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Attitudes of Providers and Researchers Toward Harm Reduction Strategies

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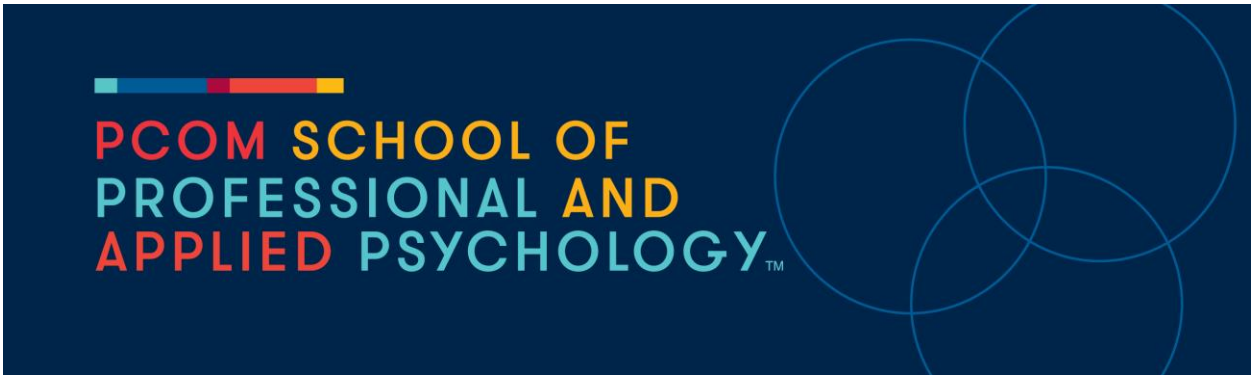

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requirements for the degree of Doctor of Psychology, has been examined and is

acceptable in both scholarship and literary quality.

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ABSTRACT

The present study utilized a mix methods approach to examine the relationship between professional role, years of experience, and support for harm reduction strategies to treat Opioid Use Disorder. There were 84 participants who completed the online survey. The survey included both quantitative and qualitative questions about their professional role, years of experience, age, use of cognitive behavioral therapy for opioid use disorder, and support for harm reduction strategies. There was no significant association among years of experience and support for harm reduction strategies (including safe injection sites). Additionally, there were no significant findings among age and support for harm reduction strategies (including safe injection sites). The qualitative data revealed both positive (i.e. facilitates treatment, new needles/harm reduction, disease prevention, etc.) and negative themes (i.e. enables drug use, access to drugs, effects on the community, etc.) about safe injection sites. Given the nonsignificant findings variety of qualitative responses, further research should be conducted to explore support of harm reduction strategies among mental health professionals.

CHAPTER 1: INTRODUCTION

Statement of the Problem

According to Dydyk, Jain, and Gupta (2020), 2.1 million individuals in the United States currently suffer with Opioid Use Disorder. Opioid Use Disorder, as defined by the Diagnostic Statistical Manual for Mental Disorders (5th ed.; DSM–5; American Psychiatric Association, 2013), is characterized by larger amounts of opioid use or longer periods of opioid use than intended, desire or unsuccessful attempts to cut down on opioid use, ample time spent obtaining opioids, cravings to use opioids, social and interpersonal problems from opioid use, opioid use that causes physical problems, tolerance, withdrawal, and opioid use causing difficulties at work, home, or school (American Psychiatric Association [APA], 2013). Annually, 120,000 deaths worldwide are due to opioid use (Dydyk et al., 2020). Due to the substantial amount of deaths as a result of the opioid epidemic, it is crucial for public mental health that harm reduction strategies are utilized to save lives. These strategies are used with the knowledge that sobriety is difficult to maintain and that allowing individuals with addiction to consider strategies that are not abstinence based can be beneficial socially, legally, biomedically, and economically (Bonar & Rosenberg, 2010).

Opioid substitution therapy, is a strategy in which individuals who are addicted to opioids are given other forms of opioids, such as methadone, a synthetic opioid used as an oral medication, or a combination of partial agonists like suboxone, in order to prevent withdrawal symptoms or opioid intoxication so that these individuals struggling with Opioid Use Disorder can maintain a productive lifestyle. Another harm reduction strategy is needle exchange programs, in which individuals who use injection drugs are provided with clean needles to prevent the transmission of blood borne diseases such as human immunodeficiency virus (HIV)

and Hepatitis C (Logan & Marlatt, 2010). A meta-analysis conducted by Platt and colleagues (2018) found that individuals who are utilizing opioid substitution therapy and needle exchange programs experienced a 74% reduction in Hepatitis C infection compared to injection drug users who did not use opioid substitution therapy or needle exchange programs. Another harm reduction strategy, that is often considered the most controversial, is safe injection sites. At these sites, individuals who use injection drugs can inject drugs using clean equipment in the presence of medical personnel. The goal of these sites is to prevent overdoses (Logan & Marlatt, 2010). Wallace, Pagan, and Pauly (2019) conducted a study on 20 safe injection sites in Canada and found that throughout those sites, there were 550,000 visits in the first year and zero overdose deaths, speaking to the efficacy of these sites for saving lives (Wallace et al., 2019).

Despite the scientific support for harm reduction strategies, there is still stigma surrounding opioid use that affects public acceptance. In a study of public opinion on harm reduction strategies conducted by McGinty and colleagues (2018), found that individuals in the study reported stigmatized attitudes toward individuals using opioids. For example, 16% of participants reported that they would be ok with someone who uses opioids marrying into the family. Whereas 28% of participants were comfortable with working closely with someone using opioids. Only 27% of respondents identified individuals who use opioids as deserving versus worthless, while only 10% of participants identified individuals who use opioids as strong versus weak (McGinty et al., 2018). It is postulated that these stigmatizing views may be exacerbated by mental health clinician's lack of support and public advocacy for harm reduction strategies for opioid users. However, there is currently very little research that examines clinician's perceptions of harm reductions strategies and safe injection sites. Therefore, it is crucial that research is conducted to understand clinician's views of harm reduction strategies and safe

injection sites. Additionally, it is suspected that if mental health clinicians are viewed as experts and are not publicly advocating for harm reduction strategies and safe injection sites, resulting in doubt and lack of confidence in these strategies. These harmful beliefs could ultimately affect public policy. Therefore, the current study will examine how clinicians' perceptions of safe injection sites and other harm reduction strategies ultimately affect public policy. Previous research indicates that only 29% of people supported safe consumption sites and 39% supported syringe exchange programs (McGinty et al., 2018). It is suspected that low acceptability may be related to the perception that drug use is a criminal justice issue, rather than a mental health or public health problem; and that harm reduction does not eliminate drug use but rather eliminates the issues associated with drug use (Barry, 2017; McGinty et al., 2018). However, proponents of safe injection sites have continued advocating for harm reduction strategies due to the lowered rates of infectious disease, such as Hepatitis C and HIV, fewer overdose deaths, less public syringe disposal, and no upticks in crime surrounding pre-established safe injection sites (Barry et al., 2019; Marshall et al., 2011; Potier et al., 2014;).

Purpose of the Study

Harm reduction strategies and safe injection sites have successfully been implemented in countries, such as Canada, Australia, and Western Europe (Barry et al., 2019). However, there has been a lag in the execution of safe injection sites in the United States. Nevertheless, Philadelphia is scheduled to implement the first safe injection site in the United States after approval from a federal judge (Yang & Beletsky, 2019). Opioid Use Disorder is an extraordinarily stigmatized condition (Barry et al., 2018), which could ultimately lead to lack of public acceptance for harm reduction strategies. To date, there are very few research studies that have been utilized to study clinician's perceptions of harm reduction strategies and safe injection

sites. It is suspected that clinicians' public support of these strategies would increase public acceptance of harm reduction strategies and safe injection sites and could ultimately affect public policy. The purpose of the study is therefore to determine clinicians' perceptions of harm reduction strategies and safe injection sites.

Research Questions and Hypotheses

The current study was created to address the research question of how do providers' and researchers' perceptions of harm reduction strategies and safe injection sites for people who use injection drugs affect public policy? It is hypothesized that: (A) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for harm reduction strategies (B) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for safe injection sites. (C) Researchers will endorse a significantly higher level of support for harm reduction strategies than providers and (D) Researchers will endorse a significantly higher level of support for safe injection sites than providers.

The following are the hypotheses for this study: (A) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for harm reduction strategies (B) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for safe injection sites. (C) Researchers will endorse a significantly higher level of support for harm reduction strategies than providers and (D) Researchers will endorse a significantly higher level of support for safe injection sites than providers. To investigate the research question and test the proposed hypotheses, a mixed-methods study was conducted that utilized convenience sampling to recruit both clinicians and scholars who work with individuals with OUD.

CHAPTER 2: LITERATURE REVIEW

Opioid Use Disorder (OUD) is a condition in which individuals experience social, emotional, and occupational challenges due to their drug use (APA, 2013). Symptoms may include unsuccessful attempts to cut down opioid use, cravings, significant amounts of time spent obtaining and using opioids, the use of opioids in physically harmful situations, tolerance, and withdrawal (APA, 2013). OUD has increased substantially in recent years, with 1.7 million individuals addicted to prescription drugs and 652,000 living with addiction to heroin in 2017 (National Institute on Drug Abuse, 2020). Not only does OUD have the potential lead to severe adverse medical and psychosocial consequences, but this condition may also result in overdose and/or premature mortality. Other causes of premature mortality for individuals living with OUD are cardiovascular disease, bacterial infections, and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) (Bech et al., 2019). In 2020 alone, 69,000 Americans died from opioid overdose, with more than 82% of these deaths resulting from synthetic opioid use (Hedegaard et al., 2021). Between 1999 and 2018, 450,000 Americans died from an opioid overdose (CDC, 2020a). Overdose deaths were worsened by the coronavirus (COVID-19) pandemic, in which 81,000 people died from opioid overdose in the first year of the pandemic (CDC 2020b). in the United States In 2010, there were nearly 2.4 million estimated individuals abusing opioids in the United States, which represents a 225% increase from 1992 (Lembke, 2012).

Opioids encompass a wide range of drugs, including prescription drugs such as Oxycontin and Vicodin, heroin, and fentanyl (CDCa, 2020). Opioids have been available for pain management for decades. However, there was a large increase in opioid prescriptions for pain management beginning in the late 1990s (National Institute on Drug Abuse, 2014). However, when opioids became readily available to patients for pain management, prescribing

physicians were not yet informed of the potential risks of frequent opioid use, such as addiction (Weaver, 2020). The overdose epidemic began in many rural communities in the United States due to the commonality of manual labor and related injuries. Approximately half of adults living in rural America have been personally affected by opioid use. This number is even greater for farmers, in which 75% of the population report personal impacts of opioid use (American Farm Bureau Federation, 2017). More recently, street drugs such as heroin and fentanyl have become increasingly available for many individuals experiencing opioid addiction (Weaver, 2020). Fentanyl is a street drug that is 100 times stronger than morphine and 50 times stronger than heroin. The integration of fentanyl into street drugs has led to the massive increase in overdose deaths. Illicitly made fentanyl is linked with the most overdose deaths because of being added to street drugs such as heroin to increase potency and decrease cost (Wilson et al., 2020). More than 150 people in the United States die every day from synthetic opioid use (Ahmad et al., 2022).

Individuals prescribed opioids appropriately by their physicians for pain have the potential to become dependent on these medications, suggesting a strong potential for abuse in this class of medication. The mechanisms underlying the development of this particularly powerful addictive process are noteworthy. The human body has five opioid receptors, which include delta (δ), kappa (κ), mu (μ), zeta receptor, and opioid receptor like-1 that are stimulated by endogenous opioids such as endorphins, dynorphins, and enkephalins (Dhaliwal & Gupta, 2022; Hagedorn et al., 2019). These receptors are also connected with the dopamine pathway which is associated with increases and pleasure and decreases in pain, making the stimulation of these receptors highly reinforcing (Hagedorn et al., 2019). These opioid receptors can also be stimulated by opioids, which mimic neurotransmitters like endorphins and can be in one of three classes: natural, semisynthetic, and synthetic. Natural opioids may also be referred to as opiates

and are derivatives of the poppy plant. Opiates includes drugs such as morphine and codeine. Semisynthetic opioids are chemically processed using opiates and include drugs such as heroin, hydrocodone, and oxycodone. Synthetic opioids have been recognized as one of the predominant issues in the overdose epidemic due to high potency and lower negative side effects include drugs like illicitly manufactured fentanyl and tramadol (Hagedorn et al., 2019). Exogenous opioids, including synthetic and semisynthetic formulations bind with the same receptors as our endogenous ones and reduce the production of our natural opioid-like transmitters, such as endorphins and enkephalins lead to feelings of pleasure and numbing of both physical and emotional pain but the use of these drugs can also lead to physical dependence and withdrawal. Withdrawal is a result of the body craving opioids in response to reduced use and cessation due to dependency. Symptoms of withdrawal may include diarrhea, fever, insomnia, mood swings, nausea and vomiting, and sweating (Lin, 2018). Due to the unpleasantness of these symptoms, many individuals who experience withdrawal will use opioids again.

The development of OUD can be understood when examining the disorder from the lens of negative reinforcement and operant conditioning. Skinner (1937) described operant behavior as behavior that is guided by outcomes. These consequences may be either positive, leading to an increase in the behavior or negative, leading to a decrease in behavior (Staddon & Cerutti, 2002). Opioids use leads to increased pleasure and decreased pain, resulting in positive reinforcement of the drug (Hagedorn et al., 2019). As use continues, symptoms of withdrawal, such as diarrhea, nausea, and vomiting may lead to negative reinforcement and continued use of opioids (Lin, 2018). The frequency of opioid use can also affect the likelihood of use and addiction. The Resistance to Change Hypothesis states that response intensity is measured by the sensitivity to interruption of operant conditioning (Nevin et al., 1983). Researchers conducted a study using

pigeons, which utilized a variable reinforcement schedule to administer doses of methadone and buprenorphine. The researchers found that lower doses of the drugs increased pecking to receive the drugs on a variable reinforcement schedule (Egli et al., 1992). This finding can be used to better understand frequency of drug use in humans. According to Shah and colleagues (2017), individuals who were prescribed opioids for one day had a 6% chance of long-standing opioid use. Patients who were prescribed opioids for eight days or longer had a 13.5% chance of chronic opioid use. The patients with the highest likelihood of continued opioid use were prescribed a long-acting opioid, with 27% of patients still using opioids a year later (Shah et al., 2017).

