All Humans are Human:
Environmental Humanization and
Its Positive Impacts on People Struggling with Substance Abuse

by
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Dedication

My late grandma, Brenda Lee Hale, gave me the heart that I have today and taught me to always be kind. She was not here when I started the thesis but she has been my motivation to keep going. She would always tell me to “keep your chin up baby.” I want to thank her for being my inspiration to teach the world to be a little kinder and more understanding to each other.

Abstract

The Opiate Epidemic began in three waves, each wave getting gradually worse. The Centers for Disease Control and Prevention, National Institute of Health, and the Department of Health and Human Services changed the guidelines for how prescription opiates were being prescribed and began helping people who have already become addicted. With these changes, the amount of opiate related deaths dropped 5.1% (CDC, 2018). The question then is, why have the trends not changes so much? There must be an underlying factor that is not being taken in account. A study conducted by a Canadian researcher, Bruce Alexander (1978), shows through a series of rat experiments that the environment can be just as impactful as the chemical makeups of addictive drugs. The methods of this procedure included recruiting participants from Facebook support groups to complete a survey asking qualitative questions about the environment they were raised in, the environment their addiction began, and their environment after completing a rehabilitation program. As a result with 23 responses, it was concluded through multiple things that the environment positively impacts sobriety because of confidence, family relationships, and mental health. The negative impacts of environmental dehumanization included abused trust, physical or mental abuse, normalized substance abuse, and poor mental health.

Key words: *dehumanization, substance abuse, environmental humanization*

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CHAPTER I
Introduction:
Drug Use Explosion in the United States

The Opiate Epidemic occurred in three waves. The first wave began in 1991 when deaths rose sharply due to an increase in prescribing opioids and other pain relief combinations for pain treatment. It was influenced by pharmaceutical companies and medical societies that claimed that the risk of addiction was low. By 1999, 86% of patients using opioids were non-cancer patients. According to Liu and Pie (2012), the communities where opioids were the most available were also where there were the sharpest rises in drug abuse. In 2010 the second wave began. It happened when there was an increase in heroin overdose deaths. When the rate of opiate prescriptions decreases, heroin was on the rise. Heroin was cheap, readily available, and a potent illegal opioid. Deaths due to heroin increased by 286% between 2002 and 2013. The third wave began in 2013 as an increase in deaths came from fentanyl, a potent synthetic opiate. The sharpest rise of deaths happened in 2016 with 20,000 deaths (Liu et al., 2012). Then, the Centers for Disease Control and Prevention (CDC) changed their guidelines for prescriptions (Liu et al., 2012). It is now suggested that medical professionals try other practices and medicines before prescribing opioids and generally make it harder to obtain a prescription.

According to the CDC (2018), drug overdose deaths have dropped 5.1% in 2018. This is because of the reduction of prescribed pain medications due to the guidelines set in place by the CDC changing how doctors prescribe different pain medications (Opioid deaths are down but challenges continue , 2019). However, this is just a first step.

According to Hodge (2017), addiction is one of the most preventable threats to public health, yet only ten percent of people with an addiction will receive specialty care (Hodge, 2017).

Along with the CDC, the Department of Health and Human Services (HHS) and the National Institute of Health (NIH) now have five major priorities starting with improving access to treatment and recovery services (National Institute on Drug Abuse, 2019). They are also now promoting use of overdose reversing drugs such as Narcan pens and strengthening the understanding and knowledge of the epidemic. The NIH and HHS are also providing support for cutting edge research as well as advancing better practices for pain management, such as making it more difficult to obtain a prescription for opioids. In theory, these practices sound like they would work perfectly on paper. However, the CDC's (2018) statistics say that roughly 21 to 29 percent of patients given an opioid misuse them, 8 to 12 percent will develop a disorder and 4 to 6 percent will eventually do heroin. In fact, 80 percent of individuals addicted to heroin started with opiates.

Overdoses increased 30 percent from July of 2016 to September of 2017 (National Institute on Drug Abuse, 2019). The increase in overdoses since the HHS and NIH have made their propositions leads to the question: why? If pharmaceutical companies are changing policies and organizations are promoting awareness, then why are addiction rates still so high? Why is unintentional injury, which includes overdoses, the third leading cause of death across all age groups?

Health experts say that repeating a health behavior takes 21 days to become a habit and 90 days to become a lifestyle (Josey, 2019); however, it only takes one

experience to overdose or lose family and friends. According to the National Academies of Sciences, Engineering, and Medicine (2020), isolation can be mental or physical in the case of a substance abuse disorder. This isolation can cause problems when it comes to recovery (National Academies of Sciences, Engineering, and Medicine, 2020.) Family and friends may shun the sufferer, or they may be detained and locked away from the world.

Isolation can cause environmental dehumanization (National Academies of Sciences, Engineering, and Medicine, 2020), a concept illustrated in Bruce Alexander's seminal rat park experiment. There is a general stigmatization of people who struggle with a drug abuse disorder (National Academies of Sciences, Engineering, and Medicine, 2016). The stigma is a negative, demeaning image of these people. Personal relationships are lost, and environmental humanization becomes compromised. A study conducted by Bruce Alexander (1982) started with researchers putting a rat in a cage with a bottle of water and a bottle of water laced with heroin or methamphetamines. The rat would almost always choose the laced bottle of water. Another researcher in Alexander's lab noticed a flaw with the experiment and made changes to the test environment. He built what could be considered a rat amusement park with tunnels and activities and multiple other rats with which the formerly single rat could interact. He still provided both water bottles, only this time the rats mostly chose the regular water. The differences between the environments were the social reinforcements. The social reinforcements created environmental humanization for the rats. It was easy to for them to not choose the drugs because they were already in a Utopia. The researchers involved in the project came to the conclusion that it was not the chemicals of the drugs that fostered the drug

dependency, but rather the cages, or the difficult environments, in which the rats were placed (Alexander & Hadaway, 1982).

The experiment with the rats shows the importance of social reinforcements, which can also be known as environmental humanization, when it comes to drug abuse. When the rat was alone with nothing else to do, the euphoria from the drugs filled the void. Alexander hypothesizes that the same principle applies to humans. Demarginalizing addicts can have the same effects on humans as it does the rats. When the rats were demarginalized, they veered away from the laced water. The experiment shows how impactful the environment an addict is in when facing sobriety.

When society "others" somebody, they are basically saying "that is not me" or "I wouldn't do that." Differentiating someone is like a switch that is on or off; there is a better and subordinate: me over you -- I am better than you (Therrien, 2019). "Othering" someone is powerful and marginalizes addicts. In many cases people have already lost friends and potentially family, and society's way to "help" them is to send them to rehab or prison. In the scenario of prison, drug addicts are confined to a room without contact with the outside world with almost nothing they can call their own. In the scenario of rehab, the environment may be a nicer room with activities, but there is still a lack of communication and connection to the outside world. Isolation of those with drug dependency, away from friends and family members, is negative for their mental health because people deserve to be treated like people, even if they made poor choices. Integrating and warmly supporting people with drug issues can also be described as social humanization. Some addicts can go down criminal roads, and being under the influence does not justify their actions.

