

Estimated Community Stigma Levels Toward Those Who Use Opioids in a

Rural Tennessee County

By

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I dedicate this to my family who supported me throughout my entire academic journey. To my mother and father, your support and motivation helped me continue to persevere despite any challenges placed in my way. To my older sisters, Heidi and Samantha, your advice and guidance throughout this journey meant the world to me. Additionally, I would like to dedicate this to Chase Snyder. Thank you for being there for me throughout this program and always celebrating any accomplishment, whether it be big or small.

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ABSTRACT

One known barrier to opioid and drug use prevention, treatment, and recovery is stigma. Stigma toward those who use drugs is associated with poorer health outcomes and lower life expectancy. Addressing stigma at the individual, provider, and social levels requires understanding the domains of stigma present in a community to target anti-stigma messaging and campaigns. This project aims to describe the level of stigma in law enforcement, a provider, and the community at large and compare the two. A short 21-item Likert-scale (1 = strongly agree to 5 = strongly disagree) questionnaire was developed using previous literature on provider and social-based stigma with the domains of dangerousness, blame, social distance, fatalism, and various perceptions that people have toward those who use drugs. Law enforcement officers were provided an opportunity to answer the questionnaire during a training event in January 2022, while community members were provided an opportunity during the Wilson County Tennessee State Fair in August 2022. Law enforcement (N = 48) and community members (N = 393) differed in demographic makeup, where law enforcement was predominantly more male (77.1% vs. 37.9%), between 30 to 39 years old (35.4% vs. 26.5%), and whiter (91.7% vs. 76.6%). Mean scores within law enforcement in dangerousness (2.03 vs. 2.17), blame (2.48 vs. 2.81), social distance (2.41 vs. 2.73), and fatalism (3.19 vs. 3.31) were consistently worse (lower score = higher stigma). Overall, regardless of whether law enforcement or community-wide, stigma toward those who use drugs in Wilson County, TN is measurably present. Both community members and law enforcement providers have elevated stigma across each domain.

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CHAPTER I

INTRODUCTION

Substance Use Disorder

The National Institute of Mental Health (2021) defines substance use disorder (SUD) as “a mental disorder that affects a person’s brain and behavior, leading to a person’s inability to control their use of substances, such as legal or illegal drugs, alcohol, or medication” (para 1). Although alcohol abuse can be considered a component of substance use disorder, it can also be separately categorized. Alcohol use disorder “encompasses the conditions that some people refer to as alcohol abuse, alcohol dependence, alcohol addiction, and the colloquial term, alcoholism, [and it is] characterized by an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences” (National Institute on Alcohol Abuse and Alcoholism, 2020, para 1). Both substance use disorder and alcohol use disorder can be measured as being either mild, moderate, or severe. Individuals with a substance use disorder can experience significant impairment as well as an array of health problems, disability, and the inability to uphold daily responsibilities (Substance Abuse and Mental Health Services Association, 2022).

Abuse, intoxication, and physical/psychological dependence are all factors of substance use disorder (Jahan & Burgess, 2022, para 2). Polysubstance use, or the use of two or more substances at the same time or within a short period of time, also commonly occurs among individuals with a substance use disorder (Centers for Disease Control and Prevention, 2022). As stated by the Centers for Disease Control and Prevention (2022),

substance use disorder is a treatable chronic disease that affects all individuals regardless of demographic characteristics (i.e., race, gender, sex, income level, educational attainment, or social class).

It is important to note that co-morbid psychiatric disorders, environmental and genetic factors, and adverse childhood experiences (ACEs) have been associated with an increased risk of developing a substance use disorder among some individuals (Jahan & Burgess, 2022). Recent data from the National Survey on Drug Use and Health show the co-occurrence of substance use and various psychiatric disorders like generalized anxiety disorder, panic disorder, post-traumatic stress disorder (PTSD), depression, bipolar disorder, attention-deficit hyperactivity disorder (ADHD), psychotic illness, borderline personality disorder, anti-social personality disorder, and schizophrenia (National Institute on Drug Abuse, 2020). Notably, 1 in 4 individuals with a serious mental illness (such as major depression, schizophrenia, or bipolar disorder) has a concurrent substance use disorder (National Institute on Drug Abuse, 2020).

According to Jahan and Burgess (2022), substance use disorders can be impacted by variations in “an individual’s genetic make-up for stress-response” (para 5). According to the Mayo Clinic, substance use disorders can be “influenced by inherited genetic traits” (Mayo Clinic Staff, 2022). The American Psychological Association (2008) states that substance use disorders could potentially be linked to genetic factors like the number of dopamine (D2) receptors in an individual’s brain (para 4). Research has found that “people with fewer D2 receptors are [considerably] more likely to [have a substance use disorder]” (The American Psychological Association, 2008, para 4); (Trifilieff & Martinez, 2014).

In regard to environmental exposures on substance use disorder, the Mayo Clinic explains that environmental factors like familial beliefs and attitudes as well as a direct exposure to drug use from a peer group can have a role in initial substance use (Mayo Clinic Staff, 2022). Mennis et al (2016) further explain that “environmental factors, including access and exposure to substances of abuse, neighborhood disadvantage and disorder, and environmental barriers to treatment influence substance use behaviors” (para 1). Furthermore, adverse childhood experiences, also known as ACEs, have been shown to increase the risk of substance use disorder. According to SAMHSA’s Center for the Application of Prevention Technologies (2018), “when children are exposed to chronic stressful events, their neurodevelopment can be disrupted; [thus, impairing] the child’s cognitive functioning and/or ability to cope with negative or disruptive emotions” (para 2). Jahan and Burgess (2022) mention how the Adverse Childhood Experiences Study found that the “exposure to a range of traumatic events during childhood demonstrates a dose-response-like pattern where increased trauma exposure was directly correlated with increased risk of developing a substance use disorder [later in life]” (para 6). Ultimately, these various environmental factors can impact the initiation of substance use and increase the potential risk of developing a substance use disorder (Rhee et al, 2003).

Results from the 2019 National Survey on Drug Use and Health found that in the United States, 20.4 million people aged 12 or older (7.6 % of the population) reported having a substance use disorder in the past year (SAMHSA, 2020). Of those who reported having a substance use disorder in the past year, 14.5 million reported specifically having alcohol use disorder, and 8.3 million reported having an illicit drug

use disorder (SAMHSA, 2020). Furthermore, in 2019, 0.5% of the population aged 12 or older (or 1.4 million people) reported having a prescription pain reliever disorder (SAMHSA, 2020). The results of the survey also found that “11.8% of people aged 12 or older (or 2.4 million people) had both an illicit drug use disorder and alcohol use disorder in the past year” (SAMHSA, 2020). Reported substance use disorders in the past year varied by age as 4.5% of adolescents aged 12 to 17 had a SUD, 14.1 % of young adults aged 18 to 25 had a SUD, and 6.7% of adults aged 26 or older had a SUD (SAMHSA, 2020).

Based on state data from the 2018-2019 National Survey on Drug Use and Health, in Tennessee, an estimated 4.0% of adolescents aged 12 to 17 years reported having a substance use disorder in the past year (SAMHSA, 2020). Around 13.1% of young adults 18 to 25 years of age and 6.32% of adults 26 years of age or older in Tennessee reported having a substance use disorder in the past year (SAMHSA, 2020). Furthermore, 2.81% of Tennessean residents 12 years of age or older reported having an illicit drug use disorder in the past year, 0.68% reported having a pain reliever disorder in the past year, and 4.85% reported having alcohol use disorder in the past year (SAMHSA, 2020).