The Harm Reduction Debate

Opioid use disorder not only carries the potential risk for overdose and death, but the intravenous delivery of opioids using shared or non-sterile needles can lead to the transmission of serious and chronic diseases such as Hepatitis C and HIV. To prevent and mitigate these risks, many mental health providers have transitioned their focus to teaching and promoting harm reduction strategies (Clarke et al., 2016). Harm reduction is centered on the idea that clinicians must provide treatment based on the patient's motivation for change, with the focus shifting from abstinence to safety and the minimization of unfavorable health, economic, and social repercussions of illegal substance use (Lago et al., 2017; Owczarzak et al., 2020, p. 6). Some of the more common examples of harm reduction strategies for other at-risk populations include accessibility to free condoms for teenagers and wearing bike helmets for outdoor cycling (Pediatric Child Health, 2008). While these strategies are intended to reduce the potential for harm when individuals engage in potentially risky behavior, public and professional opinion regarding these strategies can be mixed. Specifically, critics fear that harm reduction encourage engagement in risk behaviors, including drug use, placing pressure on decision-makers to

promote and implement harm reduction policy and practice (Clarke et al., 2016). Critics are particularly vocal regarding drug-related harm reduction in urban, poor, and Black communities; specifically, critics propose that harm reduction programs reinforce stereotypes that these communities are filled with drug use. In turn, stereotypes lead to discriminatory policies and procedures in these areas by encouraging elevated police surveillance, arrests related to drug use, and imprisonment (Eversman, 2014; Owczarzak et al., 2020). Additional, some Black community advocates suggest that harm reduction is an avenue for White individuals to try and *save* people of color, as well as prevent drug use from spreading into traditionally White neighborhoods (Eversman, 2015; Owczarzak et al., 2020).

Needle Exchange Programs

The initiation of harm reduction strategies began following the emergence of the HIV/AIDS epidemic in the 1980s. One of the harm reduction approaches proposed at this time was needle exchange programs, where people who use injection drugs are able to trade their used needles for clean needles to reduce the risk of infection or disease transmission. Despite the enthusiasm of advocates, clinicians, and stakeholders, the federal government was unwilling to provide funding for harm reduction initiatives until there was research and evidence to prove the efficacy of these strategies (Clarke et al., 2016). After analyzing data from the CDC on needle exchange programs and HIV prevalence of people who use injection drugs from 1988 to1993, Hurley and colleagues (1997) found that geographic regions with needle exchange programs had a decreased HIV prevalence rate of 5.8%. Additionally, geographic regions with needle exchange programs had an annual change in HIV prevalence that was approximately 11% lower than areas without needle exchange programs. A needle exchange program was implemented in Fresno, California to test the efficacy of this strategy for the minimization of disease

transmission. The researchers found that nearly half of participants stopped reusing needles after receiving needles from the needle exchange program and almost three quarters of participants obtained new needles biweekly (Clarke et al., 2016). Another harm reduction strategy that is often employed with people who use injection drugs is needle cleaning training, when individuals are taught how to appropriately disinfect needles to prevent infection (Carlson et al., 1998). Despite the efficacy of needle exchange and needle cleaning programs, there is still a significant amount of ambivalence toward the implementation of this strategy into neighborhoods.

Good Samaritan Laws

Another common harm reduction strategy is good Samaritan laws. These laws offer criminal immunity for individuals who report an overdose that involves illicit drugs (Hamilton et al., 2021). Researchers have found that individual knowledge of good Samaritan laws is positively associated with calling 911 in the event of an overdose (Jakubowski et al., 2018). Despite this, knowledge about these laws is often low among both community members and first responders (Banta-Green et al., 2013; Latimore & Bergstein, 2017). It has been found that the implementation of good Samaritan laws has decreased fatal overdoses by 15% (McClellan et al., 2018). Hamilton and colleagues (2021) found a 7% decrease in fatal overdose after the implementation of good Samaritan laws. However, it takes approximately two years post implementation to actually see the impact of these laws. It is very common for people who use drugs to feel fearful of police, due to previous negative experiences (Baca & Grant, 2007). Even with the implementation of good Samaritan laws, many people feared they would be arrested for other reasons, such as outstanding warrants, probation and parole violations, and immigration and child welfare repercussions (Drug Policy, 2022; Koester et al., 2017). This is important to

note, as police officers have a history of not following the good Samaritan laws (Koester et al., 2017). These findings indicate that training is necessary for first responders and that a cultural shift will be necessary in order for people who use opioids to be less fearful of the police.

Drug Checking Services

Drug checking is another harm reduction strategy utilized at parties or raves to inform individuals of the ingredients of the drug they plan to take, as well as risks and safe consumption options (Strike et al., 2019). This harm reduction technique first emerged in Europe in the 1990's to ensure safe psychoactive drug use for party-goers (Brunt et al., 2017). Drug checking tools range from expensive and sophisticated to more affordable options that can be utilized at large gatherings or music festivals. As fentanyl became increasingly found in drugs like heroin, drug checking devices became even more useful in terms of overdose prevention (Strike et al., 2019). In fact, researchers in Vancouver found that 90.6% of analyzed heroin contained fentanyl (Tupper et al., 2018), lending support for the need to continue and even expand utilizing drug checking services.

Naloxone Distribution

Another harm reduction strategy that has emerged during the overdose epidemic in Philadelphia is naloxone distribution. Naloxone can be injected or used intranasally to reverse an opioid overdose, which is a vital tool during the overdose epidemic (Owczarzak et al., 2020; Strike et al., 2019). Initially naloxone was distributed to first responders, such as police officers, emergency medical technicians (EMTs), and firefighters to administer to community members. However, many people who use opioids are apprehensive of first responders due to a history of arrests or discrimination leading to distrust (Owczarzak et al., 2020). Therefore, there has been a push to distribute naloxone and conduct trainings for community members. In 2015, pharmacy

access laws made naloxone available without a prescription, with the goal of making the reversal drug easily obtainable for people who use opioids (Freeman et al., 2018; Owczarzak et al., 2020). Since the enactment of these laws, public trainings on naloxone use have become more readily available for community members. Despite more accessibility to naloxone, there are some barriers to obtaining the opioid reversal drug, such as an accepting political environment, funding from the government, and wide-reaching programs (Madah-Amiri et al., 2016; Strike et al., 2019). It is suggested that in British Columbia alone, 1,580 deaths were prevented between 2016-2017 due to take-home naloxone programs (Irvine et al., 2018).

Medications for Opioid Use Disorder

As deaths tolls from opioid use rise, there needs to be more sophisticated strategies for preventing overdose and addiction. Currently, mental health professionals and medical professionals alike have turned to harm reduction strategies to prevent overdose deaths. Opioid substitution therapy, also known as medications for opioid use disorder (MOUD), is a strategy in which individuals with OUD are prescribed less harmful and lower dose opioids to prevent withdraw and opioid intoxication (Logan & Marlatt, 2010). More specifically, many physicians will prescribe opioid agonist treatment by giving patients opioids, such as morphine. Higher doses of MOUDs are known to cause higher levels of opioid tolerance which may lead to lesser positive reinforcement from illicit opioids (Ayanga et al., 2016). These medications are typically prescribed to individuals who are not responsive to other forms of treatment for OUD (Strike et al., 2019). It is important to note that MOUD options vary depending on the country a person is receiving treatment. For example, patients being treated with MOUD in Canada have more pharmacological options than those residing in the United States (Priest et al., 2019). One of the most common forms of MOUD is methadone, a synthetic opioid that can reduce pain and

prevent withdrawal (CDC, 2021). MOUD is an effective way to maintain a productive and happy lifestyle. Ferri and colleagues (2011) found that the use of opioid agonist treatment can also reduce opioid use and criminality. In British Columbia alone, statistical modeling showed that between 2016 and 2017, 590 deaths were averted (Irvine et al., 2018).

Treatments for OUD

Cognitive Behavioral Therapy (CBT) is a therapeutic modality that focuses on the relationship between thoughts, emotions, and behaviors. The principles of CBT state that mental health concerns stem from unhelpful thinking patterns and behaviors, which can be improved by increasing coping skills and identifying and changing unhelpful thoughts (APA, 2017). CBT has recently become an increasingly popular treatment choice for individuals living with OUD and can be a positive supplement to MOUD (Kampman & Jarvis, 2015). Therapeutic treatment can contribute to the recovery process, maintain abstinence if desired, and teach coping skills to those living with OUD. Additionally, it has been shown to be a more effective treatment than MOUD alone (Dugosh et al., 2016).

In addition to CBT, individuals with OUD may receive withdrawal treatment, individual and group counseling, health education, housing, peer support, and naloxone kits (Substance Abuse and Mental Health Services Administration, 2019). This multifaceted approach could potentially prevent relapse and ensure that people who live with OUD can continue to enrich their well-being. Peer support specialists also provide an important role in OUD treatment by facilitating clinical treatment and providing access to financial, social, and legal resources. These specialists provide support if the individual experiences an addiction related set back. Since peer support specialists have lived experience with addiction, they are able to increase engagement and motivate people who use opioids to strive for recovery (Martin et al., 2021).

Decriminalization of Drugs

The decriminalization of drugs means that individuals using, producing, or selling drugs will not arrested for drug-related activity (Lacquer, 2014). However, many people confuse decriminalization with the legalization of drugs, which would mean that drugs could lawfully be grown and sold. With decriminalization, these drugs are still produced and grown in an illegal market. Spain decriminalized drugs in 1982 and Portugal decriminalized drugs in 2001 (Gamella et al., 2004; Lacquer 2014). This approach has been crucial in fighting the stigma toward people who use opioids, as it judges these individuals as people struggling with addiction in need of help; while drug dealers and traffickers are viewed in a criminal light (European Monitoring Centre for Drugs and Drug Addiction, 2008). In Portugal, this attitude was shown by the growing number of people in treatment for substance use, with approximately 15,000 more individuals seeking substance use treatment over the ten-year period. The result of drug possessions includes non-monetary retributions. Additionally, convictions for drug trafficking were cut in half and 50% fewer prisoners were incarcerated for drug trafficking offensives (Lacquer 2014). HIV infection among people who use injection drugs also dropped, with only 116 new cases in 2010, compared to 1,482 cases in 1999 (Institutes for Drugs and Drug Addiction, 2011). Due to the successes of drug decriminalization, this harm reduction strategy gained popularity in other parts of the world.

In June of 2018, officials announced that buprenorphine would be decriminalized in Burlington, Vermont; meaning that individuals who obtained the drug without a prescription would not be arrested or prosecuted (del Pozo et al., 2020). Many individuals utilize buprenorphine as a treatment for OUD to terminate withdrawal symptoms and physical dependence and decrease the chances of opioid overdose. Buprenorphine has been found to be

one of the most effective medications for reducing overdoses and disease transmission (Magwood et al., 2020; Sordo et al., 2017). Shortly after this decision was enacted in Burlington, Philadelphia also committed to the decriminalization of the partial agonist for OUD. Del Pozo and colleagues (2020) state that the reason for the decriminalization was to remedy the previous strategy of arresting individuals who needed treatment for OUD, reduce stigma surrounding MAT and OUD, and to make buprenorphine more accessible to individuals who need the medication. The year that the decriminalization was implemented in Burlington, there was a notable 50% decrease in overdose deaths. In a similar vein, Oregon recently decriminalized smalls amounts of drugs that were previously considered illegal such as cocaine, heroin, and methamphetamine. This idea was encouraged by the Drug Policy Alliance (DPA) to eliminate the stigma of drug use and focus on treatment options for individuals who struggle with addiction. Individuals who are apprehended with drugs can pay a $100 fine or complete funded substance use treatment. Oregon plans to use the taxes from the cannabis industry to pay for substance use treatment (Knopf, 2020).

Police Involvement and Harm Reduction

Many people who use injection drugs report fear of using in public due to potential legal repercussions. Barriers to harm reduction implementation are presented with current laws treating drug use and addiction as a criminal offense. It is estimated that non-fatal overdoses have doubly increased among sex workers in Vancouver, Canada because of police activity (Goldenberg et al., 2020). People who use injection drugs have also reported that they have often been pushed out of their neighborhoods due to gentrification (Collins et al., 2019). Significant challenges in access to care are presented when individuals are frequently demonized for their drug use and in fear of recurring legal issues (Goldenberg et al., 2020). Additionally, many

people who use injection drugs have a distrust of law enforcement and health providers alike due to long standing discrimination (Eversman, 2014; Owczarzak et al., 2020). Public policy advocates have also promoted treatment alternatives to prison time, such as mandated mental health or drug and alcohol treatment, court involvement, and frequent drug testing (Stefancic et al., 2012). These alternatives allow for individuals with substance use disorders to receive the treatment that they need rather than be punished for their addiction.

Attitudes toward Harm Reduction

Provider (medical and mental health professionals) views are an important aspect of harm reduction. Henwood and colleagues (2014) completed a qualitative study to understand provider views of harm reduction strategies implemented in a homeless shelter. Many homeless shelters require residents to maintain sobriety, leading to many individuals being rejected from housing opportunities. Participants who supported harm reduction strategies emphasized that residents may no longer feel the need to be dishonest about their substance use difficulties and the expectations of drug and alcohol use become clearer. Additionally, participants reported that harm reduction allows providers to congratulate the gradual changes in substance use, rather than focusing on abstinence as the only milestone (Henwood et al., 2014). However, these perceptions of harm reduction often vary by clinicians. For example, a group of substance use clinicians believed that non-abstinence-based goals were more appropriate for individuals who use alcohol or cannabis but not for more illicit drugs. Additionally, most substance use clinicians in one study reported that they were unlikely to approve of non-abstinence-based goals for individuals who struggle with dependence (Rosenberg et al., 2014). Xin and colleagues (2022) found that the age of the provider to be negatively associated with acceptance for non-abstinence goals for people who use opioids. However, other researchers have found no association among age and

acceptance of non-abstinence-based goals for treatment (Davis et al., 2018; Davis & Rosenberg, 2013). Jordan (2021) also found no association among age and years of experience of providers and their likelihood to accept non-abstinence-based-goals for treatment. Wyrobeck and colleagues (2005) found that clinicians were more accepting of needle exchange programs for their clients if the individual had unsuccessfully stopped using injection drugs multiple times or had HIV. Similarly, psychologist's acceptance of short-term methadone use for clients was based on previous unsuccessful attempts to stop use, years of use, employment history, and legal involvement. Clinicians often exhibited similar beliefs about harm reduction strategies for self-harm. Although harm reduction reduced both the severity and incidence of self-harm, many clinicians were fearful that the behavior would increase (James et al., 2017). Skelton and colleagues (2021) reported that within a large sample of substance use healthcare providers, only 30% believed that e-cigarettes may help smokers quit and only 19% of providers reported that they would recommend e-cigarettes to clients who smoked. These beliefs may be similar to provider's beliefs about other healthcare strategies as well. Similarly, Klingemann and colleagues (2017) reported that many healthcare providers in their sample did not support allowing people access to alcohol who had alcohol use disorder due to the belief that this would enable patients and encourage substance abuse. Additionally, many clinicians worry about how to treat individuals using harm reduction strategies rather than the traditional abstinence-based strategies proposed in mental health. As with other self-harm strategies, clinicians were concerned about the ethical implications of allowing patients to engage in negative behaviors (James et al., 2017). However, stigma toward individuals with substance use disorders and ambivalence about harm reduction strategies can lead to lower quality of care for patients (Magwood et al., 2020; van Boekel et al., 2020).