Addiction can be caused by something earlier in life, such as trauma, that makes them want to mask the pain (National Institute on Drug Abuse, 2020). Eventually, that person will be recognized as an addict. “Addict” is a name that is common for someone who has a substance abuse disorder. The name or identity or label that is given to addicts becomes an assumption that they themselves take on, which can shape not only how they interact with the world but how the world interacts with them (Ladipo, 2013). “Addict” is a negative form of identification. This meaning that the world is going to have a negative view on the person, simply over a name. Identity is therefore also an important part of social humanization.

Next in understanding addiction is the biological change that happens to the brain. Once a person becomes addicted to drugs like heroin and opiates, the addiction changes the chemical makeup of the brain. Each sector of the brain has a certain amount of chemical output for each brain function. Continuous drug use recalibrates chemical output and taking drugs is balancing the chemical output back out (Kosten et al., 2002). This means that once a person takes drugs, they are no longer the same person they were before the drugs. According to the different tiers of health and wellness as illustrated by the National Wellness Institute (2019) -- spiritual, intellectual, psychological, physical, emotional, and social -- the change in the brain made by drugs is impact to a person’s physical health. The biological change could be considered physical dehumanization.

The underlying message society conveys is that the addict deserves to be in the situation they are in and they have done it to themselves. How can that sort of narrative be changed? Is there a compromise that both helps addicts without marginalizing them and “othering” them? Could providing jobs and treating the person struggling with a

substance abuse disorder like normal people help them in their journey to recovery? People who are challenged by substance abuse already struggle with humanization in other aspects of their lives, such as the spiritually, physically, intellectually, psychologically, and emotionally, but the focus of this study is environmental humanization.

Based on the Social Cognitive Theory proposed by Albert Bandura in the 1960's, environmental factors in a person's development are parts of the living environment that will influence a person's behavior and ability to be successful (Loveless, 2020; Bandura, 2002). In this study, "environmental humanization" refers to a support group provided to the person struggling with substance abuse. A support group for this study is defined as any friend or family member who is actively a positive impact in the person's life.

This leads to my research question: In what ways does the environment an addict begins in, and is released in after rehabilitation impact their sobriety? In other words, from drug users' personal qualitative assessments, what harmed them in their recovery and what helped them? Did environmental humanization provide them positive benefits?

CHAPTER II
Environmental Humanization Supports Sobriety

"Rat Park" was a series of experiments conducted in the 1970's. Bruce Alexander was the main researcher at Simon Fraser University in Canada, and he hypothesized that it was not solely the addictive chemical makeup of opiates that cause addiction, but also the environmental factors (Gage & Sumnall, 2018; Alexander and Hadaway, 1982). The conclusion of Alexander's laboratory tests test did support his hypothesis. The experiment was rejected by two major journals and published in 1978 (Alexander et al., 1978).). The research received no supportive academic, professional response, and the project's funding was taken away by the university

There subsequently were several different tests conducted to test the rat's willingness to try and use the morphine. Each of the experiments in which a supportive, engaging environment was supplied to the subjects resulted in the rats choosing the regular water. The rats spent 57 days solo in a cage with the two water types – regular and opiate laced. Once moved into an environmentally enriching rat park. Alexander claims,

> The intense appetite of isolated experimental animals for heroin in self-injection experiments tells us nothing about the responsiveness of normal animals and people to these drugs. Normal people can ignore heroin ... even when it is plentiful in their environment, and they can use these drugs with little likelihood of addiction ... Rats from Rat Park seem to be no less discriminating (Gage, 2018, par. 5).

While the drug itself is a major part of addiction, the environment is just as important.

The Vietnam War was a parallel event to this experiment. It showed eerie parallels of how an environment can shaped addiction. In another study (Robins et al.,

2003), researchers recruited 374 Vietnam veterans who used heroin while overseas and interviewed them about their drug use after returning home. An important detail was that only a few had injected; instead, a majority was smoked or snorted. This is important because a research study conducted by Novak and Kral (2011) shows that injection has been shown to be more addictive than other forms of administration. However, after their return home, most men only occasionally used or not at all. They noticed that those who injected already had previous accounts of drug use before service.

> In Vietnam, the use of heroin was especially common (35%) among Army enlisted men who had arrived in Vietnam in 1970 and returned to the United States in September 1971. They were selected for study because they had a higher rate of heroin use than enlisted men in other Services and higher than Army officers (Robins et al., 2003, par. 2).

Because most of the men enlisted were too young to purchase alcohol on base but had a familiarity with opiates that were widely available and cheap in Vietnam at the time, they felt free to use opiates. Even though they did not inject any drug, they smoked it with tobacco or snorted it. Only nine percent did inject while in Vietnam. These were also the men that continued to use 9-12 months after returning to the United States (Robins, et al., 2003).

This article runs parallel to the Rat Park experiment. While enlisted, they chose the drugs, but after returning home they were able to stop almost cold turkey. It shows that their drug use was not motivated by the chemical makeup of the drugs and more about the scenario they were in. The study showed that the more vulnerable veterans were the ones who lived on the east and west coasts and less in the center of the United States and already had history with drugs. Both the rat park research and the vet research

were carried out in the 1970s, in the waning years of the Vietnam War. Drugs were more prevalent on the east and west coast of the United States and more densely populated (Alexander and Hadaway, 1982). Both experiments were almost mirror images that changed the face of addiction. This experiment shows that being in a high stress situation such as the Vietnam War is more impactful that the chemicals in the drugs. Something like living on base in a foreign country under high stress would much be like the rats' living in the cage alone. The Rat Park was revisited, and they left the rats in the cages with the drugs for 57 days and then put them in the rat park. After discovering which water bottle was laced with drugs, they then chose to drink the regular water. This showed that even after long exposure to the drugs, there was not a result of addiction (Alexander and Hadaway, 1982).

In another study, Semple et al. (2010) examined the link between drug stigmatization and the treatment services for 292 meth users. According to Semple et al (2010), "stigma marks an individual as being different, and those differences are linked to undesirable characteristics of the person (Semple et al., 2010, p. 369)." They also mention that there are studies of stigma that associate the term "drug addict" to a thin, unhealthy, lower class person with behavioral problems. They also found evidence that health care professionals show stigmatizing attitudes in the care they give to people struggling with drug addictions because they find them the most difficult to deal with (Semple et al., 2010).

Their sample consisted of 292 HIV-negative, heterosexual, meth using men and women enrolled in the FASTLANE program at the University of California, San Diego. This is a rehabilitation program. Participants were asked a series of questions based on

their meth use and treatment programs they had used. Those who had been to treatment were compared to those that did not. Most of the participants agreed that there was a negative stigma against meth users and that outsiders (non-drug users) had negative stereotypes created, did not want their children around meth users, and would mistreat them (Semple, et al., 2010). After all the data was collected, statistically they found that the meth users that did not seek treatment generated more stigmatizing coping strategies such as secrecy compared to those who did seek treatment (Semple et al., 2010).

This warrants further investigation because it shows there is a relationship between stigma and drug abuse. A confounding variable was why people sought treatment. Some claimed that they did not seek treatment because they did not want people to know that they abused substances and they felt stigmatized, but those who did not go still received a negative attitude that only worsened their disorder compared to those who did seek treatment.