Opioid Use Disorder

Opiates are naturally derived drugs from opium that are extracted from the plant’s poppy sap and fibers. Examples of opiates include Opium, Morphine, Codeine, and Heroin (Alcohol and Drug Policy Commission, n.d.). Opioids are synthetic or semi-synthetic drugs similar in chemical structure and biological effects to opiates but are created and manufactured in a laboratory (Gahlinger, 2001, p. 10; Alcohol and Drug Policy Commission, n.d.). Hydrocodone (i.e., Vicodin), hydromorphone (i.e., Dilaudid),

and oxycodone (i.e., Oxycontin, Percocet) are examples of semi-synthetic opioids as some components are partially synthesized from the natural chemical components of opium (Alcohol and Drug Policy Commission, n.d.). Fully synthetic opioids like fentanyl, pethidine, levorphanol, methadone, tramadol, and dextropropoxyphene are designed and manufactured in laboratories. Opiates and opioids work to “activate an area of nerve cells in the brain and body, called opioid receptors, and block pain signals between the brain and body” (John Hopkins Medicine, n.d.). As stated by the American Psychiatric Association (2022), both opiates and opioids can “cause drowsiness, confusion, euphoria, nausea, and constipation, [and] at high doses, they can slow breathing, which can lead to death” (para 4). It is important to note that opiates and opioids can be used and/or prescribed medically for “pain relief, anesthesia, cough suppression, diarrhea suppression, and for treatment of opiate/opioid use disorder” (Alcohol and Drug Policy Commission, n.d.).

The Centers for Disease Control and Prevention (2022) defines opioid use disorder (OUD) as a type of substance use disorder that involves the "problematic pattern of opioid use that causes significant impairment or distress” (para 2). Like other substance use disorders, opioid use disorder is a chronic but treatable disease that can affect anyone (Centers for Disease Control and Prevention, 2022). The diagnosis of OUD is made by meeting two or more of the eleven criteria from the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) in a year time period. With the DSM-5-TR, a diagnosed OUD can be measured as being either mild, moderate, or severe. According to Azadfard et al (2022), the DSM-5-TR criteria for OUD includes:

“increasing dose/tolerance, wish to cut down on use, excessive time spent to obtain or use the medication, strong desire to use, use interferes with obligations, continued use despite life disruption, use of opioids in physically hazardous situations, reduction or elimination of important activities due to use, continued use despite physical or psychological problems, need for increased doses of the drug, and withdrawal when the dose is decreased” (para 2).

In the United States, opioid use disorder has reached “epidemic levels as around three million individuals have had or currently suffer from OUD” (Azadfard et al., 2022, para 1). According to Azadfard et al (2022), a major factor that contributed to the opioid epidemic in the United States was the overprescribing of opioid medications by healthcare providers in the 1990s (para 3). The "pain as a fifth vital sign" campaign, which was started in 1995 by Dr. James Campbell, encouraged healthcare providers to improve pain care for patients (Scher et al., 2018, para 2). This initiative, as well as the “downplay of the abuse potential of opioids and aggressive marketing of drugs [like] Oxycontin and Opana, [exacerbated the prevalence of opioid use disorder in the United States]” (Azadfard et al., 2022, para 3).

Opioids are a highly addictive drug with a high abuse potential as the tolerance for this substance can be achieved within days, thus, enabling the desire for individuals to want more. In 2019, 10.1 million people aged 12 or older in the United States reported that they misused (or took in a manner or dose other than what was prescribed) opioids in the past year (SAMSHA, 2020). Of those 10.1 million people, “9.7 million individuals aged 12 or older misused prescription pain relievers in the past year [and] 745,000 individuals used heroin” (SAMSHA, 2020). Additionally, in 2019, “an estimated 404,000

people aged 12 or older reported [both] a misuse of prescription pain relievers and use of heroin in the past year” (SAMSHA, 2020). Notably, the 2019 National Survey on Drug Use and Health results show that “4.2% of prescription pain reliever misusers also used heroin in the past year, and 54.2% of heroin users misused pain relievers in the past year” (SAMSHA, 2020). Reported opioid misuse varied by age as 2.3% of adolescents aged 12 to 17 (567,000 people) misused opioids in the past year, 5.3% of adults aged 18 to 25 (1.8 million people) misused opioids in the past year, and 3.6% of adults aged 26 or older (7.7 million people) misused opioids in the past year (SAMSHA, 2020).

Data from the 2019 National Survey on Drug Use and Health show that 0.6% of individuals (or 1.6 million people) aged 12 or older reported an opioid use disorder in the past year (SAMSHA, 2020). Moreover, survey data found that 0.3% of adolescents aged 12 to 17 (or 87,000 people) reported having an opioid use disorder in the past year, 0.7% of adults aged 18 to 25 (or 227,000 people) reported having an opioid use disorder in the past year, and 0.6% of adults 26 years of age or older (or 1.3 million people) reported having an opioid use disorder in the past year (SAMSHA, 2020).

According to the Tennessee Bureau of Investigation (n.d.), roughly 70,000 Tennesseans currently have opioid use disorder, and Tennessee is ranked third in the nation for prescription drug abuse (para 2). In 2021, 4,715,782 opioids for pain prescriptions were filled across the state (Tennessee Department of Health, n.d.). Data from 2020 show that an estimated 2,004 total prescription opiates (excluding Buprenorphine) were submitted to the TBI crime lab as well as 9,159 total opiate submissions (including heroin, fentanyl, and buprenorphine); 510 hydrocodone

submissions; 812 oxycodone submissions; 2,321 heroin submissions; and 3,404 total fentanyl and fentanyl analogs submissions (Tennessee Bureau of Investigation, n.d.).

Fatal and Nonfatal Overdose

Both nonfatal and fatal drug overdoses continue to impact the United States as fatal drug overdoses remain a “leading cause of injury-related death [among individuals]” (CDC, 2022). Since 1999, there have been more than 932,000 fatal drug overdoses in the United States, and in 2020 alone, 91,799 individuals died from a drug overdose (CDC, 2022). In 2020, there was a significant increase in deaths involving synthetic opioids (primarily fentanyl) as 56,516 fatal overdoses were reported in the United States (National Institute on Drug Abuse, 2022, Figure 1). Collectively, fatal overdoses from prescription opioids, heroin, and synthetic opioids (primarily fentanyl) increased to 68,630 in 2020 (National Institute on Drug Abuse, 2022, Figure 3). Overall, 74.8% of all drug overdose deaths in the United States involved opioids in 2020 (CDC, 2022).

The Centers for Disease Control and Prevention (2022) states that “for every drug overdose that results in death, there are many more nonfatal overdoses, each one with its own emotional and economic [impact]” (para 2). Available research has shown that “nonfatal drug overdose is estimated to be about 20 to 30 times more likely to occur than fatal drug overdose, [and] one non-fatal drug overdose increases the risk of having subsequent overdoses, both nonfatal and fatal” (Keen et al, 2021, para 6). In a cross-sectional study done on heroin users in Australia, Warner-Smith et al (2002) found examples of both indirect nonfatal overdose-related complications (sustained physical injury due to falling at overdose, burs, and assault while unconscious) and direct nonfatal

overdose-related complications (peripheral neuropathy or nerve damage, vomiting, temporary paralysis of limbs, chest infections, and seizure). In 2020, states like Illinois (+10.97%), Tennessee (+13.74%), Oregon (+22.76%), Mississippi (+46.03%), and the District of Columbia (+46.71%) had a significant increase in all opioid nonfatal overdoses (CDC, 2023).