Safe Injection Sites

Safe injection sites, also known as supervised/safe consumption and overdose prevention sites, are locations where individuals who use injection drugs can use drugs while being monitored by medical staff to prevent overdose reduce disease transmission. These sites also connect individuals with resources for housing, therapy, medical care, and food (Kerman et al., 2020). These sites have existed since the 1970s but have not reached North America until recently (Kerman et al., 2020; Kimber et al., 2003). As with other harm reduction strategies, there has been opposition to safe injection sites due to the belief that safe injection sites could "enable" drug use. However, there are many benefits to safe injection sites. For example, these sites allow individuals to gain social support. Many individuals who struggle with addiction may experience frequent loss of loved ones due to overdose. These sites limit the opportunity for this to happen to people who use injection drugs. Additionally, many individuals emphasized that they felt loved, heard, and respected by staff at the sites (Kerman et al., 2020). Safety is arguably one of the most important benefits of safe injection sites. These sites allow people who use opioids to do so without judgement or fear of arrest, while providing them with appropriate supervision to prevent overdose. Foreman-Mackey and colleagues (2019) found that individuals who use safe injection sites described these sites as a *safe sanctuary*. This notion is pivotal for the utilization of safe injection sites since acceptance is often a new sentiment for individuals who have been faced with many reasons to not trust medical providers (Wallace et al., 2019). Women who are at high risk of disease transmission from sex work, needle sharing, and frequent drug use need harm reduction services and are often more willing than individuals with less risky behavior to participate (Rouhani et al., 2020). Safety can also be an issue, particularly for

women. Many women have discussed the importance of safe injection sites in preventing assaults and robberies (Boyd et al., 2018).

Due to the benefits of safe injection sites, six states (Colorado, California, Maryland, Massachusetts, and Vermont) and two cities (Philadelphia and Seattle) in the United States of America are currently working toward passing legislature to legalize safe injection sites. (Kennedy-Hendricks et al., 2019). Two safe injection sites were opened in New York City in November 2021 (New York City, 2021). California had passed a bill for safe injection sites, but the bill was ultimately vetoed by the governor of California. Both Philadelphia and Seattle plan to open sites and have allotted money to do so in the future. With the current concerns about the overdose epidemic, now is an excellent time to pursue solutions. This initiative does face several challenges, such as finding a location that is suitable for people who use injection drugs and addressing political pushback about the implementation of this strategy (Kennedy-Hendricks et al., 2019). When considering the implementation of safe injection sites into communities, it is important to examine Schneider and Ingram's (1993) model, which postulates that the social establishment of the injection drug use population is a variable that determines the efficacy of policy change. Due to this, there must be ample community support and advocacy for safe injection sites to counter the power of political figures (Kennedy-Hendricks et al., 2019). Another theory about the implementation of safe injection sites into the community is referred to as the *high stakes institutional translational model*. The researchers describe that this initiative began with energized, grassroots advocacy groups that encouraged health departments and local officials to consider safe injection sites. During this process, the advocacy groups integrated feedback about injection sites from people who use injection drugs, which in turn increased empathy of political figures and encouraged policy change (Lawrence, 2017).

Impact of Safe Injection Sites

Since the arguments against safe injection sites have been widespread, many researchers have created numerous convincing arguments and gathered evidence to illuminate that safe injection sites are an appropriate and advantageous solution for the overdose crisis. Researchers utilized a cost-benefit analysis to reveal the cost-effectiveness of the implementation of a safe injection site in San Francisco. A safe injection site in San Francisco could save $2.6 million dollars per year because of prevention of hepatitis C and HIV infections, $425,000 because of prevention of overdose deaths, and $2.7 million by making MAT readily available to safe injection site users (Irwin et al., 2017). A safe injection site located in British Columbia, Canada is estimated to have prevented 3,030 overdose deaths, which makes up for approximately 60% of annual overdose deaths in British Columbia, in the first year and a half of opening (Irvine et al., 2019). Researchers conducted a study on 20 safe injection sites in Canada and found that throughout those sites, there were 550,000 visits in the first year and zero overdose deaths, speaking to the efficacy of these sites for saving lives (Wallace, Pagan, & Pauly, 2019).

Negative Attitudes

Safe injection sites are often considered very controversial due to the misconception that these sites encourage drug use (Kerman et al., 2020). Due to this, there have been arguments that safe injection sites are not an appropriate response to the overdose crisis. Researchers argue that many policies now address the overdose crisis as a humanitarian and human right issue rather than a political concern. Due to the frame of OUD being a disease, the overdose crisis has become medicalized, which Foth (2020) argues prevents policy from addressing the root of the overdose crisis.

The public often opposes safe injection sites (Barry et al., 2019). Concerns about safe injection sites are often due to the logistical issues. For example, patients often worry about the anonymity of their drug use. Substances use disorders are highly stigmatized and users run the risk of the staff or other users recognizing them (Bardwell et al., 2020). Other concerns about safe injection sites address the financial obligations of the sites and the attitude that the money would be better spent on addiction treatment. Negative attitudes toward safe injection sites reveal ethical concerns, such as encouraging drug use and unlawful behaviors (Barry et al., 2019). A possible explanation for the ambivalence toward harm reduction strategies and safe injection sites is the stigma toward people who use injection drugs (McGinty et al., 2018). Wenger and colleagues (2011) found that providers worried that harm reduction could create an unsafe space for people who want to maintain abstinence and could prevent individuals from seeking treatment. Additionally, these attitudes are reflective of the long-standing viewpoint that drug use is a criminal offense and a moral failing rather than a public health concern (Morone, 1997). Stigma ultimately affects how people who use opioids are viewed, with the public often regarding people who use opioids as untrustworthy, responsible for their addiction, and unable to recover (Barry et al., 2014). Furthermore, people who use opioids often receive a lower quality of care than their sober counterparts (Knaak et al., 2019).

An additional concern regarding the implementation of safe injection sites is the concept of Not in my Backyard (NIMBY). This attitude can ultimately stall large government run advocacy initiatives, such as safe injection sites (McAvoy, 1998). A recent example of this is when Philadelphia attempted to open a safe injection site in Kensington. Due to community pushback, Mayor Kenney opted to delay the opening of the site in an attempt to prioritize the needs of Kensington (Lofaro & Miller, 2021). However, there are negative implications for this,

as there is a history of racism in the way drug use has been addressed politically. During the crack epidemic, the focus was to be punish people who commit crimes, which in turn led to many people of color experiencing discrimination due to their drug use (Jones, 2018b). The lack of safe injection sites will lead to drug use in public, continuing to place people of color at risk for arrest and jail time (Mohammed & Shaikh, 2019). An additional concern is that there was not a push for policy change regarding the overdose epidemic until addiction began affecting White folks (Jones, 2018a).

Positive attitudes

In terms of positive benefits of safe injection sites, many individuals recognize the importance of these sites providing food, water, and access to medical care. This is especially important for people who use injection drugs, as many of them do not have access to resources that can meet basic needs, such as healthcare, shelter, and food (Bardwell et al., 2020; Pauly et al., 2020). Although public support for safe injection sites is often low, support varies by geographic location. Cities that are infiltrated with the overdose epidemic may be more likely to have public support of harm reduction strategies and safe injection sites as a response to the crisis. Kensington, Philadelphia was hit hard by the overdose epidemic compared to other parts of Philadelphia, which ultimately led to more support from business owners and individuals residing in Kensington. It is suspected that individuals in Kensington have been exposed to more drug-related problems, such as overdose deaths, improperly discarded needles and drug paraphernalia, and public drug use (Roth et al., 2019). Acceptability of safe injection sites is often higher among people who use injection drugs compared to individuals who do not use drugs (Kral et al., 2010; Roth et al., 2019). Researchers found that providers with more years of experience often knew more about safe injection sites. However, most providers endorsed

positive views of safe injection sites (Bolarinwa et al., 2011). These individuals who use drugs are aware of the risk of overdose and also value having a place to use where they can be free from stigma and police (Bouvier et al., 2017; Davidson et al., 2018). Medical providers, as well as the American Medical Association have also been known to publicly support safe injection sites (Bonventre, 2018). Researchers have shown public support for initiatives like narcotics anonymous as a response to the overdose epidemic (Enos, 2016). Furthermore, Des Jarlais (2017) found that researchers often support the disease model of addiction. These viewpoints may also translate to attitudes toward safe injection sites.

Policy Change

Policy change encompassing drug use has been a challenge considering how controversial harm reduction strategies and safe injection sites are to the public. However, it is important that these strategies are framed in a way that emphasizes the benefits of harm reduction. For example, Barry and colleagues (2018) found that the public is more supportive of legalizing locations referred to as overdose prevention sites (45% support) compared to safe consumption sites (29% support). Similarly, researchers found that in order to increase public support for safe injection sites, it is vital that the advocates challenge misunderstandings, emphasize the benefits, and incorporate a story of how safe injection sites have helped people who use injection drugs. Surprisingly, presenting factual evidence was not associated with increasing support for safe injection sites (Sumnall et al., 2020). One of the major blockades to policy change is the stigma surrounding opioid use disorder and people who use opioids. These beliefs can infiltrate into healthcare, leading to a poor quality of care and lack of access to necessary resources and services, as well as policy change (Tsai et al., 2019). Since there is a discrepancy in how the public and public health professionals view safe injection sites, it is

important to reframe the overdose crisis in terms of moral values. Although safe injection sites do allow illegal behavior, that does not discount the inequities that are addressed, such as reducing disease transmission and overdose deaths (Barry et al., 2019).

Geographic location has also been a predictor of public support, with more support from urban areas (Barry et al., 2019). Many times, the initiatives for mental health and substance use problems, as well as infectious disease transmission (HIV, Hepatitis C) fail in rural areas due to limited support and capability to address these challenges (Wild et al., 2017). Despite these challenges, psychologists have a duty to advocate for both their patients and individuals who struggle with drug use alike. In doing so, psychologists should continue to base these advocacy efforts off the lived experiences of people who use drugs, without imposing their own cultural values and norms to this group of individuals (Nadal, 2017). Therefore, in order to create the most efficient advocacy and policy change efforts, it is crucial to understand psychologists' perceptions of harm reduction strategies and safe injection sites.

CHAPTER 3: METHOD

Participants

A self-reported, anonymous survey was emailed to 1,022 potential participants, who were identified as either scholars or clinicians involved in the study or treatment of OUD.

Inclusion and Exclusion Criteria

Individuals were eligible to participate in the survey if they met the following inclusion criteria: (a) a minimum of a master's degree, (b) worked in the field of psychology, social work, or medicine, (c) endorsed a cognitive-behavioral orientation, (d) had either studied or treated patients with OUD, and (e) were English speaking. Participants were excluded if they did not work with individuals with OUD, have a CBT orientation, or speak English. These qualifications were developed by the research team for the host study (Lent et al., 2021).

A total of 1,022 providers and researchers were emailed a survey invitation for this study. Of those 1,022 individuals, 107 were interested in participating in the study (10.5%). Of the interested participants, 21 individuals were not eligible due to lack of experience with CBT or the OUD population, or an insufficient level of education. The final analyses included 84 respondents (8.2%). The mean age of participants was 46.6 years (*SD* = 14.8). The majority (56%) of participants identified as female. In terms of education, the majority of participants (56%) had a Ph.D or Psy.D followed by a Masters (38.1%). Regarding careers, 81% of participants identified as clinicians, 26% of participants were scientists/researchers, and 25% were professors or instructors. Characteristics of the survey participants are in Table 1.

Table 1
Characteristics of Survey Participants (N = 84)

Construct	n (%)	*M (SD)*
Age (years-18-74)		46.6 (14.8)
Identified Gender		
Male	37 (44.0)	
Female	47 (56.0)	
Years in Profession (years-.5-50)		17.2 (13.4)
Education		
MA	32 (38.1)	
Ph.D/Psy.D	50 (59.5)	
M.D./D.O.	1 (1.2)	
Other	1 (1.2)	
Career Type		
Clinician	68 (81.0)	
Scientist	22 (26.2)	
Professor/Instructor	21 (25.0)	

Recruitment and Screening

Potential participants were identified through an internet search of substance use clinicians and scholars in North America. The majority of potential participants were identified from university websites, academic journal articles, OUD treatment programs, and private practice websites. To identify scholars, convenience sampling was used to identify potential participants by completing searches on Google Scholar and PubMed for articles that were published within the past nineteen years, 2000-2019 that included key words such as opioid use disorder, CBT, medication assisted treatment, cognitive behavioral, and psychotherapy. Author email addresses for potential participants were identified through author contact information

provided in the journal articles. To identify clinicians, an internet search was conducted of university and private practice websites, newspaper articles, listservs of the American Psychological Association and the Association for Behavioral and Cognitive Therapies, and of OUD treatment centers within the U.S. Search terms used for this process included opioid use disorder clinicians, addiction specialists, substance use therapists, and CBT therapists for addiction. The respective clinicians' specialty was searched in order to ensure their eligibility. After more than 1,000 potential participants were identified, recruitment was completed by sending the surveys via email to participants along with a brief, one-page cover letter describing the purpose of the study and a link to the online survey.

This study was part of a host study designed to collect information for the purpose of developing a cognitive behavioral therapy manual for OUD. This survey included screener questions, including "if the individual has utilized cognitive-behavioral techniques for treatment or research (*yes or no*), highest degree completed (*high school, college, masters, PhD or PsyD, MD or DO, other*), what role the participant has working with individuals with OUD (*Clinician, Scientist, Professor, Instructor, Other, or I do not work in OUD),"* and consent to participate. Participants were required to meet the inclusion criteria and consent to the study to continue on. Initially, the host study had a total of 75 questions.

Design

To investigate the research question and test the proposed hypotheses, this mixed-methods study utilized convenience sampling to recruit both clinicians and scholars who work with individuals with OUD. The host study utilized a mixed-methods design using an online platform to survey both scholars and clinicians about the utility of cognitive behavioral treatment for OUD. This research study was part of the larger host study. Participants were asked to

identify what aspects of cognitive behavioral therapy could be helpful for OUD treatment and their perceived efficacy of those treatment modalities. The current study focused specifically on assessing knowledge and perceptions related to harm reduction and safe injection sites. The study was approved by the Philadelphia College of Osteopathic Medicine's Institutional Review Board.

Measures

For the current study, an additional 15 survey items were included to the host study survey to examine attitudes regarding harm reduction strategies and safe injection sites. Harm reduction strategies are operationally defined as techniques that reduce the potential damages that occur from injection drug use such as disease transmission and overdose. These strategies may include condom use, sexually transmitted infection/sexually transmitted disease (STI/STD) testing, Narcan, medication assisted treatment, and needle exchange programs. Safe injection sites are operationally defined as locations where individuals can inject drugs with medical and therapeutic attention available. For this survey, attitudes are operationally defined as how participants view these strategies. Attitudes were measured through 5-point Likert-type scales ranging from "strongly disagree" to "strongly agree". The development of the following questions were created by the research team with the goal of examining perceptions of harm reduction strategies. These questions included: "level of support for safe injection sites, methadone clinics, and physician waivers to prescribe buprenorphine for OUD users on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 *(strongly agree),* risk prevention strategies for individuals with OUD (*condom use, needle exchange programs, single use needles/needle cleaning, annual medical visits, STD/STI testing, Narcan, other*), how helpful safe injection sites, innocent bystander laws, and Narcan training are for individuals with OUD 5-point Likert scale

ranging from 1 (*not helpful*) to 5 *(extremely helpful)*, positive aspects of safe injection sites (open-ended), and negative aspects of safe injection sites (open-ended).” A linear regression model was utilized to examine the relationship between years in the profession and support for harm reduction strategies. This survey was imbedded in a larger survey about cognitive behavioral approaches for OUD treatment. A complete list of all the questions administered in this survey can be found in Appendix A.