According to Cryan et al. (2003), humans' withdrawal from substances and depression results in overlapping behaviors. The researchers conducted experiments on rats to see how their behavior changed when they experienced withdrawal. In their conclusion they found that withdrawal is analogous to depression. A reduced interest in pleasure is a core symptom of depression and withdrawal. They claim that this would suggest a common neurological disorder. In their conclusion, they state that more studies need to be conducted to test whether the depressive-like symptoms can be reversed with anti-depressants (Cryan et al., 2003.)

Comorbidity is two existing conditions in a person. This is why withdrawal and depression is significant during the period of recovery. Comorbidity is important

otherwise a drug abuser will use the drugs to pleasure the limbic reward symptoms to lessen the depression-like behaviors, thus leading to relapse. The idea of withdrawal-induced depression was determined not a myth and explains why some drug users relapse, especially when brain abnormalities are taken into consideration. Cryan (2003) shows that having unstable mental health can contribute to lower chances of sobriety. Exploration of how stigma can affect the mental health of a drug abuser could help verify that stigma can affect a drug users' chances of sobriety because it affects their mental health overall, leading to relapse. Environmental humanization can help mental disorders and cause a positive snowball effect. [Try to build a stronger transition here to show how these ideas connect to build your case]

Kosten and George (2002) go into depth to explain how an addiction to drugs can physically reset the brain. Explaining how these abnormalities and changes happen to an addict may help researchers understand that addicts are not "bad people" for being dependent on drugs. There is dependence versus an addiction to drugs. This difference lies in whether the abnormalities go away after detoxification or are longer lasting. The abnormalities in the brain can be the cause of the craving that can lead to relapse because they affects the reward system. Opiates use the bloodstream to get to the brain and the chemicals attach to special proteins. This triggers the chemical processes that produce a reward feeling of pleasure (Kosten et al., 2002). This shows that stigma is not a fair system when addiction is more than the drug itself but has become a biological function. As mentioned earlier, this is an example of physical humanization. The body functions are a form of physical health. When drugs begin to attack it, physical health becomes compromised.

A blog post was created by a multi-cultural concerns topic expert, Tonya Ladipo (2013) about the power of a name. This article was written with the purpose of making it clear how important identity is and how powerful a name can be. A name is defined as "a descriptor that allows people to make quick judgements and assumptions about us… It is a fast way to categorize a lot of information in a short amount of time" (Ladipo, 2013, par. 1). Identity is going to be the thing that is presented and to the world and how we interact with it- it is our first impression. Identity is made of multitude of things such as clothing, sexuality, or gender; identity is everything that makes people unique. This relates to stigma because once someone begins to associate with the identity given to them by a stigma, it may make it difficult to want to remain sober- this is spiritual dehumanization. If the stigma is broken and people with a substance abuse disorder are not identified with a negative connotation, then their spirituality can be reformed, thus creating spiritual humanization.

Stigma can shape identity; therefore, it is important to know how identity is shaped over a lifetime. Sokol (2009) explains Erikson's (1968) theory of identity development. Psychologist [first name?] Erikson has many theories about development and identity. Erikson was the first to theorize an eight stage lifespan of identity development. Each stage is met with a conflict and/or crisis that a person must encounter to successfully build a developed identity. He was also the first to show that context is important when defining a person because there is social context within the psychological makeup of a person. Identity building begins in young childhood and continues well into adulthood because it takes time to form who someone is. Identity even becomes unknown

in middle adulthood because the idea of "half of life is over" begins to sink in and identity issues may begin to form (Sokol, 2009).

Operant conditioning also shows that there is an underlying issue that most people struggling with drug abuse have. It can be recognized as a mood disorder, and they are self-medicating. Staddon, et al. (2013) explains operant conditioning and explains the two factors that play a big part in it: self-control and choice. The article uses B.F. Skinner's ideologies and expands on them because Skinner defined operant conditioning as a behavior "controlled by its consequences." Choice is something that cannot be observed or measured; however, there are multiple experiments using it to prove that there is a certain choice that subjects would always choose, this being the fixed alternative. If given two options of one now or two later, most people would choose the one now. This is the fixed alternative (Staddon, et al., 2013).

When a person chooses a "fixed alternative" of abusing substances, they are choosing the endorphins and rush of happiness from the high rather than dealing with their problems sober. The same thing happens with self-control. A delayed, better reward such as therapy or rehabilitation is not the choice that is preferred, but an immediate, small reward such as a drug high is preferred. This would be intellectual dehumanization.

In a person's life while struggling with drug addiction, it may be hard to have a sense of self and know their identity, especially when everybody around them has a negative stigma against them. The negative stigma shows that there is no one point in life that drugs become more desirable and as the stages of developing an identity unfold, there are multiple chances to become vulnerable. Throughout these studies, there is heavy emphasis on the drug itself and the person themselves; however, there is not much about

environmental humanization. Environmental humanization is just as important and deserves to be recognized as well.

Shepard et al. (2006) shows conclusions that the more personalized a counselor becomes with their patient, the better the outcomes were when the patient was trying to recover. The researchers go to say, "…characteristics associated with retention and outcomes of substance-abuse clients, including the therapist' s interest in helping, skill, and ability to form a good working relationship (therapeutic alliance) (Shepard, et al., 2006, p. 630)…" The study was conducted to show how incentives improved the counselor's ability, which effected their client's experience. Eligible clients were enrolled in a trial that was randomized. Sessions were scheduled weekly and there was rescheduling if requested. If a client didn't show up, the counselor was still paid a minimum nominal fee. It was up to the counselor to reach out and contact the client to reschedule if the session was a no-show (Shepard et al., 2006).

The clients in this study were all previously enrolled in regular rehabilitation programs. There were 124 clients that were randomized to receive the relapse prevention care [unspecified] and the rest received standard aftercare (Shepard et al., 2006). The ones struggling with substance abuse receiving the standard aftercare was the control group. The incentive program was introduced to the counselors as a way to prevent turnover The counselors would receive bonuses based on their sessions with clients. Shepard et al., (2006) broke the methodology down to them as,

> They would receive a bonus of $100 for each of their assigned clients who attained five sessions (considered a "milestone" session) after date and $50 for each client who completed the full course of 12 sessions, in addition to their normal compensation of $22 an hour for a one hour session. Counselors continued to receive $11 for no shows (Shepard et al., 2006, p. 629).

Results were gathered and showed that counselors needed to balance time between their professional lives and personal lives. Counselors had better results if they reminded their clients of appointments, anticipated and accommodated for client difficulties during appointments, emphasized the importance to the client of completing treatment, followed up and pursued those who miss appointments, and persisted contact to clients who have lapses in treatment. Overall, counselors reported a better outcome after incentives. In their data they found a 26% difference between the responsiveness to incentives by Milestone 5 (Shepard et al., 2006.) This shows that counselors are taking the initiative to help their clients to the best of their ability.

The personal relationships that the counselors form with their clients due to the incentives' influencing them shows that environmental humanization can be a factor that matters. Environmental humanization was increased after the incentive was introduced. The counselors were treating the clients better because they had the incentive and overall improved the quality of care. Making clients feel important enough to schedule around personal lives and form personal relationships influenced their initiative to finish their programs. This influence shows that environmental humanization is important when it comes to treatment. Treatment is more than just being enrolled in a program, but the environment and relationships are important to achieve sobriety.

Another look into The Substance Abuse Monitoring System database by Wickizer et al. showed findings that inpatient programs had higher completion rates than the outpatient programs. The differences were related to the treatment settings. There were clinical norms and peer expectations that exist in inpatient programs that may make it

more difficult to quit treatment; however, an outpatient client simply has to not show up to a meeting (Wickizer et al., 1994).