The risk of both nonfatal and fatal overdose is elevated after periods of abstinence, polysubstance use, and injection drug use (J.N Park et al, 2020, p. 13). Higher risks of overdose have been associated with “incarceration, unstable housing, and drug use in public settings” (J.N Park et al, 2020, p. 13). J.N Park et al (2020) mention that homeless individuals who use drugs typically use in public spaces, which heightens their “risk of robbery, stigmatization, and harassment from community members and interactions with police.” (p. 13). Ultimately, these risk factors can lead to rushed and unsafe levels of drug use and overdose (J.N Park et al, 2020, p. 14). Furthermore, research has found that people who use drugs and are witnesses to a fatal overdose are more likely to delay or refuse to call emergency medical services due to fear of police arrest (J.N Park et al, 2020, p. 15).

In 2020-2021, the state of Tennessee reported 3,814 overdose deaths and 7,063 nonfatal inpatient overdoses (Tennessee Department of Health, 2023). Middle Tennessee counties with a high number of fatal overdose deaths include Davidson County (529 fatal overdoses), Rutherford County (141 fatal overdoses), Montgomery County (117 fatal overdoses), Sumner County (93 fatal overdoses), Dickson County (41 fatal overdoses), Wilson County (63 fatal overdoses), Williamson County (41 fatal overdoses), and Maury County (52 fatal overdoses) (Tennessee Department of Health, 2023). In regard to

nonfatal overdoses, Middle Tennessee counties like Sumner County (490 nonfatal overdoses), Montgomery County (668 nonfatal overdoses), Davidson County (2,559 nonfatal overdoses), Wilson County (411 nonfatal overdoses), and Rutherford County (1,051 nonfatal overdoses) had an elevated number of nonfatal overdoses in comparison to other counties in Middle Tennessee (Tennessee Department of Health, 2023).

Stigma

Goffman (1963) defines stigma as the unfavorable perception of an individual as contaminated or discredited based on characteristics like mental illness, ethnicity, substance use, or physical disability. Stigma is based on the “assumptions and/or misconceptions of people” (Zwick et al, 2020, para 2) and “relates to the personal characteristics, or cues, that are socially considered shameful (Wogen & Restrepo, 2020, para 6). The implications that arise with stigma ultimately affect the perception of others and label individuals as bad, dangerous, or weak and invalidate their personhood (Wogen & Restrepo, 2020, para 6). According to literature by Strangl et al (2019), stigma has been linked to notable health consequences in populations by worsening or exacerbating the illness or creating barriers to treatment or care for the existing illness (para 2). Individuals with a substance use disorder face stigmatization day-to-day. The impact of stigma on substance use disorders, specifically opioid use disorder, can be detrimental to drug overdose prevention strategies, treatment resources, and recovery efforts within communities.

Structural stigma can be best described as the societal and institutional display of attitudes, beliefs, and behaviors that sustain prejudice and discriminatory ideologies in both public and private institutional sectors, like health care and treatment systems and

the criminal justice system (National Academy of Sciences, 2016, para 35). In healthcare settings, structural stigma can contribute to low quality of care for people with substance use disorders and limit access to treatment and services (National Academy of Sciences, 2016, para 44). Furthermore, healthcare provider stigma can impact the effective delivery of care to individuals with a substance use disorder, as negative provider-based attitudes, perceptions, and behaviors pose a critical threat (Metsch, L., n.d.). In the case of stigma in the criminal justice system, substance use disorders are treated as a criminal issue rather than a health concern, thus, contributing to its marginalization (National Academy of Sciences, 2016, para 52). Both harsh criminal sentencing and anti-drug messages in the United States have contributed to the labels made for individuals with a substance use disorder “as unwanted by society” (National Academy of Sciences, 2016, para 44). Structural stigma has an impact on public stigma as many factors that influence societal norms and values also influence public stigma (National Academy of Sciences, 2016, para 9).

Public stigma occurs when communities uphold negative stereotypes and prejudices that result in blatant discrimination against an individual or specific group of people. According to the National Academy of Sciences (2016), public stigma is “strongly influenced by social norms concerning the attribution of cause, or blame, for mental and substance use disorders, and the perceived dangerousness or unpredictability of people with these disorders” (para 11). For example, using common terms like “junkie” or “addict” dehumanize people and can usher the idea that substance use disorder is a choice rather than a medical condition (National Institute on Drug Abuse, n.d., para 4). Public stigma can also contribute to social exclusion, which has a vital

impact on recovery efforts for individuals with substance use disorders (National Academy of Sciences, 2016, para 53). As mentioned by the National Academy of Sciences (2016), structural stigma helps contribute to the prejudice and discrimination found in public stigma, which fundamentally enables the occurrence of self-stigma.

Self-stigma relates to the “negative attitudes, [such as] internalized shame, that [stigmatized individuals] have about [themselves]” (American Psychiatric Association, 2020). The impact of self-stigma can contribute to “lowered self-esteem, decreased self-efficacy, and psychologically harmful feelings of embarrassment and shame” (National Academy of Sciences, 2016, para 56). For the case of individuals who have a substance use disorder, low self-efficacy can have an adverse effect on work and independent living and impact one’s self-esteem in terms of goal attainment, quality of life, and help-seeking behavior (National Academy of Sciences, 2016, para 57). The internalization of self-perceived shame can serve as a barrier to accessing rehabilitation services and fully participating in one’s community (National Academy of Sciences, 2016, para 56).

Literature has shown that four key concepts of stigma have surfaced: dangerousness, blame, social distance, and fatalism (Kruis et al, 2020, para 7). Dangerousness perpetuates the idea of labeled “drug users” being a “threat to the safety of themselves and/or their community, [and] those who bear a marginalized label are more likely than others to engage in risky behaviors that may cause harm to others” (Kruis et al, 2020, para 8). This sector of stigma is typically existent in the community as well as in providers like healthcare workers and law enforcement officials.

Blame entails the idea that individuals who use drugs or have a substance use disorder are solely responsible for their circumstances. As stated by Kruijs et al (2020), prior research (Corrigan et al., 2009; Ormston et al., 2010) has shown the following:

“Some members of the general public project blame onto persons who use illicit substances, [and] members of the general public perceive persons suffering from substance use disorder as being more blameworthy and deserving of the negative consequences associated with their condition than members of other marginalized groups, including those struggling with mental illness and those suffering from physical disabilities” (para 9).

Social distance is the preference of being both metaphorically and literally distant or detached from stigmatized individuals. In previous research (Boyd et al., 2008; Link et al., 1999, Pescosolido et al., 2010), social distance has been “measured by having respondents describe their willingness to accept a [stigmatized] person as a friend, neighbor, co-worker, in-law, or spouse” (Kruijs et al, 2020, para 10). Prior research has also found that “members of the general public [as well as healthcare professionals] desire great social distance from persons who use and “abuse” substances” (Kruijs et al, 2020, para 10).

Similar to hopelessness, fatalism is linked to the stigmatization of individuals who use drugs and “includes elements of helplessness, finality, and lack of control (Kruijs et al, 2020, para 11). Strong fatalism is indicative of the idea that there is no point, or it is not worth it to help someone with a substance use disorder as “they will never get clean” and will spend the duration of their lives dealing with dependency” (Kruijs et al, 2020, para 11). Although fatalism is considered one of the least discussed domains of social stigma,

available research (Barry et al., 2014; Ding et al., 2005; Haug et al., 2016) has indicated that “certain numbers of the general public and professionals perceive substance use disorder as being a fatalistic condition” (Kruis et al, 2020, para 11).

Harm Related to OUD and other SUDs

Link and Phelan (2001) conceptualize stigma as existing when the following interrelated components converge:

“People distinguish and label human differences; dominant cultural beliefs link labeled persons to undesirable characteristics [or] negative stereotypes; labeled persons are placed in distinct categories so as to accomplish some degree of separation of “us” from “them;” labeled persons experience status loss and discrimination that lead to unequal outcomes; and stigmatization is entirely contingent on access to social, economic, and political power that allows the identification of differentness, the construction of stereotypes, the separation of labeled persons into distinct categories, and the full execution of disapproval, rejection, exclusion, and discrimination” (p. 367).