Procedure

Research Electronic Data Capture (REDCap) was used to collect survey data (Harris et al., 2009). Responses to this survey were anonymous. Participants were asked to complete the screening criteria. If they were eligible to participate, REDCap automatically loaded the rest of the survey questions. Those who were not eligible were shown a message stating that they are not eligible to participate in the study. Interested participants who clicked on the REDCap link were taken to a brief description of the study and an introduction to the study team, including the investigators of the host study. After reading this description, individuals were brought to a consent page that described the study’s purpose, the voluntary nature of the study, requirements (to complete the survey), and their opportunity to earn a $75 gift card. Participants who chose to receive a gift card were directed to a separate link to provide their mailing address to which the card could be sent. This information was maintained in a separate database that was not connected to the participant’s responses.

Qualitative Analyses

Additionally, a thematic analysis was conducted on the open-ended questions to identify patterns among responses. According to Braun and Clarke (2006), there are six necessary steps to complete thematic analysis including (a) Get to know the data set (b) Create codes (c) Identify

themes (d) Assess themes (e) Interpret themes and (f) Write up findings. To follow these steps, the data was broken up into either the positive or negative attitudes category. The researchers worked with other coders who were graduate students at the Philadelphia College of Osteopathic Medicine to identify themes and assess those themes. In the positive category, the coders identified the following themes: facilitates treatment, new needles/harm reduction, disease prevention, decreased mortality/overdose, and decreased utilization of medical services/cost reduction. The coders identified the following negative attitude themes: enables drug use, access to drugs, effects on the community, illegal behaviors, and prevents recovery. After creating the categories for themes, the coders identified the correct placement for each response in their respective classifications. To improve interrater reliability, multiple people assisted in the coding of the qualitative responses. The coding team consisted of the researcher and a secondary coder. Both coders reviewed the responses separately and chose their respective categories. When there is not 90% agreement or more on coding responses, the PI assisted in coding that data in the appropriate categories. Finally, descriptive analyses will be conducted to examine the demographic characteristics of the study sample, including means and standard deviations for continuous constructs and percentages for categorical constructs.

CHAPTER 4:RESULTS

Statistical Considerations

A regression was run on the data. To use a regression, there are four assumptions that must be met: (a) homoscedasticity (b) normal distribution (c) independence and (d) linearity. The Levene's Test was used to assess this assumption. In order for this assumption to be met, $p < .05$ (Kozak et al., 2018). Normal distribution was assessed by plotting the data in a histogram to examine skewness and kurtosis and reporting. Independence means that the data are not connected. Linearity refers to a straight and direct relationship between variables (Flatt et al., 2019). The analyses were run using the Statistical Package for the Social Sciences 29 (SPSS; IBM Corp, 2020).

Two regression models were tested including one for the dependent construct support of harm reductions strategies and one for the dependent construct support of safe injection sites. The two primary independent constructs that were entered into each of these models were (1) years of experience and (2) professional role (treatment provider or researcher).

The first regression model was used to examine the relationship between hypotheses:

(1) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for harm reduction strategies

(2) Researchers will endorse a significantly higher level of support for harm reduction strategies than providers.

The second regression model was used to examine the relationships between hypotheses:

(2) Providers and researchers with fewer years of clinical experience will endorse a significantly higher level of support for safe injection sites

(3) Researchers will endorse a significantly higher level of support for safe injection sites than providers.

Prior to conducting the linear regressions, bivariate correlations were run between the dependent constructs, demographic constructs (age, gender, credentials, education background, professional role, & occupational setting) and the independent constructs. This helped identify any cases of multicollinearity and additional constructs that needed to be entered into the regression models due to a correlation with the dependent constructs.

Outcome Measures

The primary outcome measures for this study were ratings of the utility of harm reduction strategies and safe injection sites on a Likert-type scale. Descriptive statistics of the ratings of harm reduction and safe injection sites are in Table 2.

Table 2

Descriptive Statistics for Ratings of Harm Reduction Strategies and Safe Injection Site Utility from Mental Health Professionals (N = 84)

Construct	Mean	Std. Deviation	Min/Max
Support for Safe Injection Sites	3.99	1.1	1/5
Usefulness of Safe Injection Sites	3.72	1.17	1/5

Usefulness of Innocent Bystander Laws	3.75	1.19	1/5
Usefulness of Narcan Training	4.43	.875	1/5

Ratings of support for safe injection sites and harm reduction strategies significantly deviated from a normal distribution as per the K-S test ($p < .05$, Table 3 & Table 4). Log transformations were attempted but did not improve normality. Therefore, parametric statistics were utilized and non-parametric equivalents were employed for any significant findings.

Table 3

Test of normality for survey Respondents' ratings of support for safe injection sites and the utility of harm reduction strategies utilizing the Kolmogorov-Sminov (N = 84)

	Kolmogorov-Sminov		
Construct	Statistic	Df	Sig.
Support for Safe Injection Sites	0.241	80	<.001
Usefulness of Safe Injection Sites	0.239	130	<.001
Usefulness of Innocent Bystander Laws	0.212	80	<.001
Usefulness of Narcan Training	0.386	80	<.001

Table 4

Test of normality for survey Respondents' ratings of support for safe injection sites and the utility of harm reduction strategies utilizing the Shapiro Wilk (N = 84)

	Shapiro Wilk		
Construct	Statistic	Df	Sig
Support for Safe Injection Sites	0.810	80	<.001
Usefulness of Safe Injection Sites	0.861	80	<.001
Usefulness of Innocent Bystander Laws	0.856	80	<.001
Usefulness of Narcan Training	0.671	80	<.001

Correlation Matrix

To evaluate any demographic constructs to be included in the regression models, Pearson correlations were conducted with all demographic constructs (age, gender) and our primary outcomes (Table 5). Age did not significantly relate to the four harm reduction/safe injection site outcomes ($p > .05$ for all).

Table 5

Correlation Matrix

Constructs	Pearson Correlation	Sig. (2-tailed)	N
Years in Profession/Usefulness Of safe injection sites	-0.213	0.061	78
Years in Profession/Age	0.857	<.000	79
Years in Profession/Years in Profession	1		81
Age/Usefulness Of safe injection sites	-0.175		79
Age/Age	1		82
Usefulness of Safe Injection Sites/Usefulness of Safe Injection Sites	1		81
Usefulness of Innocent Bystander Laws/Usefulness of Safe Injection Sites	0.286	0.10	80
Usefulness of Innocent Bystander Laws/Age	-0.137	0.227	79
Usefulness of Innocent Bystander Laws/Years in Profession	-0.109	0.343	78
Usefulness of Narcan Training/Usefulness of Safe Injection Sites	0.326	0.003	81
Usefulness of Narcan Training/Age	-0.178	0.113	80
Usefulness of Narcan Training/Years in Profession	-0.203	0.073	79
Support for Safe Injection Sites/Usefulness of Safe Injection Sites	0.743	0.000	80
Support for Safe Injection Sites/Age	-0.036	0.748	81
Support for Safe Injection Sites/Years in Profession	-0.175	0.121	80

Hypotheses 1 & 3

To evaluate the relationship between years of experience and support for harm reduction, linear regression models were utilized. The overall model was not significant (F= 1.8, p > .05, Table 6). Accordingly, the independent construct of years in profession was also not significant (p = .06, Table 7; Table 8). To evaluate the relationship between one independent construct (Professional Role, clinician versus researcher) and our dependent constructs of support for harm reduction strategies, innocent bystander laws and Narcan training), regression models were utilized. The overall models for professional role and harm reduction (Table 6; F = 1.80, p =.172,), support for innocent bystander laws (Table 9; Table 10 F = .456, p=.635), and support for Narcan training (Table 11; Table 12) were not significant (F =1 .931, p=.152). Accordingly, the independent construct of professional role was also not significant (Table 9, p=.909; Table 11, p=.450).

Table 6

Model Summary of Years in profession and Researcher/Provider Role to the Support of Harm Reduction Strategies (N = 84)

Model	R	R^2	Adjusted R^2	Std. Error of Est.	F Change	Df1	Df2	Mean Square	Sig. F Change
1	.214	.046	.020	1.17	1.80	2	75	2.46	.172

Table 7

Years in Profession and Researcher/Provider Roles and Support of Harm Reduction Strategies

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.
1 (constant)	3.976	.448		8.880	<.001
Years in Profession	-.019	.010	-.214	-1.893	.062
Professional Role	.052	.328	.018	.159	.874

Table 8

Model Summary of the Predictor Construct to the Criterion Construct (N = 84)

Model	R	R^2	Adjusted R^2	Std. Error of Est.	R^2 Change	F Change	Df1	Df2
1	.393	.154	.148	16.49276	.154	25.153	1	127

Table 9

Professional Role and Support for Harm Reduction-Innocent Bystander Laws

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.
1 (constant)	3.824	.466		8.198	<.001
Professional Role	.040	.346	.013	.115	.909
Years in Profession	-.010	.010	-.109	-.905	.345

Table 10

Model Summary of the Predictor Construct to the Criterion Construct (N = 84)

Model	R	R^2	Adjusted R^2	Std. Error of Estimate	F Change	DF1	Df2	Mean Square	Sig. F Change
1	.110	.012	-.014	1.205	.456	2	75	.663	.635

Table 11

Professional Role and Support for Harm Reduction-Narcan Training

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.
1 (constant)	4.425	.335		13.225	<.001
Professional Role	.186	.245	.085	.759	.450
Years in Profession	-.013	.007	-.204	-1.820	.073

Table 12

Model Summary of the Predictor Construct to the Criterion Construct (N = 84)

Model	R	R^2	Adjusted R^2	Std. Error of Est.	R^2 Change	F Change	Df1	Df2	Mean Square	Sig. F Change
1	.220	.048	.023	.876	.154	1.931	2	76	1.48	.152

Hypotheses 2 & 4

To evaluate the relationship years of experience and the dependent construct of support for safe injection sites, simple linear regression models were utilized. The overall model was not significant (F = 1.5, p =.23, Table 13). Accordingly, the independent construct of years in

profession was also not significant (p = .12, Table 14). To evaluate the relationship between one independent constructs (Professional Role) and the dependent construct of support for safe injection sites, two linear regression models were utilized (Table 13). The overall model was not significant (F = 1.501, p =.23). Accordingly, the independent construct of professional role was also not significant (p = .458).

Table 13

Model Summary of the Predictor Construct to the Criterion Construct (N = 84)

Model	R	R^2	Adjusted R^2	Std. Error of Est.	F Change	Df1	Df2	Mean Square
1	.194	.038	.013	1.129	1.501	2	77	1.91

Table 14

Years in Profession and Professional Role and Support for Safe Injection Sites, N =79

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.
1 (constant)	3.975	.431		9.213	<.001
Years in Profession	-.015	.009	-.175	-1.565	.122
Professional Role	.235	.316	.083	.746	.458

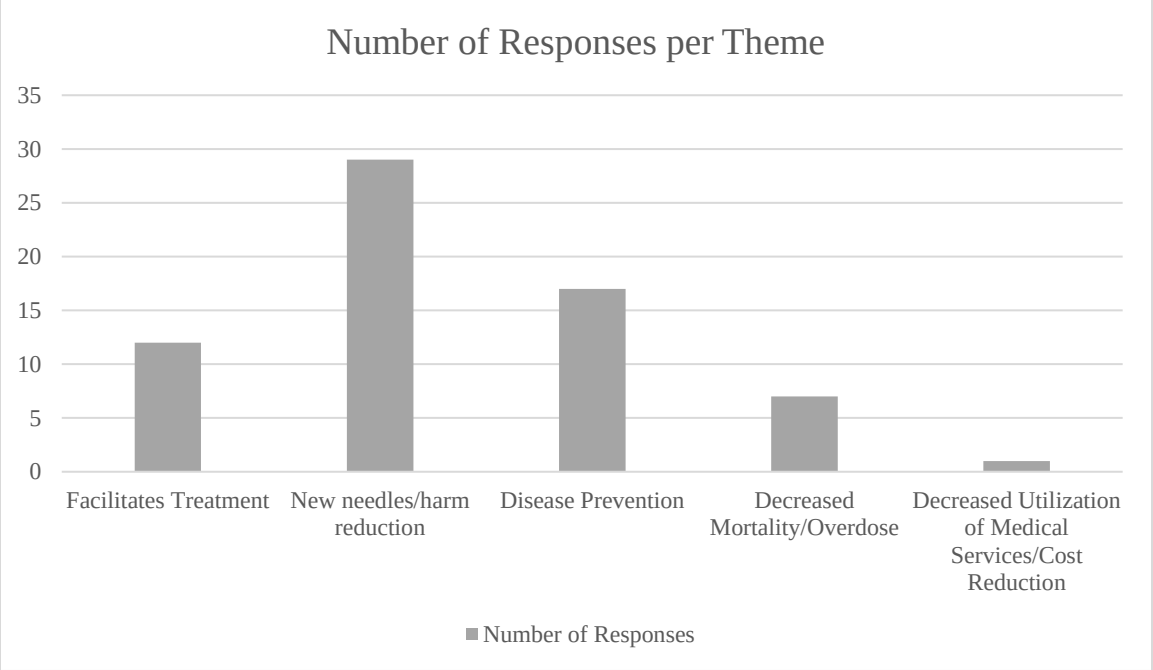
Qualitative Analyses

To better understand the participants' attitudes toward safe injection sites, they were asked to identify the positive and negative aspects of this harm reduction strategy. The themes for positive attitudes included: facilitates treatment, new needles/harm reduction, disease

prevention, decreased mortality/overdose, and decreased utilization of medical services/cost reduction (Figure I). Figure I displays the number of coded responses per theme.

Figure 1

Number of Responses per Positive Theme



One participant emphasized the importance of facilitating treatment,

> There are still many patients with OUD who are not ready for treatment. SIFs give these patients a safe place to inject and be monitor(ed) to prevent overdose and also allow them to interact with providers who can move them toward readiness for treatment.