More importantly, this study by Wickizer (1994) shows that stigma alone within the programs can affect the outcome of the client's well-being. Factors that were also accounted for included finances to pay for treatment, cost of treatments, age, education, and their history with substance abuse. All can be considered factors of the environment that they were in. Patients that had more control over their environment in inpatient programs had a higher chance of success, while those in an outpatient programs had less control over their environments and were less successful.

MacNicol (2017) published an article explaining the different aspects of the neurobiology of addiction. MacNicol (2017) defines neurobiology as "the study and organization of neurons into functional circuits- provides a framework for understanding the neuronal circuits involved in addiction (MacNicol, 2017, p.142)." The feeling of craving food, sex, and social interaction is a survival instinct. These feelings are promoted by the activation of the reward circuit. The hippocampal memory centers can be triggered to remember the environment, experience, and activity as the reward system was activated. MacNicol (2017) explains the neurotransmitters associated with substances of abuse as being dopamine, serotonin, norepinephrine, endogenous opioids, acetylcholine, endocannabinoids, glutamate, and GABA (aminobutyric acid).

The researchers tested the strength of the mesolimbic reward circuit with electrodes implanted into an animal's brain reward center. MacNicol (2017) found that animals would ignore other stimuli like food, drink, or a chance to mate to press a bar and activate the mesolimbic reward center to the point of starvation or death.

Genetics and environment play largely off each other. There are no findings of a clear family pattern, but mice with a targeted dopamine transporter protein exhibited a reduction in drug seeking behavior. MacNicol (2017) states the environment can alter gene expression through three main mechanisms “DNA methylation, histone acetylation, and non-coding RNA.” (p. 145) The environment as well as genetics can affect an addict and their likelihood of sobriety because of triggers.

CHAPTER III
Study Methodology:
Qualitative Survey

Participants

This study consisted of surveying people that were currently recovering or have already recovered from a substance abuse disorder. Through these responses I expected to find a common thread among the stories of people who struggle with substance abuse and discover the environments they grew up in. As seen thus far, the environment can impact the road someone takes to sobriety. Through this experiment, I want to know if there are similar patterns between environments and sobriety stories.

My participants were recruited on Facebook. Facebook groups allow membership based on similar experiences and therefore allowed me to recruit participants that meet the standard requirements. Participants must volunteer to participate rather than be chosen. This could have affected results by introducing bias as those more open to sharing their experiences would be more likely to participate and be more open to share their experiences and opinions; however, HIPPA laws and boundaries would not be violated because they had already left treatment and are an open forum of communication and sharing. Both male and females could participate as long as they were at least eighteen years of age. The only guideline is that they must have had participated in some form of rehabilitation program because of a substance abuse disorder. My goal was to collect between 15 and 30 surveys.

Convenience sampling was the method of participant recruitment. Every participant had an equal chance to volunteer to participate because they were all members of the same Facebook group.

Materials

MTSU's Institutional Review Board gave approval to the consent form September 24, 2020, protocol 21-20277q, used for this experiment (see Appendix A). The consent form included a section with contact information that the participant can keep if they have any questions, concerns, or comments about the survey. Within the consent form is a disclaimer (see Appendix B). The disclaimer includes a warning that any information shared would be used in data collection and that participants have the option to opt out and choose to not complete the survey. It also states the purpose of data collection and states appreciation for the contribution.

The next document included was a nine-question survey consisting of both open-ended and close-ended questions to collect quantifiable data (see Appendix C). It includes two scales, one response being a semantic differential; another response format is the Likert scale numerically one through ten. The open-ended questions allowed for further elaboration on the close-ended questions. The semantic differential scale allowed participants to tell how humanized they feel from humanized to completely dehumanized/ monstrous, while the weighted scale allowed the participant to state how likely they are to successfully stay sober upon graduation.

Each question was based upon the environment the participant has lived in before and during their struggle with substance abuse. While I included two questions that were quantifiable, they would not yield results that are statistically significant due to small

sample group. Most data collected was qualitative and analyzed to explore themes of environmental humanization levels to anticipated success in remaining sober.

Procedures

After joining several Facebook groups solely for people who are struggling or have already recovered from substance abuse, I reached out to the administration team to ask permission to use their forum for my research. I wanted their members to feel like they still have a safe place for their personal use. Once permission was obtained, a brief description of my research was posted with a link to a survey that was created using Qualtrics. Within this survey was also the IRB Consent Form, where written consent was obtained.

Members were asked to participate if they would like to. After enough surveys are submitted the post was deleted.

To analyze results, I looked for reoccurring themes, from home life, to relationships, to support groups outside of their programs. Using the responses to this question, I looked for a relationship between environmental humanization and the confidence felt for a successful road to sobriety.

A total of 24 responses were collected over two days. Within these responses, 79.17% of responses had completed an inpatient program, and 16.67% did not. There were also 4.17% that didn't finish their program or were not successful (See Figure 1).

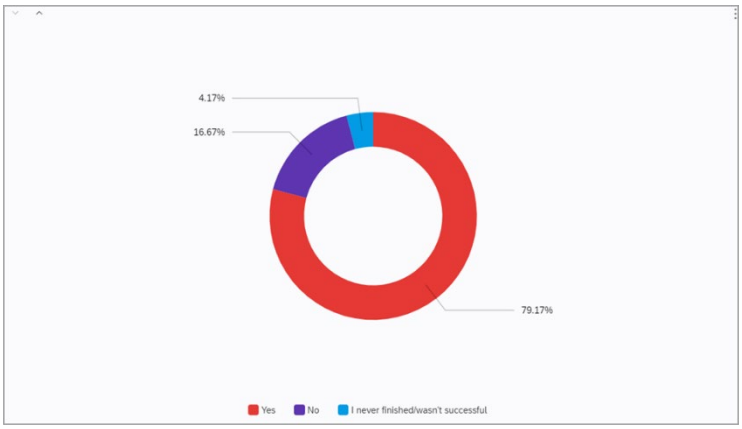

Figure 5 Q3 - Did you complete an inpatient or outpatient program from a rehabilitation center?

Of the 24 responses, 53.58% said that they had a substance abuse problem with alcohol or methamphetamines; 5.36% were addicted to synthetic opiates; 21.43% were addicted to opioids, and 19.64% were addicted to others. 95.83% of these responses had lost their job or struggled to maintain a job. Based on responses, the participants felt humanized by their support groups, and they felt confident in their likelihood to remain sober upon graduation.

Open ended questions were examined for themes relating environmental humanization with sobriety. The environmental factors that led to substance abuse problems can be broken down to confidence via self and others, poor family relations, destigmatized substance abuse, and insecurities. All of these factors show a pattern at how environmental humanization can impact sobriety, especially after rehabilitation.

These three subthemes—accountability, confidence in themselves, and supportive family and friends—can be grouped as confidence via self and others. Those who had high confidence in themselves, held themselves accountable, and/or had supportive

friends and family typically also showed signs of having a better chance of sobriety after rehabilitation.

> One response coded under the theme of accountability says,
> Part of being a person's support is holding them accountable. It never feels good to be held accountable. It sometimes feels dehumanizing to be held accountable. Other than that, they have made me feel more human than I ever have. I finally have friends who don't want anything from me other than to see me happy and sober.