Stigma places individuals in a generally lower ranking in societal hierarchy, which can connect them to “undesirable characteristics that reduce his or her status in the eyes of the stigmatizer” (Link & Phelan, 2001, p. 371). Furthermore, stigma can lead individuals to experience both individual and structural discrimination (Link & Phelan, 2001, p. 372). For example, rejecting a stigmatized individual’s job or rent application is an example of individual discrimination, and less funding dedicated to research about substance use disorders or less funding dedicated to improving treatment programs is an example of structural discrimination (Link & Phelan, 2001, p. 372). As Link and Phelan (2001) stated, the role of stigma in status loss can “make a person less attractive to

socialize with, to involve in community activities, or to include in a business venture that requires partners who have political influence” (p. 373).

Stigma has a rippling effect on an individual as it can affect the “structure around the person, leading the person to be exposed to a host of untoward circumstances” (Link & Phelan, 2001, p. 373). Low hierarchical status and discrimination can lead to a multitude of disadvantages regarding “income, education, psychological well-being, housing status, medical treatment, and [overall] health” (Link & Phelan, 2001, p. 371). Stigma can involve a multitude of negative health outcomes within marginalized groups that can impact an individual’s overall quality of life.

In the case of OUD and other SUDs, stigma can decrease help-seeking behavior, impact the perceptions of providers like healthcare workers, and lead to detachment from individuals with OUD or other SUDs (Buffo, J., n.d.). As we see in the aforementioned literature done by Link and Phelan (2001), stigma can create barriers in the lives of individuals with OUD or other SUDs and have a profound impact on socioeconomic status, educational attainment, housing status, mental health, and medical treatment. These implications can further ostracize individuals with OUD or other SUDs and affect prevention, treatment, and recovery efforts.

According to the National Academy of Sciences, Engineering, and Medicine (2016), stigma can be reduced through educational anti-stigma interventions, in-school mental health literacy programs, contact interventions, peer support programs, protest/advocacy, and legislative and policy change. Educational anti-stigma interventions “present factual information about the stigmatized condition with the goal of correcting misinformation [and/or] contradicting negative attitudes and beliefs”

(National Academies of Sciences, Engineering, and Medicine, 2016, p. 69). In the case of in-school mental health literacy programs, evidence has shown that knowledge, attitudes, and help-seeking behavior have been improved after the completion of the program, and improvements in mental health literacy “may be effective in reducing stigma for school-age children” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 72).

Furthermore, contact interventions “aim to facilitate positive interaction and connection between these groups [by having] people with lived experience of mental illness or [SUDs] interact with the public describing their challenges and stories of success” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 73). Ultimately, contact strategies are aimed at reducing public stigma but have also been successfully utilized to improve self-stigma. Moreover, peer support groups involve individuals “with lived experience who work as healthcare team members and foster the provision of nonjudgmental, nondiscriminatory services while openly identifying their own experiences” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 74-75). Notably, peer support groups “can help sustain longer term and more regular treatment utilization [by] acting as a counterbalance to the discrimination, rejection, and isolation people may encounter when trying to seek mental or substance use treatment and services” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 75).

Protest and advocacy efforts can help engage people with some investment in “behavioral health stigma change [and be a call to action to help] energize unengaged stakeholders by raising awareness about the harmful effects of stigma” (National Academies of Sciences, Engineering, and Medicine, 2016, p. 76). Finally, the National Academies of Sciences, Engineering, and Medicine (2016) state that “legislative and

policy change can promote social equity and improve overall quality of life for people with mental and substance use disorders” (p.78-79). With legislative and policy change, structural stigma that impacts marginalized individuals across the nation can substantially be reduced and create more of an equitable opportunity for all.

Measuring Stigma

Stigma is typically measured by observing stigmatized individuals through the use of quantitative (surveys and questionnaires) and qualitative (interviews) methods. Non-stigmatized individuals are also often analyzed to understand the impact of public stigma on marginalized groups. Both questionnaires and surveys as well as face-to-face interviews consist of questions that encompass the perceived beliefs of individuals as well as their thoughts on stigmatization.

Kruis and colleagues (2020) developed a 23-item questionnaire measuring provider-base stigma among law enforcement officers on the front line of the opioid epidemic. According to the literature, this questionnaire was “intended to capture officers’ perceptions of the opioid epidemic, attitudes toward drug users, beliefs related to the demographic makeup of drug users, and various dimensions of social stigma” (Kruis et al, 2020). Survey items were measured using either a 5-point Likert scale, multiple-choice options, or free text entry. The face validity for this survey instrument was formally assessed prior to its distribution.

The Substance Use Stigma Mechanism Scale (SU-SMS) is an 18-item scale designed to “capture enacted, anticipated, and internalized substance use stigma mechanisms among persons with current and past [SUDs] and distinguish between key stigma sources [i.e., family members and healthcare workers] most likely to impact this

target population” (Smith et al, 2016, para 13). A 5-point Likert scale is given for all responses, and higher scores indicate an elevated endorsement of substance use stigma (Smith & Earnshaw, n.d.). SU-SMS is split into three stigma mechanisms, which are “Enacted” (six items); “Anticipated” (six items); and “Internalized” (six items).

When measuring self-stigma in association with substance abuse, the Substance Abuse Self-Stigma Scale (SASSS) can be used. SASSS is a 74-item questionnaire designed to measure “self-devaluation, fear of enacted stigma, and stigma avoidance and values disengagement” (Luoma et al, 2013, para 18). Furthermore, the Internalized Stigma of Substance Abuse Scale, which is an adaptation of the Internalized Stigma of Mental Illness scale, consists of 29 items can be used to measure the “experience of stigma related to substance abuse” (Luoma et al, 2013, para 19). When using this scale, higher scores indicate increased stigma. Moreover, the Perceived Stigma of Addiction Scale uses an eight-item questionnaire to measure the personal perceptions on the prevalence of stigmatizing beliefs toward substance use (Luoma et al, 2013, para 26). With this instrument, “higher scores indicate perceptions of more frequent negative attitudes toward addiction” (Luoma et al, 2013, para 19).

Purpose

The purpose of this study is to describe the level of stigma towards those who use drugs, specifically opioids, among rural law enforcement officers (provider-based) and community members and compare the two groups’ stigma levels.

Research Question

This study aims to answer and provide insight into two questions:

1. What is the population-level stigma toward those who use opioids or other drugs in a rural Tennessee County?
2. Does stigma level differ from law enforcement providers to the general public in a rural Tennessee county?

Study Objectives

The first objective of this study is to assess whether individuals from rural communities, like Wilson County, will exhibit some level of stigma towards people with opioid use disorder or other substance use disorders. The second objective of this study is to identify whether community members will share the same or similar level of stigma as law enforcement officers in Wilson County.

Significance of the Study

Prior research has been conducted evaluating the impact of stigma on various health conditions, but few studies have focused on describing the level of community stigma towards individuals who use opioids or other drugs in a rural setting. Additionally, few studies have examined potential similarities in stigma level by law enforcement officers and community members in a rural setting. This study will contribute to the growing body of literature surrounding community-level stigma and drug use as well as provide some insight on the potential similarities seen in stigma levels expressed by law enforcement providers and community members within a rural county.