Of the positive themes, harm reduction was the most common. One participant reported:

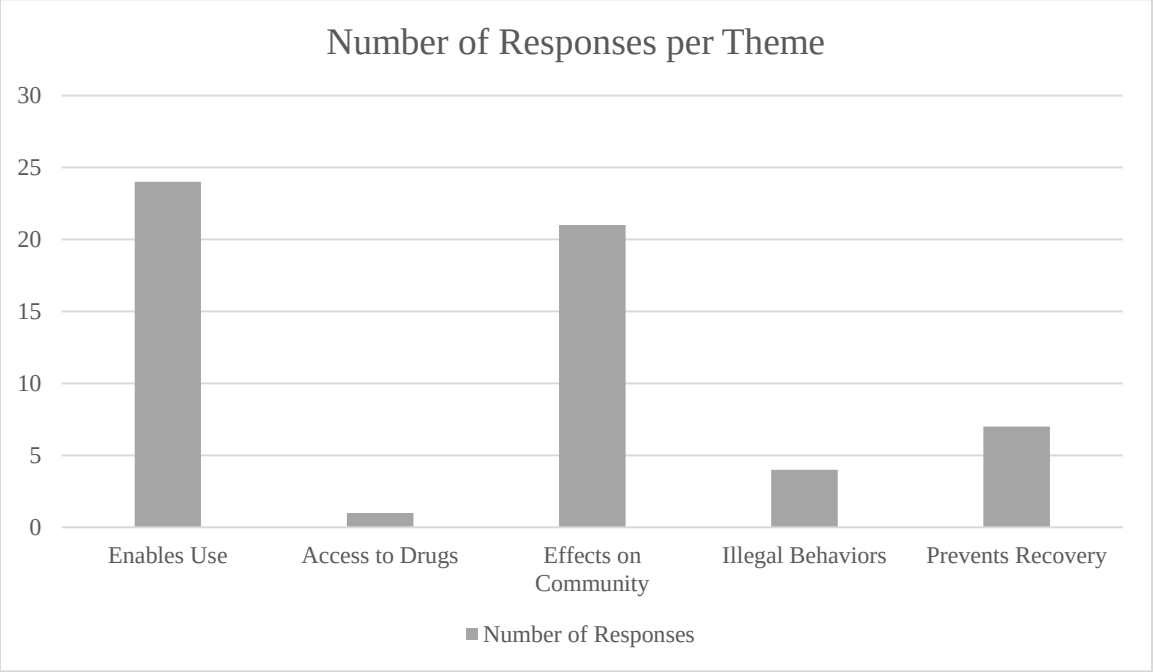
> Reduction in overdose deaths, centralized location to make resources available (access to housing, employment fairs, tx access, healthcare), and reduction in infectious disease risk" as positive aspects to safe injection sites. Another participant identified the cost benefits of safe injection sites: "Decreased transmission of disease and thus reduction in

emergency medical visits, health care costs, and medical complications. It also embraces motivational interviewing and the concept that the person has to be willing and ready to change, and if they are not, they WILL continue to use whether we provide a safe way to do so or not.

The following themes for negative aspects of safe injection sites were identified: enables drug use, access to drugs, effects on the community, illegal behaviors, and prevents recovery (Figure II). Figure II displays the number of coded responses per theme.

Figure 2

Number of Responses per Negative Theme



One participant discussed how this affects the community:

Political cost. I'd much prefer to use the political effort to site more medication and counseling units than safe injection sites. NIMBY would inhibit the building of many safe injection sites so access to them would be limited to relatively few people. That's been happening where I live and work." Providers also expressed concern about the

prevention of recovery: “Could allow for easier access to use, if in recovery could be temping, meeting other addicts at sites and being deeper in addiction.” Participants reported that it could also enable drug use: “Can create and positive reinforce (a bad thing) a drug community.

CHAPTER 5:DISCUSSION

Our hypothesis that providers and researchers with fewer years of clinical experience would endorse a significantly higher level of support for harm reduction strategies was not supported. Previous research has shown that younger age and fewer years of experience in the mental health field are associated with more positive views toward harm reduction strategies (Rosenberg et al., 2014). Furthermore, Xin and colleagues (2022) found that the age of clinicians is negatively associated with acceptability of non-abstinence-based goals for substance use treatment. In contrast, there has also been research to state that age is not associated with support for non-abstinence-based goals (Davis et al., 2018). Furthermore, previous research has found mixed results in regard to years of clinical experience and acceptability of non-abstinence-based goals. Two studies conducted within the last decade have found no association between years of experience and acceptability of non-abstinence-based goals (Davis & Rosenberg, 2013; Rosenberg & Davis, 2014). Similarly, Jordan (2021) found that age and years of experience are not associated with acceptability of harm reduction strategies. Previous research has shown that younger age and fewer years of experience in the mental health field are associated with more positive views toward harm reduction strategies (Rosenberg et al., 2014). With the mixed results from previous research, it is evident that additional research should be conducted to better understand how age and years of professional experience affect the likelihood of supporting harm reduction strategies. There are a few reasons that the hypotheses may have not panned out as expected. For example, the study contained a small sample size. Additionally, it is possible that the participants shared similar viewpoints in their support for harm reduction, leading to nonsignificant findings.

Additionally, our hypothesis that providers and researchers with fewer years of clinical experience would endorse a significantly higher level of support for safe injection sites was not supported. Researchers found that providers with ten or more years of experience knew the most information about safe injection sites. Most providers in the sample endorsed positive attitudes toward safe injection sites (Bolarinwa et al., 2011). Researchers found that most doctors in the sample endorsed safe injection sites as a way to reduce disease transmission and stigma of OUD. Furthermore, the American Medical Association (AMA) has publicly announced their support for safe injection sites recently (Bonventre, 2018). However, both the Bolarinwa and colleagues (2011) and Bonventre (2018) study were heavily focused on medical providers, which may be a fundamentally different sample than that of the current study. This sample is different because the majority of participants were mental health providers who have likely received training in OUD and harm reduction. It was anticipated that those with fewer years of clinical experience may have been exposed to more training on harm reduction and therefore have more favorable views. However, it is possible that those who have been treating OUD longer have been searching for ways to more effectively treat OUD, leading there to be less of a discrepancy among their responses.

In 2020, 69,000 Americans died from opioid overdose (Hedegaard et al., 2020). Due to the substantial number of deaths in the U.S. from opioid overdose, it is vital that harm reduction strategies, such as needle exchange programs, methadone clinics, and safe injections are made readily accessible to people who use opioids. Harm reduction is centered on the idea that clinicians must follow the client's goals, with the focus shifting from abstinence to safety and the minimization of unfavorable health, economic, and social repercussions of illegal substance use (Lago et al., 2017; Owczarzak et al., 2020, p. 6). Despite the positive aspects of harm reduction,

these approaches face substantial criticism due to the belief that they increase drug use (Clarke et al., 2016).

Further, different than expected, researchers did not endorse a significantly higher level of support for harm reduction strategies than providers . To date, there has not been ample research examining providers and researchers' attitudes toward harm reduction strategies. This gap in the literature led to this research project. However, the literature that does exist indicates that there are a wide range of opinions on harm reduction amongst providers. For example, providers reported that some positive aspects of safe injection sites are that individuals who use harm reduction services may be more likely to be honest about their substance use and providers can focus on the gradual changes in their use (Henwood et al., 2014). Despite these positive opinions, many providers believe that harm reduction is only appropriate for individuals who do not use illicit substances or experience drug dependence (Rosenberg et al., 2014). Provider acceptance of harm reduction strategies increased for individuals who unsuccessfully attempted sobriety or had a diagnosis of HIV (Cook & Fletcher, 2011; Enos, 2016; Wyrobeck et al., 2005). Many clinicians also feared that harm reduction strategies would intensify the individual's addiction (James et al., 2017; Klingemann et al., 2017). This fear has led many providers to explore the ethics of harm reduction and be resistant to implementing these strategies into their clinical work (Cook & Fletcher, 2011; Enos, 2016; James et al., 2017).

There have been very few studies that examined researchers' perspectives and/or support of harm reduction strategies. Researchers have often shown public support for groups like narcotics anonymous as a crucial component of the overdose epidemic response (Enos, 2016). Des Jarlais (2017) found that researchers are more likely to support the disease model of addiction than the public. This viewpoint could potentially affect their support for alternative

treatments for OUD. In addition, researchers focused on opioid use disorder will be up to date about the most current research, which could potentially lead to more support for these strategies. Since the hypotheses of this study were not supported by the data, it is important to consider what extraneous factors may lead to the differences in findings. For example, this data sample was positively skewed rather than normally distributed. This distribution may have made it more difficult to detect differences in the sample, indicating that many of the participants likely shared similar viewpoints. The sample was highly educated and worked with populations who use opioids. Additionally, harm reduction strategies are a hot button topic in the mental health field, particularly with recent discussions of opening safe injection sites and two new safe injection sites opening in New York City. This could potentially have affected the participants' knowledge about these strategies.

Lastly, our hypothesis that researchers would endorse a significantly higher level of support for safe injection sites than providers was also not supported. There are mixed attitudes among providers toward safe injection sites. There is a common misconception that safe injection sites enable drug use and illegal behaviors (Barry et al., 2019; Kerman et al., 2020). Additionally, many individuals are concerned about the cost-effectiveness of safe injection sites, when that money could potentially be spent on substance use treatment (Barry et al., 2019). However, there are notable positive opinions of safe injection sites as well. For example, safe injection sites provide food, water, and access to medical care (Bardwell et al., 2020; Pauly et al., 2020). Furthermore, there are positive attitudes about the reduction of overdose deaths and stigma from police (Bouvier et al., 2017 & Davidson et al., 2018). Elliott (2014) found that researchers have advocated for safe injection sites due to unsafe administration practices, overdose rates, economic factors, and the negative effects within the community. On the

contrary, other providers have expressed concern that patients working on a harm reduction model may make treatment spaces *unsafe* for individuals focusing on abstinence (Wenger et al., 2011). Providers also worried that safe injection sites may make individuals less likely to seek out treatment (Wenger et al., 2011). Researchers have also argued that professionals cannot uphold their ethics code while being employed at safe injection sites (Bonventre, 2019). Due to the recent media coverage on the overdose epidemic and safe injection sites, there may be less debate among clinicians and researchers about the helpfulness of this strategy to prevent overdose and limit disease transmission. This could have led to nonsignificant results of the hypotheses.

The qualitative findings from this study emphasize attitudes expressed in previous research studies. As shown in Bardwell and colleagues (2020) and Pauly and colleagues (2020), participants reported that the resources provided by safe injection sites are incredibly valuable to people who use injection drugs . Business owners affected by the overdose epidemic, as well as people who use injection drugs are most likely to support safe injection sites (Kral et al., 2010; Roth et al., 2019). This is likely due to the awareness of overdose risk, stigma, and police involvement associated with injection drug use (Bouvier et al., 2017 & Davidson et al., 2018). Other ethical concerns that have been voiced in previous research were also evident in the qualitative findings of this study. For example, participants expressed negative attitudes regarding the expenses of a safe injection site and "encouragement" of illegal behaviors and substance use (Barry et al., 2019).

Our null findings may be associated with Schneider and Ingram's (1993) model, which theorizes that the social establishment of the injection drug use population is a factor that will determine the efficacy of policy change. Therefore, there has to be community support and

advocacy for safe injection sites in order for policy changes to be implemented (Kennedy-Hendricks et al., 2019). Additionally, the *high stakes institutional translational model* states that grassroots advocacy and empathy for people who use injection drugs must be present to make policy change (Lawrence, 2017, p.1772). Recently, Burlington, Vermont and Oregon implemented laws about the decriminalization of drugs and New York City opened the first safe injection site in the United States (Behrends et al., 2019; del Pozo et al., 2020; Knopf, 2020). In light of Schneider and Ingram's (1993) model and the *high stakes institutional translational model*, it should be considered that there was ample support for these policy changes to be implemented. Some of this support may have stemmed from professionals within the OUD community, accounting for the null findings between researchers and providers' opinions on safe injection sites.

Although the four hypotheses of this study were not supported, one additional finding was noteworthy. Specifically, we found a significant relationship between the usefulness of safe injection sites and the usefulness of innocent bystander laws and narcan training and support for safe injection sites. These findings indicate that the participants often endorsed support and positive attitudes toward harm reduction strategies across the board. This may mean that individuals who support other types of harm reduction are more likely to support safe injection sites.

These results provide insight to mental health professionals' attitudes toward harm reduction strategies for the treatment of OUD. Specifically these null findings suggest that field of mental health may benefit from greater continuing education opportunities on harm reduction strategies, including safe injection sites. One of the major blockades to policy change is the stigma surrounding opioid use disorder and people who use opioids (McGinty et al., 2018).

These beliefs can infiltrate into healthcare, leading to a poor quality of care and lack of access to necessary resources and services, as well as policy change (Tsai et al., 2019). Researchers have found that provider stigma toward harm reduction strategies is associated with a lack of training on harm reduction and following an abstinence-based model for treatment. Stigma within the public was correlated with lack of knowledge of OUD and OUD treatment modalities (Madden et al., 2021). Stigma toward individuals with OUD can affect policy-makers' likelihood to allocate resources to treatment, reduce the frequency of screenings and treatment for substance use disorders, and may ultimately affect the likelihood for individuals to seek treatment (Yang et al., 2017). Educational trainings could provide psychoeducation and address biases that mental health professionals hold about these approaches. Mental health professionals have the unique ability to act both as clinicians and advocates for their clients. It is believed that trainings in harm reduction could empower clinicians to engage with local communities on harm reduction strategies, ultimately benefitting public health and the improvement on current policies for people who use injection drugs. Provider support for harm reduction may encourage public empathy and understanding for people who use injection drugs (Drucker et al., 2016).

Additionally, it should be considered that the generally positive reports in this sample for each strategy indicates overall support for the Mersey Harm Reduction Model. This model focuses on population health and reduction of shared injection equipment and drug use and increased abstinence when possible (O'Hare, 2007). With this model in mind, clinicians may shift their expectations for patients in OUD treatment leading to open mindedness to a wide variety of treatment goals. Despite this, there were many negative comments about the use of safe injection sites, such as these sites *enable drug use* and provide *access to drugs*. Participants also worried that these sites could potentially have detrimental effects to the community by

encouraging illegal activity or stigma. With these negative viewpoints of safe injection sites, it is possible that there is bias within the mental health community among clinicians who recommend and patients who utilize harm reduction strategies.

Currently, the main line of treatment for OUD is MOUD due to its efficacy (Volkow et al., 2019). However, MAT is often delivered in conjunction with behavioral strategies despite the discrepancy in efficacy between the two treatment modalities (National Institutes of Health, 2021). One treatment modality for OUD is known as compassion focused therapy (CFT), in which individuals are taught coping skills that can be utilized when they are feeling difficult emotions (Carlyle et al., 2019). Additionally, CFT encourages people who use opioids to shift their feelings about their poor coping strategies from shame to compassion (Carlyle et al., 2019; Gilbert et al., 2013). Another excellent way to deliver therapeutic treatment for people who use opioids is within an integrated care setting. However, there are some barriers that prevent the treatment of OUD in integrated care, including lack of clinicians with an expertise in substance use disorders and logistical issues (Gorden et al., 2014).

Researchers have considered how to apply cognitive behavioral strategies for this population (Barry et al., 2019; Lent et al., 2021). Cognitive behavioral therapy examines the relationship between thoughts, emotions, and behaviors and focuses on reframing negative thoughts to be more adaptive and helpful (Beck, 2020). Patients who use opioids have reported high satisfaction with CBT (Barry et al., 2019). To date, a CBT manual has not been created specifically to treat OUD. Lent and colleagues (2019) invited researchers and providers who work in OUD to provide feedback about the helpful aspects of CBT for this population. The researchers found that treatment alliance/rapport and coping skills were rated as the most efficacious strategies. Additionally, the respondents promoted the efficacy of motivational

interviewing, lapse/relapse prevention, problem solving, social skills development, cognitive restructuring, contingency management, and functional analysis. Participants also recommended mediation, peer support services, and medication adherence (Lent et al., 2019). It is important to note that CBT programs have only been piloted as abstinence based among individuals with OUD (Ilgen et al., 2016). Therefore, the application of CBT may look different among individuals who also employ harm reduction strategies.