This was in response to the question of what makes them feel humanized by their support group. This person goes on to say that they feel confident that they are likely able to stay sober. They stay busy being involved in the community and spend time with people "who are living the way I want to."

Besides accountability, there was also confidence. The addicts that had their morale boosted by friends and family, resulted in feeling more confident in themselves about their chances at sobriety. One participant stated, "They express their support and pride in me frequently and I feel very seen as a person by them." The humanization their support group gives them also feeds into their own self confidence to promote sobriety.

Then there was supportive friends and family. When the participants were asked about why they felt the way they did about their support groups outside of rehabilitation, most responded that with constant reassurance, a non-judgmental friend and family group, and felt seen as a person also felt like they had a high chance of success with their sobriety.

Poor parental relationships, abused trust, and household emotional, verbal, and physical abuse affect the environment in which someone lives and their chances of sobriety, as these were the stories that led to the participants first time

trying. Environmental dehumanization can start right at the roots of home life growing up. 16 of 24 responses said they had rough childhoods and a bad relationship with their parents. Most of the parents were divorced or disregarded the emotions of the child, as one participant stated:

> My dad was an alcoholic and was verbally abusive. I always felt like I was different and alone. My emotional growth wasn't fostered by my parents. I used to watch them argue a lot.

This goes to show that there was also household emotional and/or physical abuse. There was a very straightforward response by one of the participants that said, "Emotionally abusive household. Raised mostly by older brother. Close with friends rather than family." 6 of the 24 responses had mentioned a form of emotional, verbal, or physical abuse.

Emotional, verbal, and physical abuse goes hand in hand with poor parental relationships overall. A list of a few examples from the data pool is as follows:

- " pretty good besides my mother."
- "Relationship with mother [was] difficult."
- "Not a close family."
- "…My dad left the state when I was young and I tried to act like it didn't bother me, but it did."

A parent is supposed to be the role model for a person to grow from; however, when a child cannot hold a solid relationship with a parent, they have no one to look up to and no one to learn from. By not holding a solid relationship with a parent, it can make a child feel disconnected and dehumanized by their parent(s).

A lot of participants also grew up having their trust abused. While reading the responses to their first time using a substance, the response that stood out the

most was, “My brother gave me LSD at 12 years old.” Granted, this didn’t immediately lead to an addiction, but the trust between brothers should not be abused in such a way. Being offered drugs by siblings, friends and family is abusing trust and leads to an unhealthy environment.

Insecurity is what poor or abnormal mental health, substance availability, and wanting to fit it or peer pressure can be explained as. These participants had underlying insecurities that made them feel like had to try the substances to “fit in”. Having the availability of a substance does not mean they had to try it. The mental health problems can also lead to insecurity. Mental health played a big factor in the environment of the participant. Participants brought up mental health several times, even if it was not directly. One participant responded with, “I was 18 working two jobs and going to school.” Without mentioning specifically, their first time using was a coping mechanism due to stress. Others responded with information about depression, depression from losing a loved one, etc.

Availability played a small part, whether it be from friends, place of employment, or pills from a surgery. A respondent says, “I was 20, working in a wine bar.” This insinuated that the access to the wine made it easier to fall victim to an addiction. Another participant states, “What led to my first time using was the pain pills after I had my kuxs [kids].” The pain killers that were prescribed after this participant had her child became a means of access to her.

The biggest factor that consistently occurred in regard to environmental humanization is wanting to fit in and peer pressure: 19 out of the 24 responses specifically mention wanting to fit in or peer pressure. Environment is the people

that someone hangs out with, where they work, where they spend their time, etc.; when peer pressure comes into play or wanting to fit it, it can be hard to escape. It becomes an influencer and destigmatizes substance abuse. It makes substance abuse seem like a normal thing when it is not.

Table 1

Reoccurring Themes from survey "Environmental Humanization and Sobriety"

Main Theme	Sub Theme
Confidence via self and others	Accountability
	Confidence
	Supportive family and friends
Poor family relationships	Poor parental relationships
	Abused trust
	Household emotional/physical abuse
Destigmatized Substance Abuse	Poor parental relationships
	Abused trust
Insecurity	Poor/ abnormal mental health
	Availability to substance
	Wanting to fit in/peer pressure

Source: Qualtrics Survey, Environmental Humanization and Sobriety

CHAPTER IV
Analysis, Discussion, and Study Limitations

The purpose of this study was to find a relationship between environmental humanization and its effects on the likelihood of sobriety. To conclude the study, qualitative research shows that environmental humanizations and factors have a significant impact on the confidence of people struggling with substance abuse. Those with better home lives, more supportive friends outside of rehabilitation, and better mental health showed they were more likely to stay sober.

These themes were shown in the "Rat Park" experiments shown by Bruce Alexander. Similar to the rats in the "Rat Park," those who had more "toys" such as friends and good home lives felt more confident that they did not need or want the substances they were previously addicted to. To reiterate, the rats would choose the toys and healthy ways to stimulate their limbic reward system. While the people with a substance abuse disorder used the substance of their choice to stimulate their limbic reward system, it was because they were not actively getting that via their home life and other environmental factors. Once they left rehabilitation, they found heathier ways to stimulate their reward systems.

The work of Luborsky et al. (2006), shows that those that had more personal relationships outside of rehabilitation showed higher success rates. This is also demonstrated in the research gathered from this project's survey, as those with more environmental humanization felt they had a higher chance at staying sober. Instead of more personal relationships with their counselors, they had more personal relationships with their friends, parents, and themselves. The positive coping in a more humanized environment led to their feelings.

A question on the survey referred to maintaining a steady job. 95% of participants claimed they could not, and this can be really damaging to someone's character and making them underestimate their own skill. When they are under the influence it would only make it harder to complete certain tasks required for a job, even as simple as showing up on time. Cognitively, it is a hard hit to their confidence. The work of Chandler et al. (2009) studies the effects of individuals who participate in prison-based programs, then community based programs, and finds, "Individuals who participated in prison-based treatment followed by a community-based program post incarceration were 7 times more likely to be drug free and 3 times more likely to be arrested for criminal behavior than those not receiving treatment (p.184)." This insinuates that a community-based program can help a certain population of individuals who have been a victim of addiction and could potentially have an effect on the general population on individuals. Once sobriety is reached, having a role in the community, such as maintain a job, could build confidence in their characters to prevent falling back into addiction. A role in the community, like a job, could build confidence in their characters to prevent falling into addiction.

As for childhood trauma, Dube (2003) those who had higher ACEs scores between 7 to 10 were more likely to be report illicit drug use problems, addiction to illicit drugs, or parenteral drug use. The results of the study conducted by Dube et al. (2003) state, "Because ACEs seem to account for one half to two third of serious problems with drug use, progress in meeting the national goals for reducing drug use will necessitate serious attention to these types of common, stressful, and disturbing childhood

experiences by pediatric practice." (p.564) This means until the childhood trauma is attended to, one half to two thirds of substance abuse cases will never be resolved.