CHAPTER II

METHODOLOGY

This study serves to examine the prevalence of population-level stigma towards substance use, specifically opioid use, in a rural Tennessee county. Additionally, we aim to assess the relationship, if any, between provider-level stigma (local law enforcement officers) and population-level stigma within the rural Tennessee county. Survey and data collection procedures were approved by the Human Subjects Institutional Review Board at MTSU under protocol: 22-1072 1q.

Participants

Law Enforcement Participants

In January of 2022, six virtual peer-led harm reduction model presentations were held via Zoom for local law enforcement officers (LEOs) in Wilson County. These interactive presentations were given over the course of two days and led by former NYPD detective Ron Martin, who used his prior work experience to empathize with officers about the strain substance misuse brings to their roles. These presentations were in collaboration with both the MTSU Center for Health and Human Services and the DrugFreeWilCo initiative. In total, 112 trainees from various law enforcement roles in Wilson County attended the virtual trainings. A questionnaire was distributed to assess the thoughts and perceptions of LEOs in regard to substance use and opioid use disorder. After data cleaning, a total of 48 surveys were collected and used for this analysis.

Community Participants

Participant recruitment and data collection occurred at the 2022 Wilson County State Fair from August 18th to August 27th. The fair was considered an ideal setting to capture community thoughts and perceptions about substance use and opioid use disorder from Wilson County residents. The Department of Health and Human Performance at Middle Tennessee State University (MTSU) and the Center for Health and Human Services of MTSU collaborated with DrugFree WilCo to collect surveys from willing participants.

Data collection teams spread out and attended four days of the fair to limit selection bias: Saturday, August 20th; Sunday, August 21st; the evening of Thursday, August 25th; and Saturday, August 27th. Survey collectors randomly approached adults attending the fair, provided information about the survey project, and asked the adult to complete the survey using either a hard copy paper form or their phone to scan a QR code linked to an electronic version of survey on Qualtrics. In total, 413 surveys were at least partially completed with the majority being paper based (79%). Surveys that were incomplete, lacked informed consent, or missing an entire section were not used for the final analysis. After data cleaning, a total of 393 completed surveys (N online = 76; N paper = 326) were used for this analysis.

Materials and Procedures

Law Enforcement and Community Stigma Surveys

The questionnaire for this study was adapted from existing literature and prior surveys used by both Kruis and colleagues (2020) and Davis and colleagues (2014) to

assess provider-level stigma. An assessment of law enforcement attitudes was used to capture several items related to knowledge of substance use disorder and indicators of provider-level stigma. The same questionnaire was used to survey Wilson County fair attendees on their perceptions and beliefs of individuals who use drugs, specifically opioids, with a few minor modifications and additions to the survey tool.

Each question relative to the participant's perceptions and beliefs of drug use was measured using a 5-point Likert Scale ranging from "Strongly Agree," "Agree," "Not Sure," "Disagree," or "Strongly Disagree." Four survey items were related to the "danger" domain of stigma, and those items include: "If I knew that a heroin addict lived nearby, I would not allow my children to play alone outside;" "One important thing about people addicted to heroin or opioids is that you cannot tell what they will do from one minute to the next;" "People who use heroin opioids are a threat to the safety of our community;" and "Although some heroin/opioid users may seem all right it is dangerous to forget that they are drug users." One survey item was related to the "blame" domain: "Persons addicted to heroin and/or opioids are usually responsible for their own condition." Six survey items were related to the "social distance" domain, and those items include: "If I knew someone was addicted to heroin or opioids I would try not to socialize with them;" "It would bother me to live near a person who used heroin or opioids;" "It would be difficult for me to develop a friendship with someone who uses heroin or opioids;" "I would not vote for a politician if I knew they had been addicted to heroin or opioids;" "If I could, I would prefer not to work with someone who was a known user of heroin or opioids;" and "I would be fine letting someone who had a history of opioid and heroin use marry into my family." One survey item was related to the

“fatalism” domain, which was “Most people who become addicted to heroin or opioids are addicts for life.” Participant perceptions of individuals who use drugs were assessed using the items: “A typical drug user belongs to the lower class;” “Males are more likely to be a drug user;” and “Most drug users are employed.”

Participants were also asked to answer what race and/or ethnicity they perceived a typical drug user to be. Survey participants were given the answer choices “Black or African American,” “American Indian/Alaska Native,” “Asian,” “Hispanic or Latinx,” “White,” or “Not Listed.” Finally, participants were asked to indicate how strongly they agreed or disagreed with the statements “Drug abuse is a disease” and “Medical assisted treatment (MAT) programs can be an essential tool in aiding in treatment and preventing overdose deaths.” Participant demographics (age, gender, race/ethnicity, and county of residence) were also collected through the survey process.

Analysis Plan

Data Preparation

The collected data were made available in the form of a Microsoft Excel spreadsheet recoded to numerical values (1 = Strongly Agree, 2 = Agree, 3 = Not Sure, 4 = Disagree, 5 = Strongly Disagree) used to measure the domains of stigma (danger, blame, social distance, and fatalism) and participant perceptions through standardized scoring. The variables “marry,” “MAT,” and “disease” were reverse coded (1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Disagree). For the survey item regarding the perceived race of a drug user, variables were recoded to numerical values (1 = Black, 2 = American Indian/Alaskan, 3 =Asian, 4 = Hispanix/Latinx, 6 =

White, 5 = Not Listed). Participant gender (1 = man, 2 = woman, 3 = other); race (1 = Black, 2 = American Indian/Alaskan, 3 = Asian, 4 = Hispanic, 5 = White, 6 = Other); county of residence (1 = Wilson County, 2 = Outside County); and law enforcement status (1 = fair, 2 = leo training) were numerically recoded. Age was not numerically recoded, and it was entered into the spreadsheet as displayed on the survey. This data will be saved as a comma-separated values (CSV) file and will be imported into IBM SPSS Statistics (V. 28) for analysis. Descriptive statistics will be performed to measure beliefs and stigma associated with substance use among both law enforcement participants and community participants. An ANOVA test will be conducted to measure the differences in stigma level by participant characteristics. A Levene's test will be conducted to assess whether the homogeneity of variance has been met.

CHAPTER III

Results

Demographics

To determine the demographic characteristics of the study's participants, descriptive statistics were calculated. The demographics calculated included gender, race/ethnicity, age, county of residence, and whether the survey participant was from the law enforcement officer (LEO) training or state fair. After data cleaning, a total of 441 participants from both LEO trainings (n = 48) and fair attendees (n = 393) completed the survey. Among all participants, most respondents identified as a woman (55.6%), were 50 years of age or older (30.2%), and reported they were white (78.2%). Among LEOs, most respondents were men (77.1%), between the ages of 30 to 39 (35.4%), and white (91.7%). The proportion of participants that were fair attendees predominately identified as women (59.5%), were 50 years of age or older (32.3%), white (76.6%), and from Wilson County (55.0%). Between the two study groups, there were no significant differences in race/ethnicity and age, but reported gender differed between the groups.

Descriptive Statistics of Reported Perceptions of Drug Users and Drug Abuse

Among LEOs and Fair Attendees

Among law enforcement officers (LEOs), most participants reported white (75.0%) as their perceived race of a drug user. 68.6% of LEOs did not believe most drug users belong to the lower class, 12.5% did believe most drug users belong to the lower class, and 18.8% were not sure. 47.9% did not perceive men as more likely to be drug users, whereas 20.8% did perceive men as more likely to be drug users, and 31.3% were

not sure. 43.8% believe that most drug users are employed, 27.1% believe most drug users are unemployed, and 29.2% were not sure. 56.3% of LEOs believe that drug abuse is a disease, 27.1% believe drug abuse is not a disease, and 16.7% were not sure. Furthermore, 56.3% of LEOs believe MAT programs are essential tools in treatment and prevention, 27.1% do not believe MAT programs are essential tools in treatment and prevention, and 22.9% were not sure.