Strengths and Limitations

This study had several limitations. The first limitation is the rather small sample size. Although there was an attemp to recruit a large sample, only 107 responses were received and only 84 of those surveys were complete and met inclusion criteria. Despite the comprehensive review of harm reduction strategies, the survey did not include many questions about policy change and advocacy. Having more comprehensive data on these topics could better direct future research and opportunities for advocacy within the mental health community. Previously validated measures were not used in this study, meaning that the researchers were not able to test the reliability and validity of the measures. An additional limitation is that the sample contains unequal groups, with most participants identifying as clinicians rather than researchers. Despite the efforts to recruit both groups, the investigators were unable to recruit more researcher participants. The recruitment strategies utilized in this research project were not as effective as hoped for this population. This imbalance limits conclusions about the differences between researchers and clinicians. Additionally, it is possible that the unequal groups among clinicians (81%) and researchers (26%) contributed to the null findings on the hypotheses due to the loss of power in the statistical analyses.

This study also had several strengths. Many of the participants have experience working in the realm of the opioid overdose crisis and with people who use opioids. Therefore, their attitudes toward harm reduction and appropriateness of using these strategies for the treatment of OUD should be examined when considering treatment options. Additionally, study findings filled in the gaps in the research because very few studies to date have explored mental health professionals' attitudes toward harm reduction strategies. Much of the research on this topic was completed in the early 2000s or focused on harm reduction for issues like self-harm (James et al., 2017; Wyrobeck et al., 2005). No studies have been completed to date that assess mental health professionals' attitudes toward safe injection sites. Additionally, we utilized both quantitative and qualitative methods to examine positive and negative aspects of safe injection sites, which provided fruitful responses and gave a better understanding of how some mental health professionals view these services.

Harm reduction opens a pathway for people with OUD to enter recovery, in whatever way that may look for them. Typically, sobriety is viewed as the norm for recovery. However, people who use opioids can experience an enhanced life by improving their health and safety via harm reduction strategies. Recovery can allow people who use opioids to better their relationships, decrease withdrawal symptoms, and create a supportive environment to continue on their journey to wellness (Maina et al., 2021). However, there are many barriers to opioid use disorder treatment, such as cost, stigma, and withdrawal symptoms (Lin, 2018; Maina et al., 2021). Services that peer led can assist in this process due to the low cost and relatability provided to people who use opioids (Lachapelle et al., 2021).

Future Directions

This study is part of a larger parent study that was used to create a cognitive behavior therapy treatment manual for OUD. The data from this study can be used to contribute to the field of psychological science by providing data about clinician and scholar support of harm reduction strategies, which can ultimately be used to conduct future research about policy change for these approaches. In order to improve this research study, validated measures could be utilized to ensure higher construct validity. Different recruitment strategies may also be considered, such as convenience sampling through methadone clinics, needle exchange programs, and safe injection sites. These methods may allow for more participants. Future studies may benefit from evaluating researchers' and providers' attitudes toward policy change. A qualitative study would likely be most effective to understand the participants' attitudes. Within such a study, researchers could consider asking the participants for advocacy recommendations and prior involvement in advocacy work for harm reductions strategies. The qualitative data from this study can be expanded upon as well. It would be worthwhile to ask how safe injection sites can be improved upon, as well as the participants' likelihood to advocate for legislation for safe injection sites. Researchers may also consider asking if providers would recommend harm reduction for their patients.

Conclusion

One of the major blockades to policy change is the stigma surrounding opioid use disorder and people who use opioids. It is important to consider that mental health professionals' attitudes toward harm reduction may ultimately influence how the public perceives harm reduction. If providers and researchers are providing the public with psychoeducation about

harm reduction, they may be more accepting of these strategies. These advocacy efforts are vital to the profession of psychology and to improve the lives of those with OUD.

REFERENCES

Ahmad, F.B., Cisewski, J.A., Rossen, L.M., & Sutton, P. (2022). *Provisional Drug Overdose Death Counts.* National Center for Health Statistics. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

American Farm Bureau Federation (2017). Polling presentation. October 31, 2017. URL: https://farmtownstrong.org/wp-content/uploads/sites/13/2017/12/171015-AFB-Opioids- LE.pdf

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

American Psychological Association (2017). *What is Cognitive Behavioral Therapy?* American Psychological Association. https://www.apa.org/ptsd-guideline/patients-and-families/cognitive-behavioral

Ayanga, D., Shorter, D., & Kosten, T. R. (2016). Update on pharmacotherapy for treatment of opioid use disorder. *Expert Opinion on Pharmacotherapy*, *17*(17), 2307–2318. https://doi.org/10.1080/14656566.2016.1244529

Baca, C. T., & Grant, K. J. (2007). What heroin users tell us about overdose. *Journal of Addictive Diseases*, *26*(4), 63–68. https://doi.org/10.1300/J069v26n04_08

Banta-Green, C. J., Beletsky, L., Schoeppe, J. A., Coffin, P. O., & Kuszler, P. C. (2013). Police officers' and paramedics' experiences with overdose and their knowledge and opinions of Washington State's drug overdose-naloxone-Good Samaritan law. *Journal of Urban Health : Bulletin of the New York Academy of Medicine*, *90*(6), 1102–1111. https://doi.org/10.1007/s11524-013-9814-y

Bardwell, G., Strike, C., Mitra, S., Scheim, A., Barnaby, L., Altenberg, J., & Kerr, T. (2020). "That's a double-edged sword": Exploring the integration of supervised consumption services within

community health centres in Toronto, Canada. *Health and Place, 61*. https://doi.org/10.1016/j.healthplace.2019.102245

Barry, C. L., McGinty, E. E., Pescosolido, B. A., & Goldman, H. H. (2014). Stigma, discrimination, treatment efectiveness, and policy: Public views about drug addiction and mental illness. *Psychiatric Services, 65*(10), 1269–1272.

Barry, C. L., Sherman, S. G., & McGinty, E. E. (2018). Language Matters in Combatting the Opioid Epidemic: Safe Consumption Sites Versus Overdose Prevention Sites. *AmericanJournal of Public Health, 108*(9), 1157–1159. https://doi.org/10.2105/AJPH.2018.304588

Barry, C. L., Sherman, S. G., Stone, E., Kennedy-Hendricks, A., Niederdeppe, J., Linden, S., & McGinty, E. E. (2019). Arguments supporting and opposing legalization of safe consumption sites in the U.S. *International Journal of Drug Policy, 63*, 18–22. https://doi.org/10.1016/j.drugpo.2018.10.008

Bech, A.B., Clausen, T., Waal, H., Benth, J.S., & Skeie, I. (2019). Mortality and causes of death among patients with opioid use disorder receiving opioid agonist treatment: a national register study. *BMC Health Services Research, 19*(1), 1–10. https://doi.org/10.1186/s12913-019-4282-z

Bolarinwa, O.A., Salaudeen, A.G., Aderibigbe, S.A., Musa, O.I., & Akande, T.M. (2011). Knowledge and Attitude of Primary Healthcare Workers in a North Central State of Nigeria toward Safe injection. *Internal Journal of Academic Research, 3*(3). DOI:10.7813/2075-4124.2011/3-3/A.30

Bonventre, A.M. (2018). Injecting the Solution or the Encouraging the Epidemic: The Legality of Safe Injection Sites and the Healthcare Professionals Duty of Non-maleficence. *Government Law Reviews, 12* (1).

Bouvier, B.A., Elston, B., Hadland, S.E., Green, T.C., & Marshall, B.D.L. (2017). Willingness to use a supervised injection facility among young adults who use prescription opioids non-medically: a cross-sectional study. *Harm Reduct J, 14*(1):1–9.

Boyd, J., Collins, A. B., Mayer, S., Maher, L., Kerr, T., & McNeil, R. (2018). Gendered violence and overdose prevention sites: a rapid ethnographic study during an overdose epidemic in Vancouver, Canada. *Addiction, 113*(12), 2261–2270. https://doi.org/10.1111/add.14417

Brunt, T.B., Nagy, C., Bucheli, A., Martins, D., Ugarte, M., Beduwe, C., & Vilamala, M.V. (2017). Drug testing in Europe: monitoring results of the Trans European Drug Information (TEDI) project. *Drug Testing and Analysis, 9*(2), 188-198. https://doi.org/10.1002/dta.1954

Carlson, R. G., Jichuan Wang, Siegal, H. A., & Falck, R. S. (1998). A Preliminary Evaluation of a Modified Needle-Cleaning Intervention Using Bleach among Injection Drug Users. *AIDS Education & Prevention, 10*(6), 523–532.

Center for Behavioral Health Statistics and Quality. (2016). *Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health* (HHS Publication No. SMA 16-4984, NSDUH Series H-51).http://www.samhsa.gov/data/

Centers for Disease Control and Prevention (2021). *Opioid Overdose: Commonly Used Terms.* https://www.cdc.gov/drugoverdose/opioids/terms.html#:~:text=Methadone%2C%20a%20synthetic%20opioid%20%20as%20tramadol%20and%20fentanyl.

Centers for Disease Control and Prevention (2020a). *Opioid Overdose: Understanding the Epidemic.* https://www.cdc.gov/drugoverdose/epidemic/index.html

Centers for Disease Control and Prevention (2020b). *Overdose Deaths Accelerating During COVID-19.* https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid- 19.html

Clarke, K., Harris, D., Zweifler, J. A., Lasher, M., Mortimer, R. B., & Hughes, S. (2016). The Significance of Harm Reduction as a Social and Health Care Intervention for Injecting Drug Users: An Exploratory Study of a Needle Exchange Program in Fresno, California. *Social Work in Public Health, 31*(5), 398–407.https://doi.org/10.1080/19371918.2015.1137522

Collins, A. B., Boyd, J., Mayer, S., Fowler, A., Kennedy, M. C., Bluthenthal, R. N., Kerr, T., & McNeil, R. (2019). Policing space in the overdose crisis: A rapid ethnographic study of the impact of law enforcement practices on the effectiveness of overdose prevention sites. *International Journal of Drug Policy, 73*, 199–207. https://doi.org/10.1016/j.drugpo.2019.08.002

Davidson, P.J., Lopez, A.M., & Kral, A.H. (2018). Using drugs in un/safe spaces: impact of perceived illegality on an underground supervised injecting facility in the United States. Int J Drug Policy, *53*, 37–44.

Davis, A. K., & Rosenberg, H. (2013). Acceptance of non-abstinence goals by addiction professionals in the United States.: Bulletin of the society of psychologists in addictive behaviors: Bulletin of the society of psychologists in substance abuse. *Psychology of Addictive Behaviors, 27*(4), 1102–1109. https://doi.org/10.1037/a0030563

Davis, A. K., Rosenberg, H., & Rosansky, J. A. (2018). American counselors' acceptance of non-abstinence outcome goals for clients diagnosed with co-occurring substance use and other psychiatric disorders. *Journal of Substance Abuse Treatment, 82*, 29–33. https://doi.org/10.1016/j.jsat.2017.08.006

Del Pozo, B., Krasner, L. S., & George, S. F. (2020). Decriminalization of Diverted Buprenorphine in Burlington, Vermont and Philadelphia: An Intervention to Reduce Opioid Overdose Deaths. *Journal of Law, Medicine & Ethics, 48*(2), 373–375.https://doi.org/10.1177/1073110520935353

Des Jarlais, D.C. (2017). Harm reduction in the USA: the research perspective and an archive to David Purchase. *Harm Reduction Journal*, *14*(1), 1–7. https://doi.org/10.1186/s12954- 017-0178-6

Dhaliwal, A. & Gupta, M. (2022). Physiology, Opioid Receptor. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan–. PMID: 31536249.

Drucker, E., Anderson, K., Haemmig, R., Heimer, R., Small, D., Walley, A., Wood, E., & van Beek, I. (2016). Treating Addictions: Harm Reduction in Clinical Care and Prevention. *Journal of Bioethical Inquiry, 13*, 239–249.

Drug Policy (2022). *Good Samaritan Fatal Overdose Prevention Laws.* Retrieved from: https://drugpolicy.org/issues/good-samaritan-fatal-overdose-prevention-laws#:~:text=Barriers%20to%20Effective%20Good%20Samaritan%20Laws%20Many%20states,enough%20to%20ensure%20that%20people%20will%20call%20911.

Dugosh, K., Abraham, A., Seymour, B., McLoyd, K., Chalk, M., & Festinger, D. (2016). A Systematic Review on the Use of Psychosocial Interventions in Conjunction With Medications for the Treatment of Opioid Addiction. *Journal of Addiction Medicine*, *10*(2), 93–103. https://doi.org/10.1097/ADM.0000000000000193

Egli, M., Schaal, D. W., Thompson, T., & Cleary, J. (1992). Opioid-induced response-rate decrements in pigeons responding under variable-interval schedules: Reinforcement mechanisms. *Behavioural Pharmacology*, *3*(6), 581–591. https://doi.org/10.1097/00008877-199212000-00005

Enos, G. (2016). Leading addiction researchers see NA as missing piece in opioid response. *Alcoholism & Drug Abuse Weekly*, *28*(42), 1–7. https://doi.org/10.1002/adaw.30753

European Monitoring Centre for Drugs and Drug Addiction (2008). Towards a better understanding of drug-related public expenditure in Europe. *EMCDDA*

Eversman, M.H., (2014). Trying to find the middle Ground. *Race Justice 4* (1), 29–44. http://journals.sagepub.com/doi/10.1177/2153368713517395.

Eversman, M.H., (2015). We want a living solution: views of harm reduction programs in black U.S. Communities. *J. Ethn. Subst. Abuse 14* (2), 187–207. http://www.tandfonline.com/doi/full/10.1080/15332640.2014.976803.

Ferri, M., Davoli, M., & Perucci, C. A. (2011). Heroin maintenance for chronic heroin dependent individuals. *The Cochrane Database of Systematic Reviews, 12*, CD003410.https://doi.org/10.1002/14651858.CD003410.pub4.

Foreman-Mackey, A., Bayoumi, A. M., Miskovic, M., Kolla, G., & Strike, C. (2019). 'It's our safe sanctuary': Experiences of using an unsanctioned overdose prevention site in Toronto, Ontario. *International Journal of Drug Policy, 73*, 135–140.https://doi.org/10.1016/j.drugpo.2019.09.019

Foth, T. (2020). Humanitarian reason and the movement for overdose prevention sites: The NGOization of the Opioid "Crisis." Nursing Philosophy: *An International Journal for Healthcare Professionals*, e12324. https://doi.org/10.1111/nup.12324

Freeman, P.R., Hankosky, E.R., Lofwall, M.R., & Talbert, J.C., (2018). The changing landscape of naloxone availability in the United States, 2011 – 2017. *Drug Alcohol Depend. 191*, 361–364. https://linkinghub.elsevier.com/retrieve/pii/S037687161 8304708.

