious problem? Is something that needs to be addressed actively in the medical community? In the legal community? Or will it go away on its own?

19. Some people believe you are an addict or you aren’t, whereas others believe there are degrees of substance use disorder. How do you understand substance use disorder and why?

20. It is not uncommon to hear people say individuals suffering from substance use disorder are at fault for their drug use and that relapse is a personal failure. What do you think about this statement? How does it make you feel?

21. Why do you think people start abusing drugs?

22. Do you think people are responsible for their own addiction? Please explain.

23. Some people feel that those suffering from substance use disorder cannot be helped because they have to decide for themselves to stop using drugs and they are ultimately responsible for fixing themselves. Do you believe this is true? Why or why not?

24. Do you think individuals who have parents who suffer from substance use disorder will also suffer from substance use disorder themselves? Why or why not?

Utilization of Project DAWN:

1. How many times have you come to Project DAWN?

2. What motivated you to come in to sign up for Naloxone? Was there any specific event that triggered your participation?

3. Where there any reasons you didn’t want to come visit us at Project DAWN? What are they? Why did you feel that way?

4. What can Project DAWN staff do to address any barriers to program use? Or to help people feel more comfortable coming into our clinics?
5. Do you feel like you are at risk of an overdose? Why or why not?
6. Do you feel adequately prepared to save someone’s life with Narcan after being trained at Project DAWN? Is the something more you think we should do?

**Stigma:**
1. How has stigma impacted the ways you think about substance use disorder?
2. Has the stigma you have experienced ever made you feel uncomfortable to seek out medical care such as detox, medication assisted treatment, or even Project DAWN?

**Social Support**
1. Who if anyone knows about your engagement in Project DAWN?
2. Has anyone in your social network impacted your willingness to utilize Project DAWN (i.e. positive or negative)? If so how?
3. Do anyone in your social network (i.e. family or friends) use Project Dawn services as well? If yes, what do you think made them decide to use the program? Are they using the program on your behalf or their own? If no, why do you think they don’t use the program? Have you ever asked them to participate with you?
4. Have you ever experienced negative feedback from your family and friends about your utilization of Project DAWN? If so what was said and why?
5. Do you feel supported in your use of Project DAWN? If yes, does the support you experience help to empower you to seek medical treatment?

Thank you for taking the time to participate in my study. Please feel free to follow up with me if you have any questions or any other information to add to your interview.
Appendix E – Grant Funding

DEPARTMENT OF BIOETHICS
10900 Euclid Avenue
Cleveland, Ohio 44106-4976
Phone: 216-368-2259
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May 6th 2019

Dear Maureen,

Thank you for submitting an application for the Department of Bioethics’ 2019 Medicine, Society & Culture Graduate Student Research and Travel Grant competition for graduate and professional students. This year, we received a large number of robust and compelling applications from students across the university. All applications were reviewed by an interdisciplinary committee. We are delighted to inform you that yours was among the very best and one of those selected for funding.

In order to support all of our top candidates, we need to alert you that none of the awardees received 100% of requested funding. You have been awarded $3000 for 2019. We are hopeful that this award still will be of substantial assistance in advancing your work.

It is of utmost importance that your award funds are used for the 2018-2019 fiscal year, ending June 30, 2019. Therefore, please plan on purchasing research supplies and/or booking travel as soon as possible. Disbursement of funding for awardees typically operates on a reimbursement basis. In order to receive reimbursement, please email your student ID number, receipts, a copy of this award letter, and any other supporting documentation to the Administrative Director of the Department of Bioethics, Barb Juknialis, at bwj@case.edu. Barb will assist you with any questions you have about the logistics of receiving funds. Any funds not disbursed by June 30th will be forfeited.

Congratulations on your excellent work. We wish you all the best on your upcoming research endeavors.

Sincerely,

Julia Knopes, Ph.D.
Postdoctoral Scholar in Bioethics and Medical Humanities
Adjunct Instructor of Bioethics
Case Western Reserve University School of Medicine

Eileen P. Anderson-Fye, Ed.D.
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Incomplete citation