Similarly, most community participants reported white (57.1%) as their perceived race of a drug user, but other frequencies of perceived race did vary more among community participants (Black = 10.7%; Asian = 1.0%; Hispanic/Latinx = 2.3%; and 27.2% = Not Listed). 77.9% of community participants did not believe most drug users belong to the lower class. 49.4% did not perceive men as more likely to be drug users, but other frequencies of this item did significantly vary (12.5% agreed; 37.7% were not sure). 29.3% of community participants believe most drug users are employed, whereas 26.5% do not believe most drug users are employed, and 43.8% were not sure. 68.2% of community participants believe that drug abuse is a disease, 16.0% believe drug abuse is not a disease, and 14.8% reported that they were not sure. 65.1% of community participants believe that MAT programs are essential tools in treatment and prevention, 5.3% do not believe that MAT programs are essential tools in treatment and prevention, and 27.7% were not sure. **(See Table 1).**

Table 1.*LEO vs Community members by demographics and perceptions of drug users*

		Total	LEO	COMMUNITY
		N = 441	N = 48	N = 393
Gender	Man	186 (42.2%)	37 (77.1%)	149 (37.9%)
	Woman	245 (55.6%)	11 (22.9%)	234 (59.5%)
	Other	3 (0.7%)	0 (0%)	3 (0.8%)
	Missing	7 (1.6%)	0 (0%)	7 (1.8%)
Age	18-29	96 (21.8%)	14 (29.2%)	82 (20.9%)
	30-39	121 (27.4%)	17 (35.4%)	104 (26.5%)
	40-49	78 (17.7%)	11 (22.9%)	67 (17.0%)
	50+	133 (30.2%)	6 (12.5%)	127 (32.3%)
	Missing	13 (2.9%)	0 (0%)	13 (3.3%)
Race/Ethnicity	Non-White	79 (17.9%)	4 (8.3%)	75 (19.1%)
	White	345 (78.2%)	44 (91.7%)	301 (76.6%)
	Other	8 (1.8%)	0 (0%)	8 (2.0%)
	Missing	9 (2.0%)	0 (0%)	9 (2.3%)
Race of Drug Users	Black	44 (10.0%)	2 (4.2%)	42 (10.7%)
	Asian	4 (0.9%)	0 (0%)	4 (1.0%)
	Hispanix/Latinx	9 (2.0%)	0 (0%)	9 (2.3%)
	White	239 (54.2%)	36 (75.0%)	203 (51.7%)
	Not Listed	117 (26.5%)	10 (20.8%)	107 (27.2%)
	Missing	28 (6.35%)	0 (0%)	28 (7.12%)
	Low SES Drug Users	Agree	30 (6.8%)	6 (12.5%)
	Disagree	339 (76.9%)	33 (68.6%)	306 (77.9%)
	Not sure	70 (15.9%)	9 (18.8%)	61 (15.5%)
	Missing	2 (0.5%)	0 (0%)	2 (0.5%)
Male Drug Users	Agree	59 (13.4%)	10 (20.8%)	49 (12.5%)
	Disagree	217 (49.2%)	23 (47.9%)	194 (49.4%)
	Not sure	163 (37.0%)	15 (31.3%)	148 (37.7%)
	Missing	2 (0.5%)	0 (0%)	2 (0.5%)
Employed Drug Users	Agree	136 (30.8%)	21 (43.8%)	115 (29.3%)
	Disagree	117 (26.5%)	13 (27.1%)	104 (26.5%)
	Not sure	186 (42.2%)	14 (29.2%)	172 (43.8%)
	Missing	2 (0.5%)	0 (0%)	2 (0.5%)
Drug Abuse is a Disease	Agree	295 (66.9%)	27 (56.3%)	268 (68.2%)
	Disagree	76 (17.2%)	13 (27.1%)	63 (16.0%)
	Not sure	66 (15.0%)	8 (16.7%)	58 (14.8%)
	Missing	4 (0.9%)	0 (0%)	4 (1.0%)

		Total	LEO	COMMUNITY
		N = 441	N = 48	N = 393
MAT programs are essential tools	Agree	288 (65.3%)	27 (56.3%)	256 (65.1%)
	Disagree	26 (5.9%)	13 (27.1%)	21 (5.3%)
	Not sure	120 (27.2%)	11 (22.9%)	109 (27.7%)
	Missing	7 (1.6%)	0 (0%)	7 (1.8%)

Reported Standardized Mean Stigma Scores by Community Members and Law Enforcement Officers (LEOs)

The variables “danger,” “social distance,” and “perceptions” were recoded in SPSS to create a scale score for each domain (i.e., danger = childplay + mintomin + threat + dangerforget). Furthermore, the variables “disease” and “MAT” were separately categorized from “perceptions.” For “danger,” there was no significant difference in scores between community participants ($M = 8.66, SD = 3.32$) and LEOs ($M = 8.17, SD = 2.69$). For “blame,” there was no significant difference in scores between community participants ($M = 2.81, SD = 1.20$) and law enforcement officers ($M = 2.48, SD = 1.19$). Notably, there was a slight significant difference in scores between community participants ($M = 16.39, SD = 4.92$) and LEOs ($M = 14.46, SD = 4.81$) for “social distance.” Moreover, for “fatalism,” there was no significant difference in scores between community participants ($M = 3.31, SD = 1.11$) and LEOs ($M = 3.19, SD = 1.28$). For “perceptions,” there was no significant difference in scores between community participants ($M = 10.60, SD = 2.01$) and LEOs ($M = 10.02, SD = 1.88$). For “disease,” there was no significant difference in scores between community participants ($M = 3.82, SD = 1.20$) and LEOs ($M = 3.46, SD = 1.34$). Finally, for “MAT,” there was no significant

difference in scores between community participants ($M = 3.90$, $SD = 0.93$) and LEOs ($M = 3.75$, $SD = 1.08$). (See Table 2).

TABLE 2.

Standardized Mean Stigma Scores Between Community Participants and LEOs

		<i>Danger</i>	<i>Blame</i>	<i>Social Distance</i>	<i>Fatalism</i>	<i>Perceptions</i>	<i>Disease</i>	<i>MAT</i>
<i>Community</i>	Mean	8.66	2.81	16.39	3.31	10.60	3.82	3.90
	Std. Deviation	3.32	1.20	4.92	1.11	2.01	1.20	0.93
<i>LEOs</i>	Mean	8.17	2.48	14.46	3.19	10.02	3.46	3.75
	Std. Deviation	2.69	1.19	4.81	1.28	1.88	1.34	1.08

Reported Normalized Mean Stigma Domain Scores for Community and LEOs

Normalized mean stigma domain scores were calculated for both community participants and law enforcement officers (LEOs). There was no significant difference in “dangerous” scores between community participants ($M = 2.17$, 95% CI [2.09, 2.25]) and LEOs ($M = 2.03$, 95% CI [1.84, 2.22]). For “blame” scores, there was no significant difference between community participants ($M = 2.81$, 95% CI [2.69, 2.93]) and LEOs ($M = 2.48$, 95% CI [2.15, 2.81]). Furthermore, there was a slight significant difference in “social distance” scores between community participants ($M = 2.73$, 95% CI [2.65, 2.81]) and LEOs ($M = 2.48$, 95% CI [2.18, 2.64]). Finally, there was no significant difference in “fatalism” scores between community participants ($M = 3.31$, 95% CI [3.20, 3.42]) and LEOs ($M = 3.19$, 95% CI [2.83, 3.55]). (See Figure 1).