Gamella, J. F., & Rodrigo, M. L. J. (2004). A Brief History of Cannabis Policies in Spain (1968- 2003). *Journal of Drug Issues, 34*(3), 623–660. https://doi.org/10.1177/002204260403400308

Goldenberg, S., Watt, S., Braschel, M., Hayashi, K., Moreheart, S., & Shannon, K. (2020). Police-related barriers to harm reduction linked to non-fatal overdose amongst sex workers who use drugs: Results of a community-based cohort in Metro Vancouver, Canada. *International Journal of Drug Policy, 76*.https://doi.org/10.1016/j.drugpo.2019.102618

Hagedorn, J.C. II., Maxim, D., & Gary, J.L. (2019). What Orthopaedic Surgeons Need to Know: The Basic Science Behind Opioids. *Journal of the American Academy of Orthopaedic Surgeons, 27*(18), e831–e837. https://doi.org/10.5435/JAAOS-D-18-00438

Hamilton, L., Davis, C. S., Kravitz-Wirtz, N., Ponicki, W., & Cerdá, M. (2021). Good Samaritan laws and overdose mortality in the United States in the fentanyl era. *International Journal of Drug Policy, 97*. https://doi.org/10.1016/j.drugpo.2021.103294

Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J.G. (2009) Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, *J Biomed Inform, 42*(2):377-81.

Hedegaard, H., Minino, A.M., & Warner, M. (2020). *Drug Overdose Deaths in the United States, 1999-2018*. NCHS Data Brief. https://www.cdc.gov/nchs/data/databriefs/db356- h.pdf

Henwood, B. F., Padgett, D. K., & Tiderington, E. (2014). Provider Views of Harm Reduction Versus Abstinence Policies Within Homeless Services for Dually Diagnosed Adults. *Journal of Behavioral Health Services & Research, 41*(1), 80–89. https://doi.org/10.1007/s11414-013-9318-2

Hurley, S.F., Jolley, D.J., & Kaldor, J.M. (1997). Effectiveness of needle-exchange programmes for prevention of HIV infection. *The Lancet, 349* (9068), 1797-1800.

IBM Corp. (2020). IBM SPSS Statistics for Windows (Version 27.0) [Computer software]. IBM Corp.

Institute for Drugs and Drug Addiction (IDT). 2011. National Report to the EMCDDA by the REITOX National Focal Point: Portugal Institute for Drugs and Drug Addiction. *New Development, Trends and In-Depth Information on Selected Issues. Lisbon: Institute for Drugs and Drug Addiction.*

Irvine, M. A., Coombs, D. , Kuo, M. , Buxton, J. A. , Otterstatter, M. , Macdougall, L. , Tyndall, M. , Gilbert, M., Balshaw, R., Milloy, M.-J., Bharmal, A., & Henry, B. (2019). Modelling the combined impact of interventions in averting deaths during a synthetic-opioid overdose epidemic. *Addiction, 114*(9), 1602–1613. https://doi.org/10.1111/add.14664

Irwin, A., Jozaghi, E., Bluthenthal, R. N., & Kral, A. H. (2017). A Cost-Benefit Analysis of a Potential Supervised Injection Facility in San Francisco, California, USA. *Journal of Drug Issues, 47*(2), 164–184. https://doi.org/10.1177/0022042616679829

Jakubowski, A., Kunins, H. V., Huxley-Reicher, Z., & Siegler, A. (2018). Knowledge of the 911 Good Samaritan Law and 911-calling behavior of overdose witnesses. *Substance Abuse, 39*(2), 233–238. https://doi.org/10.1080/08897077.2017.1387213

James, K., Samuels, I., Moran, P., & Stewart, D. (2017). Harm reduction as a strategy for supporting people who self-harm on mental health wards: the views and experiences of practitioners. *Journal of Affective Disorders, 214*, 67–73. https://doi.org/10.1016/j.jad.2017.03.002

Jones, S. (2018a, June 13). *Liberal racism behind push for safe injection sites.* Philadelphia Inquirer. https://www. inquirer.com/philly/columnists/solomon_jones/philadelphia-safe-injection-sites-opioids-heroin-addictioncomprehensive-user-engagement-sites-cues-20180613.html

Jones, S. (2018b, February 14). *Philly needs comprehensive plan to right the wrongs of the crack era.* Philadelphia Inquirer. https://www.inquirer.com/philly/columnists/solomon_jones/safe-injection-sites-philadelphia-com prehensive-user-engagement-sites-opioids-crack-war-on-drugs-20180214.html

Jordan, J.R. (2021). Come as You Are: The Acceptability of Harm Reduction Approaches for Opioid Use Disorder among Professional Counselor. [Doctoral Dissertation, Virginia Polytechnic Institute and State University]

Kampman, K., & Jarvis, M. (2015). American Society of Addiction Medicine (ASAM) National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use. *Journal of Addiction Medicine, 9*(5), 358–367. https://doi.org/10.1097/ADM.0000000000000166

Kennedy-Hendricks, A., Bluestein, J., Kral, A.H., Barry, C.L., & Sherman, S.G. (2019). Establishing Sanctioned Safe Consumption Sites in the United States: Five Jurisdictions Moving the Policy Agenda Forward. *Psychiatric Services, 70*(4), 294–301. https://doi.org/10.1176/appi.ps.201800398

Kerman, N., Manoni-Millar, S., Cormier, L., Cahill, T., & Sylvestre, J. (2020). "It's not just injecting drugs": Supervised consumption sites and the social determinants of health. *Drug and Alcohol Dependence, 213*. https://doi.org/10.1016/j.drugalcdep.2020.108078

Kimber, J., Dolan, K., van Beek, I., Hedrich, D., Zurhold, H., 2003. Drug consumption facilities: an update since 2000. *Drug Alcohol Rev. 22,* 227–233. https://doi.org/101080/0959523010001169 51.

Klingemann, J.I. & Klingemann, H. (2017). Drinking under control programmes: perception of alcohol-related harm reduction measures in Poland. Results of qualitative study among outpatient alcohol treatment providers. *Alcoholism and Drug Addiction*, *30*(3), 161–170. https://doi.org/10.5114/ain.2017.72310

Knaak, S., Christie, R., Mercer, S., & Stuart, H. (2019a). Stigma and the opioid crisis -- Final report. Mental Health Commission of Canada.

Knopf, A. (2020). Drug decriminalization measure in Oregon would not increase treatment funding. *Alcoholism & Drug Abuse Weekly*, *32*(46), 1–3. https://doi.org/10.1002/adaw.32905

Koester, S., Mueller, S. R., Raville, L., Langegger, S., & Binswanger, I. A. (2017). Why are some people who have received overdose education and naloxone reticent to call Emergency Medical Services in the event of overdose? *International Journal of Drug Policy, 48*, 115–124. https://doi.org/10.1016/j.drugpo.2017.06.008

Koob, G. F. (2020). Neurobiology of Opioid Addiction: Opponent Process, Hyperkatifeia, and Negative Reinforcement. *Biological Psychiatry, 87*(1), 44–53.https://doi.org/10.1016/j.biopsych.2019.05.023

Kral AH, Wenger L, Carpenter L, Wood E, Kerr T, Bourgois P. (2010). Acceptability of a safer injection facility among injection drug users in San Francisco. *Drug Alcohol Depend, 110*(1):160–3.

Lachapelle, É, Archambault, L, Blouin, C, & Perreault, M. (2021). Perspectives of people with opioid use disorder on improving addiction treatments and services. *Drugs Educ Prev Policy, 28,* 316-327.

Lacquer, H. (2014). Uses and Abuses of Drug Decriminalization in Portugal. *Law and Social Inquiry, 40*(3), 746-781. https://doi.org/10.1111/lsi.12104

Lago, R. R., Peter, E., & Bógus, C. M. (2017). Harm Reduction and Tensions in Trust and Distrust in a Mental Health Service: A Qualitative Approach. *Substance Abuse Treatment, Prevention & Policy, 12*, 1–9. https://doi.org/10.1186/s13011-017-0098-1

Latimore, A. D., & Bergstein, R. S. (2017). "Caught with a body" yet protected by law? Calling 911 for opioid overdose in the context of the Good Samaritan Law. *International Journal of Drug Policy, 50*, 82–89. https://doi.org/10.1016/j.drugpo.2017.09.010

Lawrence, T. B. (2017). High-Stakes Institutional Translation: Establishing North America's First Government-Sanctioned Supervised Injection Site. *Academy of Management Journal, 60*(5), 1771–1800. https://doi.org/10.5465/amj.2015.0714

Lembke, A. (2012). Why Doctors Prescribe Opioids to Known Opioid Abusers. *New England Journal of Medicine, 367*, 1580-1581. DOI: 10.1056/NEJMp1208498

Lent, M. R., Callahan, H. R., Womer, P., Mullen, P. M., Shook, C. B., DiTomasso, R. A.,

Felgoise, S. H., & Festinger, D. S. (2021). A mental health professional survey of cognitive-behavioral therapy for the treatment of opioid use disorder. *Journal of Clinical Psychology*, *77*(7), 1607–1613. https://doi.org/10.1002/jclp.23170

Lin, M. (Host) (2018-present). *Academic Life in Emergency Medicine* [Audio podcast]. https://www.podbean.com/media/share/pb-ei2ez-1079d01?utm_campaign=w_share_ep&utm_medium=dlink&utm_source=w_share

Lofaro, R. J., & Miller, H. T. (2021). Narrative Politics in Policy Discourse: The Debate Over Safe Injection Sites in Philadelphia, Pennsylvania. *Contemporary Drug Problems*, *48*(1), 75–95. https://doi.org/10.1177/0091450921993821

Madah-Amiri, D. & Clausen, T. (2016) The use of public health infrastructure probably the best strategy for national and large-scale naloxone distribution programmes. *Addiction, 111*(7), 1309-1310. https://doi.org/10.1111/add.13400

Madden, E.F., Prevedel, S., Light, T., & Sulzer, S.H. (2021). Intervention Stigma toward Medications for Opioid Use Disorder: A Systematic Review. *Substance Use & Misuse, 56*(14), 2181-2201, https://doi.org/10.1080/10826084.2021.1975749

Maina, G., Marshall, K., & Sherstobitof, J. (2021). Untangling the Complexities of Substance Use Initiation and Recovery: Client Reflections on Opioid Use Prevention and Recovery From a

Social-Ecological Perspective. *Substance Abuse: Research and Treatment, 15.* https://doi.org/10.1177/11782218211050372

Magwood, O., Salvalaggio, G., Beder, M., Kendall, C., Kpade, V., Daghmach, W., Habonimana, G., Marshall, Z., Snyder, E., O'Shea, T., Lennox, R., Hsu, H., Tugwell, P., & Pottie, K. (2020). The effectiveness of substance use interventions for homeless and vulnerably housed persons: A systematic review of systematic reviews on supervised consumption facilities, managed alcohol programs, and pharmacological agents for opioid use disorder. *PLoS ONE, 15*(1), 1–31.

Martin, M., Phillips, M.A., Saxon, M., Love, K. Cessna, L., Woodard, D.L., Page, M., Curry, K., Paone, A., Pennington-Stallcup, B., & Riley, W. (2021). Recovery support specialists inside the jail: a program description of treatment engagement for opioid use disorder. *International Journal of Prisoner Health*, *17*(4), 497–508. https://doi.org/10.1108/IJPH-12-2020-0102

McAvoy, G. (1998). Partisan probing and democratic decision-making rethinking the NIMBY syndrome. *Policy Studies Journal, 26*(2), 274–292. https://doi.org/10.1111/j.1541-0072.1998.tb01899.x

McClellan, C., Lambdin, B. H., Ali, M. M., Mutter, R., Davis, C. S., Wheeler, E., Pemberton, M., & Kral, A. H. (2018). Opioid-overdose laws association with opioid use and overdose mortality. *Addictive Behaviors*, *86*, 90–95. https://doi.org/10.1016/j.addbeh.2018.03.014

McGinty, E. E., Barry, C. L., Kennedy-Hendricks, A., Stone, E. M. , Linden, S., Niederdeppe, J., & Sherman, S. G.. (2018). Public support for safe consumption sites and syringe services programs to combat the opioid epidemic. *Preventive Medicine, 111*, 73–77. https://doi.org/10.1016/j.ypmed.2018.02.026

Mohammed, A., & Shaikh, A. (2019, April 25). *Overdose prevention sites are a tool for racial justice.* Philadelphia Inquirer. https://www.inquirer.com/opinion/commentary/drug-policy-racism-harm-reduction-20190425. html

Morone, J. A. (1997). Enemies of the people: The moral dimension to public health. Journal of Health Politics, *Policy & Law, 22*(4), 993. https://doi.org/10.1215/03616878-22-4-993

Nadal, K.L. (2017). "Let's Get In Formation": On Becoming a Psychologist–Activist in the 21st Century. *American Psychologist, 72*(9), 935–946. https://doi.org/10.1037/amp0000212

National Institute on Drug Abuse (2020). *Opioid Overdose Crisis.* https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis#:~:text=Roughly%2021%20to%2029%20percent,for%20chronic%20pain%20misuse%20them.&text=Between%208%20and%2012%20percent%20develop%20an%20opioid%20use%20disorder.&text=An%20estimated%204%20to%206,prescription%20opioids%20transition%20to%20heroin.

Nevin, J.A., Mendell, C. & Ajax, J.R. (1983). The Analysis of Resistance to Change. *Journal of Experimental Analysis of Behavior, 39.* 49-50.

New York City (2021). *Overdose Prevention Centers Averted 59 Overdoses in First Three Weeks of Operation.* Retrieved from: https://www.nyc.gov/site/doh/about/press/pr2021/overdose-prevention-centers-prevent- 59-deaths.page

Owczarzak, J., Weicker, N., Urquhart, G., Morris, M., Park, J. N., & Sherman, S. G. (2020). "We know the streets:" race, place, and the politics of harm reduction. *Health and Place, 64*. https://doi.org/10.1016/j.healthplace.2020.102376

Paediatric Child Health (2008). Harm reduction: An approach to reducing risky health behaviours in adolescents. *Paediatric Child Health, 13*(1), 53-56. doi: 10.1093/pch/13.1.53

Pauly, B., Wallace, B., Pagan, F., Phillips, J., Wilson, M., Hobbs, H., & Connolly, J. (2020). Impact of overdose prevention sites during a public health emergency in Victoria, Canada. *PLoS ONE, 1,* 18. https://doi.org/10.1371/journal.pone.0229208

Priest, K. C., Gorfinkel, L., Klimas, J., Jones, A. A., Fairbairn, N., & McCarty, D. (2019). Comparing Canadian and United States opioid agonist therapy policies. *International Journal of Drug Policy, 74,* 257–265. https://doi.org/10.1016/j.drugpo.2019.01.020

Rosenberg, H., & Davis, A. K. (2014). Differences in the acceptability of non-abstinence goals by type of drug among American substance abuse clinicians. *Journal of Substance Abuse Treatment, 46*(2), 214–218. https://doi.org/10.1016/j.jsat.2013.07.005

Schneider A & Ingram H (1993). Social construction of target populations: implications for politics and policy. *Am Polit Sci Rev, 87,* 334–347.