Outliers in the study included participants that had normal home lives, but still fell in the cycle of addiction. There were a couple of participants who felt that regardless of their good or "normal" home life, before and after rehabilitation, it was still unlikely that they were going to stay sober. Within the research conducted there was no evidence that could support why they felt that way. The survey did not go into depth for home trauma. There are many reasons for an addiction to form, according to the National Institute on Drug Abuse (2020). This is especially applicant for the younger population, such as curiosity or failing grades, and everyday life stresses, which was demonstrated through the results of the experiment. Another reason outside of environment that could lead to addiction is biology (National Institute on Drug Abuse, 2020). Participants that had normal home lives may have tried out of curiosity, fitting in, etc. and biologically were more likely to become addicted because of the substances' affect on the reward circuit in the brain, as discussed in MacNicol's (2017) research.

Limitations to this experiment included the validity of the source of participants. Because I used a variety of Facebook groups to obtain participants, it took months to acquire the small amount of responses collected. Facebook groups are public, and anybody can join them; that makes it difficult to know who is being accurate with their responses. There is no way to prove that support outside the rehabilitation centers has any correlation to the success rates of the participants. Thorough case studies would most likely be more beneficial. Other limitations included the insignificance of quantitative data. Because the pool was so small, quantitative data could not be used in the final

conclusion of the experiment. Quantifying the few participants makes it possible to have a generalized ideation of what a larger population may look like.

Due to the nature of this study, high internal validity cannot be assumed. Participants were real world people, casually filling out a survey on Facebook. Their input could vary depending on many different scenarios and factors outside of the survey's topic. Sampling bias as well as the Hawthorne effect may also contribute to the results of the study. The participants in my study were so few compared to the millions of active and recovered addicts that they could fall anywhere on the range of severity. Because the participants knew that the study was related to their recovery story, they may have left out specific details, or changed their answers to fit what the researcher was looking for. This could vastly change the reliability of the results.

A larger pool sample from multiple rehabilitation centers would be recommended for future research. Future research could study more specific environmental factors in detail and focus on specific factors and specific sobriety dates, rather than making assumptions from open-ended questions. These results can influence future research because it narrows down what factors can be focused on more thoroughly such as access to the substance. This study could serve as blueprints for a larger study to gather more sufficient results.

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Appendix A: Institutional Review Board Approval

IRB

INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd Murfreesboro, TN 37129 *FWA: 00005331/IRB Regn. 0003571*

IRBN001 – EXPEDITED PROTOCOL APPROVAL NOTICE

Thursday, September 24, 2020

Protocol Title	***All Humans are Humans: Environmental Humanization and its Impact on People Struggline with Substance Abuse***
Protocol ID	**21-20277q**
Principal Investigator	**Briana Sands** (Student)
Faculty Advisor	Bethany Wrye
Co-Investigators	NONE
Investigator Email(s)	*bms7x@mtmail.mtsu.edu; 34ethany.wrye@mtsu.edu*
Department	Health and Human Performance
Funding	**NONE**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU IRB through the **EXPEDITED** mechanism under 45 CFR 46.110 and 21 CFR 56.110 within the category *(7) Research on individual or group characteristics or behavior*. A summary of the IRB action is tabulated below:

IRB Action	**APPROVED for ONE YEAR**
Date of Expiration	**9/30/2021** *Date of Approval*: 9/24/20 *Recent Amendment*: NONE
Sample Size	FIFTY (50)
Participant Pool	*Target Population:* Primary Classification: **General Adults 18 or older** Specific Classification: **Individuals who have already completed or are currently in treatment for substance use disorder**
Type of Interaction	☒ ☐ Virtual/Remote/Online interaction **In person or physical interaction – Mandatory**
COVID-19 Management *Exceptions* Collection of simple demographics is permitted *Restrictions*	**1. Mandatory ACTIVE Informed Consent.** **2. Other than the exceptions above, identifiable data/artifacts, such as, audio/video data, photographs, handwriting**

samples, personal address, driving records, social security number, and etc., MUST NOT BE COLLECTED.
3. Mandatory Final report (refer last page).
4. CDC guidelines and MTSU safe practice must be followed

Approved Templates	*IRB Templates:* Informed Consent
	Non-MTSU Templates: Social media recruitment script
Research Inducement	NONE
Comments	NONE

Post-approval Requirements

The PI and FA must read and abide by the post-approval conditions (Refer "*Quick Links*" in the bottom):

- ***Reporting Adverse Events:*** The PI must report research-related adversities suffered by the participant deviations from the protocol, misconduct, and etc., within 48 hours from when they were discovered.
- ***Final Report:*** The FA is responsible for submitting a final report to close-out this protocol before **9/30/202** **(Refer to the Continuing Review section below)**; REMINDERS WILLNOT BE SENT. **Failure to close-out or request for a continuing review may result in penalties** including cancellation of the data collected using this protocol and/or withholding student diploma.
- ***Protocol Amendments***: An IRB approval must be obtained for all types of amendments, such as: addition/removal of subject population or investigating team; sample size increases; changes to the research sites (appropriate permission letter(s) may be needed); alternation to funding; and etc. The proposed amendments must be requested by the FA in an addendum request form. The proposed changes must be consistent with the approval category and they must comply with expedited review requirements
- ***Research Participant Compensation:*** Compensation for research participation must be awarded as proposed in Chapter 6 of the Expedited protocol. The documentation of the monetary compensation must Appendix J and MUST NOT include protocol details when reporting to the MTSU Business Office.
- ***COVID-19:*** Regardless whether this study poses a threat to the participants or not, refer to the COVID-19 Management section for important information for the FA.

Continuing Review (The PI has requested early termination)

Although this protocol can be continued for up to THREE years, The PI has opted to end the study by **9/30/2021** **8/31/202**
The PI must close-out this protocol by submitting a final report before Failure to close-out may penalties that include cancellation of the data collected using this protocol and delays in graduati student PI.

Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would fit within this approval category. ***Only TWO procedural amendments will be entertained per year*** *(changes like addition/removal of research personnel are not restricted by this rule).*

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Other Post-approval Actions:

recommendation by the IRB or by both. ent to the approval of this protocol on request l

Date	IRB Action(s)	IRB Comments
NONE	NONE	NONE

COVID-19 Management:

The PI must follow social distancing guidelines and other practices to avoid viral exposure to the participants and other workers when physical contact with the subjects is made during the study.

- The study must be stopped if a participant or an investigator should test positive for COVID-19 within 14 days of the research interaction. This must be reported to the IRB as an "adverse event."
- The MTSU's "Return-to-work" questionnaire found in Pipeline must be filled by the investigators on the day of the research interaction prior to physical contact.
- PPE must be worn if the participant would be within 6 feet from the each other or with an investigator.
- Physical surfaces that will come in contact with the participants must be sanitized between use
- **FA's Responsibility:** The FA is given the administrative authority to make emergency changes to protect the wellbeing of the participants and student researchers during the COVID-19 pandemic. However, the FA must notify the IRB after such changes have been made. The IRB will audit the changes at a later date and the FA will be instructed to carryout remedial measures if needed.

Data Management & Storage:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application.

The data must be stored for at least three (3) years after the study is closed. Additional Tennessee State

 data retention requirement may apply (*refer "Quick Links" for MTSU policy 129 below*). The data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects.