Reported Normalized Mean Scores for All Stigma Domains Combined

All stigma domains (dangerousness, blame, social distance, and fatalism) were recoded and combined into one variable representing stigma. When all stigma domains are combined, there is a statistical difference between community participants ($M = 31.13$, 95% CI [30.3, 32.0]) and LEOs ($M = 28.25$, 95% CI [26.1, 30.4]). (See **Figure 2**).

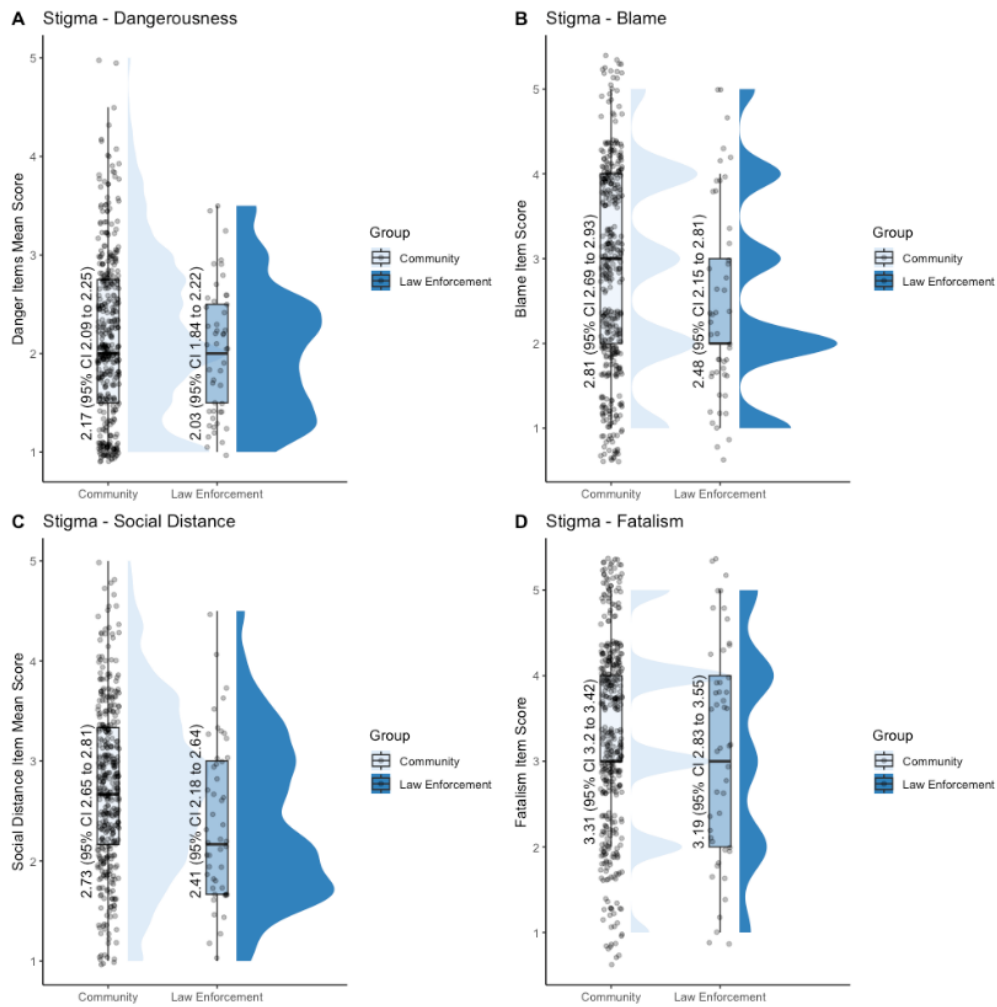


Figure 1.

Normalized Mean Stigma Domains for Community Participants and LEOs

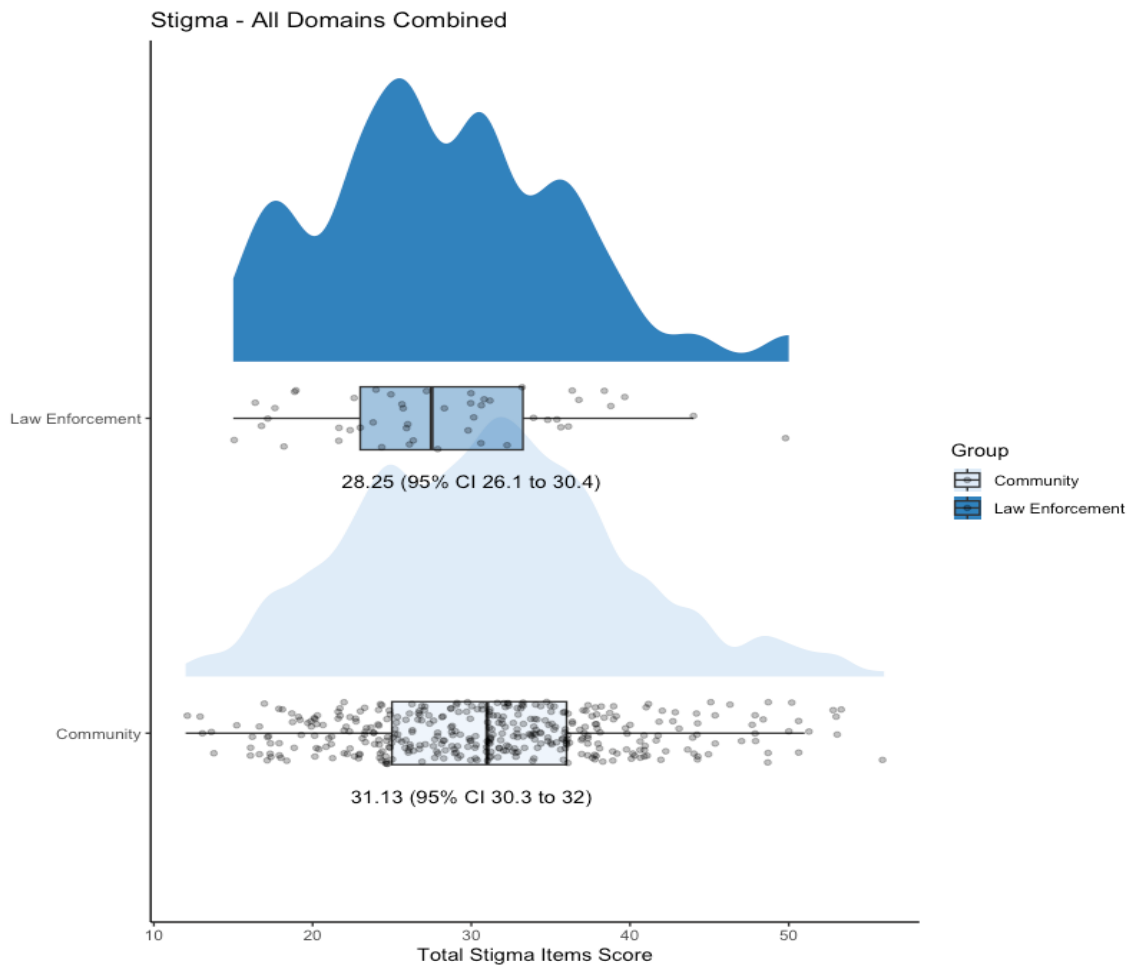


Figure 2.