Shah, A., Hayes, C. J., & Martin, B. C. (2017). Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use - United States, 2006-2015. *MMWR: Morbidity & Mortality Weekly Report, 66*(10), 265–269. https://doi.org/10.15585/mmwr.mm6610a1

Skelton, E., Guillaumier, A., Tzelepis, F., Walsberger, S., Paul, C. L., Dunlop, A. J., Palazzi, K., & Bonevski, B. (2021). Alcohol and other drug health-care providers and their client's perceptions of e-cigarette use, safety and harm reduction. *Drug and Alcohol Review*. https://doi.org/10.1111/dar.13276

Skinner, B.F. (1937) Two types of conditioned reflex: a reply to Konorski and Miller. *J. Gen. Psychol, 16*,72–79

Sordo, L., Barrio, G., Bravo, M.J., Indave, B.I., Degenhardt, L., & Wiessing, L. (2017). Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ, 357*.j1550. https://doi.org/10.1136/bmj.j1550 PMID: 28446428

Staddon, J.E.R. & Cerutti, D.T. (2002). Operant Conditioning. *Annu Rev Psychol.* 54: 115–144. doi: 10.1146/annurev.psych.54.101601.145124

Stefancic, A., Tsemberis, S., Hul, L., Gillespie, C., Jost, J., & Jones, H. (2012). Reconciling Alternative to Incarceration and Treatment Mandates with a Consumer Choice Housing First Model: A Qualitative Study of Individuals with Psychiatric Disabilities. *Journal of Forensic Psychology Practice, 12*(4), 382–408. https://doi.org/10.1080/15228932.2012.697424

Strike, C., & Watson, T. M. (2019). Losing the uphill battle? Emergent harm reduction interventions and barriers during the opioid overdose crisis in Canada. *International Journal of Drug Policy, 71,* 178–182. https://doi.org/10.1016/j.drugpo.2019.02.005

Substance Abuse and Mental Health Services Administration (2019). *Principles of Community-Based behavioral health services for Justice-Involved individuals: a Research-Based guide.* Rockville, MD, available at: https://store.samhsa.gov/product/Principles-of-Community-based-BehFavioral-HealthServices-for-Justice-involved-Individuals-A-Research-based-Guide/SMA19-5097

Sumnall, H. R., Atkinson, A. M., Trayner, K. M. A., Gage, S. H., & McAuley, A. (2020). Effects of messaging on public support for drug consumption rooms in scotland, UK. *International Journal of Drug Policy, 83*. https://doi.org/10.1016/j.drugpo.2020.102855

The Network for Public Health Law (2017). *Legal Interventions to Reduce Overdose Mortality: Naloxone Access and Good Samaritan Laws.* The Network for Public Health Law.

Tsai, A. C., Kiang, M. V., Barnett, M. L., Beletsky, L., Keyes, K. M., McGinty, E. E., Smith, L. R., Strathdee, S. A., Wakeman, S. E., & Venkataramani, A. S. (2019). Stigma as a fundamental hindrance to the United States opioid overdose crisis response. *PLoS Medicine, 16*(11), 1–18. https://doi.org/10.1371/journal.pmed.1002969

Tupper, K. W., McCrae, K., Garber, I., Lysyshyn, M., & Wood, E. (2018). Initial results of a drug checking pilot program to detect fentanyl adulteration in a Canadian setting. *Drug and Alcohol Dependence, 190*, 242–245.

Van Boekel, L.C., Brouwers, E.P.M., van Weeghel, J., & Garretsen, H.F.L. (2020). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: The effectiveness of substance use interventions for homeless and vulnerably housed persons *PLOS ONE, 29*(31).

Wallace, B., Pagan, F., & Pauly, B. (Bernie). (2019). The implementation of overdose prevention sites as a novel and nimble response during an illegal drug overdose public health emergency. *International Journal of Drug Policy, 66*, 64–72. https://doi.org/10.1016/j.drugpo.2019.01.017

Weaver, M. (2020). *The U.S. Opioid Crisis: How Did We Get Here?* https://med.uth.edu/psychiatry/2020/01/10/the-u-s-opioid-crisis-how-did-we-get-here/

Wenger, L. D., Arreola, S. G., & Kral, A. H. (2011). The prospect of implementing a Safer Injection Facility in San Francisco: Perspectives of community stakeholders. *International Journal of Drug Policy*, *22*(3), 239–241. https://doi.org/10.1016/j.drugpo.2011.01.001

Wild, T. C., Pauly, B., Belle-Isle, L., Cavalieri, W., Elliott, R., Strike, C., Tupper, K., Hathaway, A., Dell, C., MacPherson, D., Sinclair, C., Karekezi, K., Tan, B., & Hyshka, E. (2017). Canadian harm reduction policies: A comparative content analysis of provincial and territorial documents, 2000–2015. *International Journal of Drug Policy*, *45*, 9–17. https://doi.org/10.1016/j.drugpo.2017.03.014

Wilson, N., Kariisa, M., Seth, P., Smith, H, IV., Davis, N.L. (2020). Drug and Opioid-Involved Overdose Deaths — United States, 2017–2018. *MMWR Morb Mortal Wkly Rep, 69*, 290-297.

Wryobeck, J. M., & Rosenberg, H. (2005). The association of client characteristics and acceptance of harm reduction: A policy-capturing study of psychologists. *Addiction Research & Theory, 13*(5), 461–476. https://doi.org/10.1080/16066350500168410

Xin, Y., España, M., & Davis, A. K. (2022). The acceptability of non-abstinent treatment goals among clinical social workers in the united states. *Journal of Social Work Practice*. https://doi.org/10.1080/02650533.2022.2034768

Yang, L., Wong, L.Y., Grivel, M.M., & Hasin, D.S. (2017). Stigma and substance use disorders: an international phenomenon. *Curr Opin Psychiatry, 30*(5), 378-388. doi: 10.1097/YCO.0000000000000351

APPENDIX A

Please complete the survey below.

Thank you!

The following survey asks for your perspectives on the strengths and limitations of existing cognitive behavioral treatment approaches for opioid use disorder.Your voluntary survey responses will be used to guide the development of future opioid use disorder treatments and will be kept anonymous. Upon completion of this brief survey (approximately 20 minutes), you will be asked to enter your contact information on a separate screen in order to receive $75 for your time and participation.If you have any questions, please contact the study investigators David Festinger, Ph.D. (DavidFe@pcom.edu) or Michelle Lent, Ph.D. (MichelleLe@pcom.edu).

IRB# H19-041X

1. Do you currently utilize, or have you previously utilized, cognitive-behavioral techniques in your treatment or research?

Yes or No

Highest degree completed: High school/GED

College

Masters

PhD or PsyD

MD or DO

Other degree

Please specify: Other degree

_____

Are you a scholar or health professional working in I do not work in opioid use disorder

the field of opioid use disorder (clinical or Clinician (direct patient care) research)?

Please select all that apply: Scientist

Professor/Instructor

Other

Please specify: Other

_____

I agree to voluntarily participate in this survey:

Yes or No

Age (Years)

Gender identification:

Male

Female

Non-binary

Do you have one of the following:

CADC

CAADC

Master Addiction Counselor

None

Other specialized addiction credential

Please specify: Other addiction credential:

_____

Years of professional experience working in the field

of addiction (years): _____

Occupational setting (Check all that apply): Private practice

Hospital/medical center

Outpatient clinic

Residential treatment facility

College or university

Other

Please specify: Other job setting

For the next 12 questions, please rate the efficacy of the following components of CBT for opioid use disorder (OUD;alone or in conjunction with medication-assisted treatment) on the following 1-5 scale:

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Motivational Interviewing (enter a number from 1-5)

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Homework

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Agenda setting

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Forms and worksheets

_____

1. Not Effective

2. Somewhat Effective

3. Moderately Effective

4. Mostly Effective

5. Very Effective

Cognitive restructuring/Thought records

_____

1. Not Effective

2. Somewhat Effective

3. Moderately Effective

4. Mostly Effective

5. Very Effective

Psychoeducation on substance use, safety, etc.

_____

1. Not Effective

2. Somewhat Effective

3. Moderately Effective

4. Mostly Effective

5. Very Effective

Treatment alliance/rapport

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Social skills development

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Coping skills

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Functional analysis

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Contingency management

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Lapse/relapse prevention

_____

1. Not Effective
2. Somewhat Effective
3. Moderately Effective
4. Mostly Effective
5. Very Effective

Problem solving

_____

1. Not Effective

2. Somewhat Effective

3. Moderately Effective

4. Mostly Effective

5. Very Effective

If there are any other skills/techniques that you feel to be useful for opioid use disorder not listed, please enter them in the box provided and rate their efficacy:

_____

1. Not Effective

2. Somewhat Effective

3. Moderately Effective

4. Mostly Effective

5. Very Effective

Based on your ratings, please provide a comment as to your MOST effective choice(s):

_____

(list included again below for reference)

Motivational interviewing

Homework

Agenda setting

Forms and worksheets

Cognitive restructuring/thought records

Psychoeducation on substance use

Treatment alliance/rapport

Social skill development

Coping skills

Functional analysis

Contingency management

Lapse/relapse prevention

Problem-solving

Based on your ratings, please provide a comment as to

your LEAST effective choice(s):

_____

(list included again below for reference)

Motivational interviewing

Homework

Agenda setting

Forms and worksheets

Cognitive restructuring/thought records

Psychoeducation on substance use

Treatment alliance/rapport

Social skill development

Coping skills

Functional analysis

Contingency management

Lapse/relapse prevention

Problem-solving

Do you typically assign between-session homework for OUD?

Yes or No

What percentage of the time do patients complete (and/or attempt to complete) the homework assignment?

< 25%

25-50%

51-75%

>75%

How many sessions do you typically RECOMMEND for patients in CBT treatment for OUD?

_____

For how many sessions do patients typically REMAIN in treatment?

_____

Have you used or adapted any evidence-based protocols for OUD treatment?

Yes or No

Which protocol? (check all that apply)

MATRIX

NIDA/Carroll

Other

Please specify the protocol used or adapted:

Why do you think that opioid use disorder is so

challenging to treat with CBT?

Please list at least three (3) topics/strategies that you believe should be added to CBT for treating individuals with OUD?

_____

In what ways can CBT be improved to treat OUD?

Which strategies that MAY NOT BE INCLUDED in typical Psychoeducation on pain (i.e., gate theory) CBT would patients with OUD benefit from learning?

Medication adherence strategies/psychoeducation

Intensive craving skills

Check all that apply: Mindfulness

Relaxation

Acceptance and Commitment Therapy (ACT)

Dialectical Behavior Therapy (DBT)

Social skills/assertive communication

Community reinforcement approaches

Peer support services

Other

Please specify: Other strategies

For the following nine (9) items, please enter a number from 1-5 for the following question:

To what extent might addressing each of the following problem areas help individuals with OUD succeed in treatment?

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Infectious Disease Prevention/Treatment

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Harm Reduction (e.g., safe injection sites, clean needles) _____

(enter a number from 1-5)

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Anger Management

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Co-morbid Mental Health Issues

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Physical Health/Medical Care Access

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Essential Life Basics (e.g., housing, food, shelter)

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Employment/Financial Concerns

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Interpersonal Relationships

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Legal Issues

(enter a number from 1-5) _____

1- Not helpful

2- Somewhat helpful

3- Moderately helpful

4- Very helpful

5- Extremely helpful

Do any of the individuals with OUD with whom you work receive medication-assisted treatment (MAT) for treating this condition?

Yes or no

Please check all of the medications that participants in your studies or patients that you see are prescribed specifically for OUD (note, may be Long-acting Buprenorphine injection (Sublocade) prescribed by other professionals; also known as medication assisted treatment [MAT]):

Methadone

Daily Buprenorphine/Naloxone (Suboxone)

Oral Naltrexone (Revia)

Naltrexone XR (Vivitrol)

Other

Please specify: Other medications used by your

patients for opioid use disorder _____

In your opinion, how helpful is medication assisted treatment (MAT) for OUD TREATMENT?

Not helpful

Somewhat helpful

Moderately helpful

Very helpful

Extremely helpful

In your opinion, how helpful is CBT for medication assisted treatment (MAT) ADHERENCE?

Not helpful

Somewhat helpful

Moderately helpful

Very helpful

Extremely helpful

In your opinion, in what ways can CBT enhance medication assisted treatment (MAT)?

In your opinion, how helpful would a CBT manual specifically for OUD be in the treatment of this disorder?

Not helpful

Somewhat helpful

Moderately helpful

Very helpful

Extremely helpful

What are the distinct challenges in treating individuals with OUD compared to other substance use disorders? _____

What are some common concerns that individuals with Telling their sexual/romantic partners OUD, who also have HIV and/or Hepatitis C, have reported? (Check all that apply)

Safe sex practices

Access to healthcare

Telling other drug users

Access to clean needles

Symptoms of HIV/Hepatitis C

Other

Does not apply to my patients or participants

Please specify: Other

What is your level of support for safe injection sites for individuals with OUD?

Strongly Disagree

Somewhat Disagree

Somewhat Agree

Agree

Strongly agree

What are some risk prevention strategies that you discuss with your clients and/or participants who have OUD? (Check all that apply)

Condom use

Needle exchange programs

Single use of needles and/or needle cleaning

Annual medical visits with primary care provider

STD/STI testing

Narcan

Other

Please specify: Other risk prevention strategies used

Please rate using scale below how useful the following three harm reduction strategies are for OUD:

1. Not helpful
2. Somewhat helpful
3. Moderately helpful
4. Very helpful
5. Extremely helpful

Safe injection sites (enter a number 1-5)

_____

1. Not helpful
2. Somewhat helpful
3. Moderately helpful
4. Very helpful
5. Extremely helpful

Innocent bystander laws

_____

1. Not helpful
2. Somewhat helpful
3. Moderately helpful
4. Very helpful

5. Extremely helpful

Narcan training

_____

1. Not helpful

2. Somewhat helpful

3. Moderately helpful

4. Very helpful

5. Extremely helpful

What do you think are the POSITIVE aspects of safe

injection sites?

What do you think are the NEGATIVE aspects of safe

injection sites?

What is your level of support for methadone clinics for individuals with OUD?

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

What is your level of support for physician waivers to prescribe or dispense medication such as buprenorphine to individuals with OUD?

Strongly disagree

Disagree

Somewhat agree

Agree

Strongly agree

What are some common physical health concerns that your clients and/or participants with OUD report? (Check all that apply)

Lung/breathing conditions

Heart conditions

Skin conditions

Gastrointestinal problems

Diabetes

Nutritional deficiencies

Infection

Other

Please specify: Other

In the coming months, our study team will be developing an expert advisory committee to further develop psychosocial treatments for opioid use disorder. Advisory committee members will be compensated for their time (estimated 2-4 hours quarterly, no travel required).If you are

interested in participating in this panel, please email DavidFe@pcom.edu or MichelleLe@pcom.edu.Thank you for participating. Please copy the link below into your browser to enter your contact information and receive a $75 gift card.

https://redcap.pcom.edu/surveys/?s=HATKR8FFRHz