The MTSU IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php
- Expedited Procedures: https://mtsu.edu/irb/ExpeditedProcedures.php
- MTSU Policy 129: Records retention & Disposal: https://www.mtsu.edu/policies/general/129.php

Appendix B: Consent Form

IRBF024 – Participant Informed Consent (ONLINE)

Language to be used for online surveys that qualify for "no more than minimal risk"

Primary Investigator: Briana Sands

PI Department & College: Psychology, Honors

Faculty Advisor (if PI is a student): Bethany Wrye

Protocol Title: Environmental Humanization and Its Impact on People Struggling with Substance Abuse

Protocol ID: **Approval Date:** **Expiration Date: (For expedited)**

Information and Disclosure Section

1. **Purpose**: You are volunteering to participate in this study to find a correlation between environmental humanization and the longevity of sobriety. This means the people that someone is surrounded by and the environment that they live in will affect the length of sobriety based on how good or bad it is.
   .
2. **Description**: There are several parts to this project. They are:
   - After consenting to participate, there is a short survey that contains multi-choice questions and long answers. Please be thorough in your responses or your data may be discarded.

3. **Duration**: The whole activity should take about 15-20 minutes. / The participants will not compensated / The subjects must take at least 15 minutes/hours to complete the study.

Here are your rights as a participant: (MANDATORY)

- Your participation in this research is voluntary.
- You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below)
- If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can

continue the study without entering a response if you didn't want to answer any questions.
- Some items may require a response to accurately present the survey.

4. **Risks & Discomforts:** Because this research is based on your recovery from substance abuse, it may be uncomfortable talking about your journey.

5. **Benefits:** a) The potential benefits to the study are a better understanding of the relationship between environment and sobriety. It may become incorporated in outpatient programs to increase the likelihood and making it easier to remain sober. b) The potential benefits to you is letting your personal experience help others that have been through similar struggles find sobriety.

6. **Identifiable Information**: You will NOT be asked to provide identifiable personal information/You may provide contact information for follow-up / We may request your contact information for compensation purposes

7. **Compensation: There is no compensation for participating in this study/** The participant will be compensated as described below:
☐Class credit – Explain:

☐Cash ☐Gift Card ☐Merchandise Value per participation $

☐Other

Compensation Requirements:

a) The qualifications to participate in this research are: You must be a legal adult of 18 or older. You must be enrolled or have completed a rehabilitation program. If you do not meet these qualifications, you will not be included in the research and you will not be compensated.
b) After you complete this consent form you will answer screening questions. If you fail to qualify for the research based on these questions, the research will end, and you will not be compensated.
c) Please do not participate in this research more than once. Multiple attempts to participate will not be compensated.
d) Attention checks are embedded in the research. If you fail or of these, then you will not be compensated.
e) To be compensated, you must receive a completion code. That requires clicking on the final screen of the study. If you choose to stop for any reason, you will still need to click through until the end to receive compensation (just leave the items blank and click through until the end <; if items require a response to present the survey accurately, you will need to respond to those items as your progress to the end of the survey)>.
f) Based on the cash value of the compensation (more than $75 per iteration), you will be asked for tax details for accounting purposes.

8. **Confidentiality.** All efforts, within reason, will be made to keep your personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, *if* you or someone else is in danger or if we are required to do so by law.

9. **Contact Information.** If you should have any questions about this research study or possibly injury, please feel free to contact Briana Sands by telephone 5022961461 or by email bms7x@mtmail.mtsu.edu OR my faculty advisor, Bethany Wrye, at Bethany.Wrye@mtsu.edu or 6158985073. You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email (compliance@mtsu.edu). This contact information will be presented again at the end of the experiment.

Participant Response Section

☐No ☐Yes I have read this informed consent document pertaining to the above identified research

☐No ☐Yes The research procedures to be conducted are clear to me

☐No ☐Yes I confirm I am 18 years or older

☐No ☐Yes I am aware of the potential risks of the study

By clicking below, I affirm that I freely and voluntarily choose to participate in this study. I understand I can withdraw from this study at any time without facing any consequences.

☐ NO I do not consent

☐ Yes I consent

Appendix C: Survey

1. Did you complete a program from a rehabilitation center?
    - Yes
    - No
    - I never finished
2. What substance did you struggle with?
    - Opioids
    - Alcohol
    - Synthetics Opiates
    - Methamphetamines
    - Others
3. What was it like growing up? What was your relationship like with your friends and family?
4. What led to your first time using?
5. Have you lost a job or found it difficult to maintain a job because of your addiction?
    - Yes
    - No
    - I don't/haven't worked
6. What kind of program are you or were you enrolled in? (Inpatient, Outpatient, other.?)
7. What is your support group like outside of rehab? Do you have a stable home, friend/ family to support you?

8. On a scale of 1-10 how humanized do you feel by your support group? Are they confident in your recovery or do they have the opposite opinion? 1 being humanized and 10 being completely dehumanized.
9. Why do you feel this way? Please be thorough.
10. On a scale of highly likely to unlikely at all, how confident do you feel that you will remain sober, or have remained sober after completing your rehabilitation program? 5 being highly likely and 0 being unlikely at all.
11. Why do you feel this way? Please be thorough.

Appendix D:

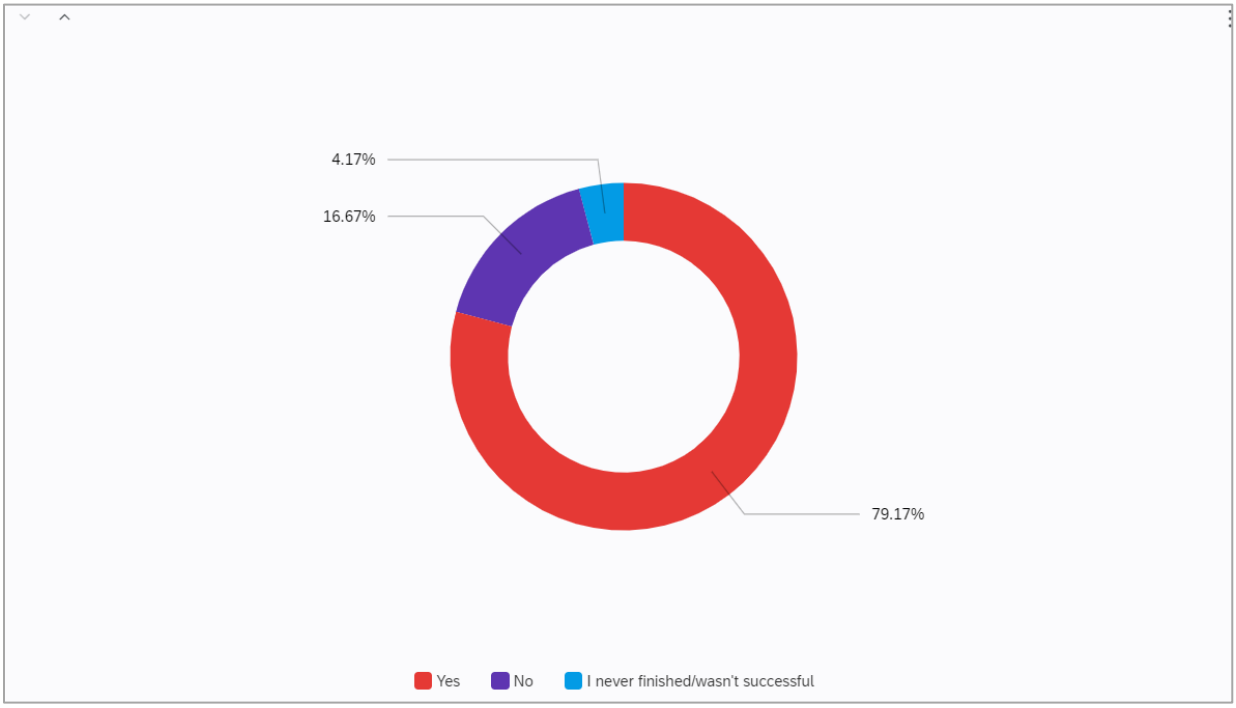

Figure 6 Q3 - Did you complete an inpatient or outpatient program from a rehabilitation center?