Mean Scores for All Stigma Domains Combined

Differences in Stigma Level by Participant Characteristics

An analysis of variance was conducted to compare the main effects of participant type (fair attendee or law enforcement officer), participant gender, participant race, participant county of residence, and the interaction between participant gender and race on stigma level. Overall, the corrected model is significant, $F(14, 388) = 184.75, p < .05$. When participant type (fair attended or LEO) was considered, there was not a significant main effect on stigma level, $F(1, 388) = 130.87, p = .214$. When participant gender was

considered, there was not a significant main effect on stigma level, $F(2, 388) = 106.35$, $p = .286$. When participant race was considered, there was almost a significant main effect on stigma level, $F(5, 388) = 174.05$, $p = .07$. When participant county of residence was considered, there was not a significant main effect on stigma level, $F(1, 388) = 200.75$, $p = .124$. When the interaction between participant gender and race was considered, there was almost a significant main effect on stigma level, $F(5, 388) = 175.71$, $p = .067$. (See Table 3).

TABLE 3.

Differences in Stigma Level by Participant Characteristics

Predictor	SS	df	MS	F	Sig.
Corrected Model	2586.53 ^a	14	184.75	2.18	.008
Intercept	60236.59	1	60236.59	712.13	< .001
LEO/Comm	130.87	1	130.87	1.55	.214
Gender	212.692	2	106.35	1.26	.286
Race	870.27	5	174.05	2.06	.070
Wilson CO Resident	200.75	1	200.75	2.37	.124
Gender*Race	878.55	5	175.71	2.08	.067
Error	32819.79	388	84.59		

Levene's Test of Equality of Error Variances			
Dependent Variable: Stigma			
F	df1	df2	Sig.
1.22	28	374	.21

CHAPTER IV

Discussion

As stated by Adams and Volkov (2020), the United States is facing a public health crisis due to untreated opioid use disorder (OUD). Lifesaving treatments are available for individuals with an OUD, and current efforts are being done federally to help reverse the impact of the opioid epidemic. The federal expansion and delivery of medications for OUD as well as the development of new therapeutics for OUD and overdoses are pivotal steps to help alleviate some of the burden this current epidemic holds on our nation (Adams & Volkov, 2020, para 2). Unfortunately, stigma towards individuals with OUD and other SUDs is a major obstacle that interferes with these efforts and impacts prevention, treatment, and recovery (Adams & Volkov, 2020, para 2).

Literature shows that provider-based stigma from law enforcement officers is one barrier to fighting the opioid epidemic as the criminal justice system has treated SUDs as a criminal issue rather than a health concern (Kruis et al, 2020; National Academy of Sciences, 2016, para 52). In the study done by Kruis and colleagues (2020), sampled law enforcement officers “held relatively high levels of social stigma as measured by perceptions of dangerousness, blame, and social distance” (p. 402). Similarly, our study shows that law enforcement officers had a documented level of stigma reported in the dangerousness, blame, and social distance domains. Furthermore, Kruis and colleagues (2020) found that the law enforcement officers sampled in their study held less fatalistic views toward opioid-using persons. Our study showed similar results as stigma in this

domain was less documented among law enforcement officers compared to the other domains.

Van Boekel and colleagues (2015) conducted a study comparing stigmatizing attitudes towards people with substance use disorders. In this study, a subsample from the general public as well as a group of general physicians (providers) were included as participants. Van Boekel and colleagues (2015) found that “the general public and [general physicians] were somewhat more negative in their stereotypical beliefs, [and] the general public maintained great social distance towards individuals with substance use disorders” (p. 546). Similar to our descriptive study, documented levels of stigma were also found amongst community members (general public) and law enforcement officers (providers). Comparably, community members from our study also had a documented level of stigma in the social distance domain.

Structural stigma can directly impact the perceptions and beliefs held within communities, also known as public stigma, and lead to potential internalized self-stigma within individuals who have opioids use disorders or other substance use disorders. Addressing stigma at the provider, social, and individual level requires understanding the domains of stigma present in a community. This research sets out to explore the levels of stigma toward those who use drugs, specifically opioids, in rural communities like Wilson County, Tennessee. Additionally, this study set out to examine potential similarities in stigma level by both law enforcement officers (LEOs) and community members in Wilson County. Findings from this study show a documented level of stigma across each domain from both law enforcement officers and community members. Our

first objective sought to assess whether individuals from rural communities, like Wilson County, would exhibit some level of stigma towards people with OUD or other SUDs. Our results from this study achieved this objective and can be seen in Figure 1. Mean stigma scores closer to “1” indicate a higher level of stigma within that domain. In this case, a documented level of community stigma is demonstrated across each domain.

The second objective of this study sought to identify whether community members will share the same or similar level of stigma as LEOs in Wilson County. Our results from this study achieved this objective as the assessment shows similarities in stigma from both community members and law enforcement officers. This objective can be seen in Figure 1 and Table 3. In Figure 1, both community members and LEOs shared similar mean stigma scores for each domain. In Table 3, an analysis of variance test was done to compare the main effects of participant type and stigma level. In this case, there was no significant difference found between community members’ and LEOs’ stigma level. On the other hand, Figure 2 shows a slight difference in mean scores for all domains combined among LEOs and community members. In this case, community members demonstrated a higher level of stigma compared to LEOs when all domains were grouped together.

This study also found that LEOs and community members had similar perceptions and beliefs of drug users, drug abuse, and the effectiveness of medicated assisted treatments. As seen in Table 2, both LEOs ($M = 10.02$, $SD = 1.88$) and community members ($M = 10.60$, $SD = 2.01$) shared similar perceptions regarding drug users. Additionally, both LEOs ($M = 3.46$, $SD = 1.34$) and community members ($M = 3.82$, SD

= 1.20) shared similar beliefs in regard to drug abuse being considered a disease. Furthermore, both LEOs ($M = 3.75$, $SD = 1.08$) and community members ($M = 3.90$, $SD = 0.93$) shared similar beliefs regarding the effectiveness of medicated assisted treatments.

This study presents a unique insight on the potential similarities in stigma level shared between law enforcement officers and community members in regard to individuals with opioid use disorder (OUD) or other substance use disorders (SUDs). According to Fortney and Booth (2001), rural communities typically have a higher prevalence of OUD and other SUDs in conjunction with a low propensity to seek care for these disorders. Educational anti-stigma interventions, mental health literacy programs, contact interventions, and peer support programs can serve as action steps to help reduce stigma held by LEOs and community members in rural areas like Wilson County (The National Academies of Sciences, Engineering, and Medicine, 2016). As research on stigma related to OUD and other SUDs in rural communities continues to emerge, it is vital to continue assessing the levels of stigma held by both providers (i.e., LEOs/healthcare workers) and community members. With this, appropriate stigma reduction campaigns can be implemented.

Limitations and Future Directions

Although this study found a documented level of community stigma across each domain as well as similarities in stigma level between LEOs and community members, there are some limitations. The first limitation of this study design was the potential selection bias exhibited during the community participant recruitment process.

Convenience sampling was done to recruit community participants, which could result in an unbalanced selection of the population. Future researchers should opt for a random sampling technique to avoid this potential discrepancy.

The second limitation in this study was the difference in the number of participants for LEOs and community members. Only 48 LEOs were a part of this study compared to 393 community members. With this, statistical power was not maximized, and variation in group sizes could potentially skew the results. Future researchers should consider this in the recruitment process and aim to have closer group sizes.

Despite these limitations, the current study contributes to a strong foundation for future studies investigating community level stigma towards individuals with opioid use disorder (OUD) or other substance use disorders (SUDs). To our knowledge, this is the first study to assess similarities in stigma level towards individuals with OUD or other SUDs among rural-based law enforcement officers and community members. Our research suggests that both law enforcement officers and community members in a rural Tennessee county have a documented level of stigma measured by the dangerousness, blame, social distance, and fatalism domains as well as similar beliefs/perceptions in relation to drug abuse and the opioid epidemic. With this, our work provides support for future research intended to investigate provider-level and community-level stigma towards people with OUD or other SUDs.

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