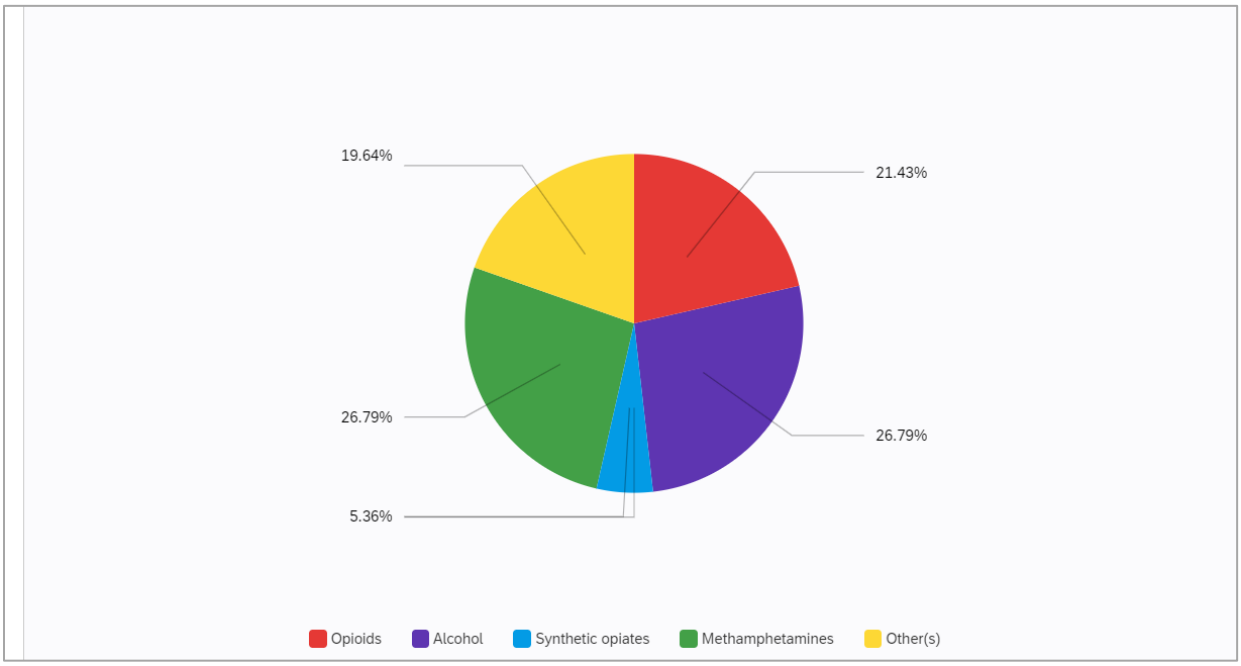

Figure 7 Q4 - What substance(s) did you struggle with?

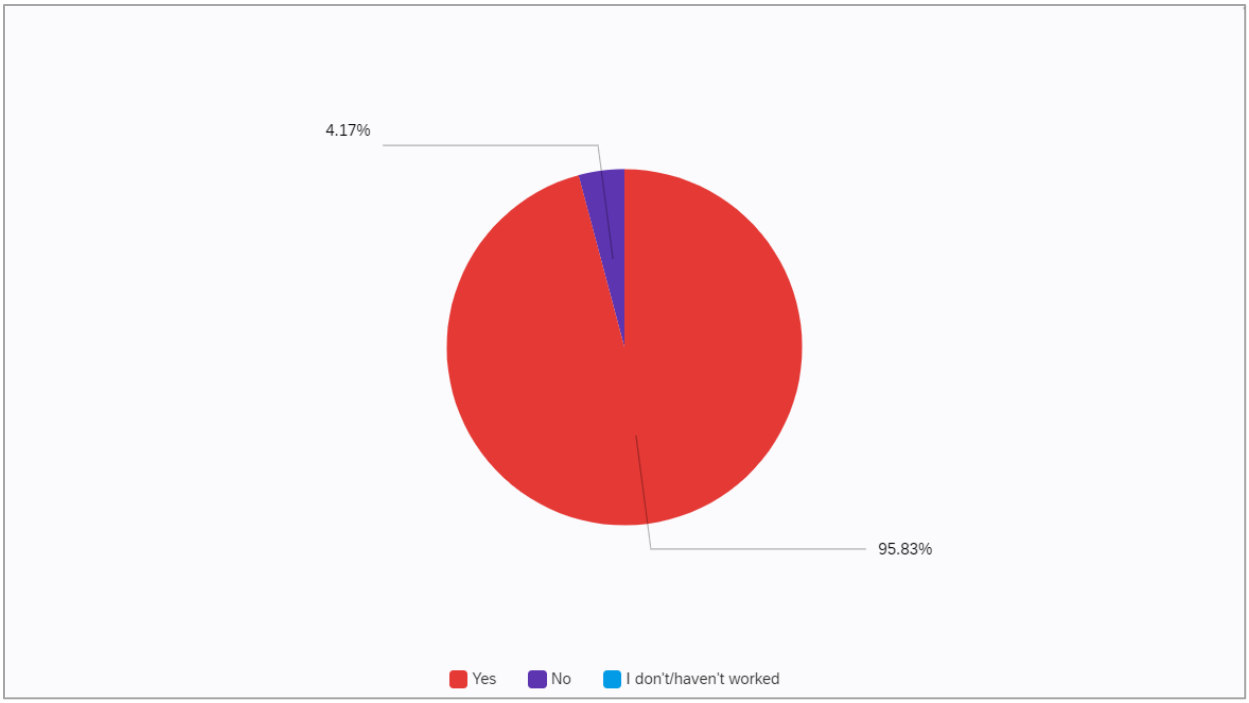

Figure 8 Q7 - Have you lost a job or found it difficult to maintain a job because of your addiction?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Click to write Choice 1	1.00	10.00	8.35	2.37	5.62	23

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Click to write Choice 1	1.00	10.00	8.35	2.37	5.62	23

Figure 9 Q10 - On a scale of 1-10 how humanized do you feel by your support group? Are they confident in your recovery or do they have the opposite opinion?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	On a scale of highly likely to highly unlikely, how confident do you feel that you will remain sober, or have you remained sober after completing your rehabilitation program?	1.00	4.00	1.58	0.76	0.58	24

#	Field		Choice Count
1	Highly likely	54.17%	13
2	Likely	37.50%	9
3	Moderately	4.17%	1
4	Unlikely	4.17%	1
5	Highly unlikely	0.00%	0
			24

Figure 10 Q12 - On a scale of highly likely to highly unlikely, how confident do you feel that you will remain sober, or have you remained sober after completing your rehabilitation program?