Walden University
ScholarWorks

Walden Dissertations and Doctoral Studies

Walden Dissertations and Doctoral Studies Collection

2023

Law Enforcement Officers' Perceptions of Administering Naloxone in Overdose Scenarios

Wayne Joseph Jackson
Walden University

Follow this and additional works at: https://scholarworks.waldenu.edu/dissertations

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Health Sciences and Public Policy

This is to certify that the doctoral dissertation by

Wayne Joseph Jackson

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Raj Singh, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Steven Matarelli, Committee Member,
Public Policy and Administration Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

Law Enforcement Officers' Perceptions of Administering Naloxone in Overdose Scenarios

by

Wayne Joseph Jackson

MBA, DeVry University – Keller Graduate School, 2011

BS, Kean University, 2000

BA, Lynchburg University, 1988

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

November 2023

Abstract

There is minimal research on law enforcement officers' perceptions of overdose recovery efforts and unforeseen occupational dangers. Using a phenomenological approach and street-level bureaucracy as the interpretive lens, this study involved examining lived experiences of law enforcement officers in northern New Jersey who have implemented naloxone administration protocols for suspected opioid overdoses and actual or perceived unintentional scene-related chemical exposure. Four main themes emerged personal experience, medical interventions, the war on drugs, and safeguards. Subthemes uncovered law enforcement officers' requests for additional occupational safeguards and education for scene-responding officers specifically involving self-protection and improved medical intervention training. These findings support positive social change by providing legislative and administrative policymakers with information to enact policy changes and safeguards for public servants, families, and bystanders who may encounter overdose scenarios.

Law Enforcement Officers' Perceptions of Administering Naloxone in Overdose Scenarios

by

Wayne Joseph Jackson

MBA, DeVry University – Keller Graduate School, 2011

BS, Kean University, 2000

BA, Lynchburg University, 1988

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

November 2023

Dedication

Above all else, I would like to thank and dedicate the research to all law enforcement officers worldwide who protect and serve the public to make our world safer. For that, I thank you for what you do every day.

To my family Robert Sr., Terry J., Robert Jr., Jane J., Matthew J., Alexis J., Chestnut, Lola, and Duke it has been a long journey, and your support and guidance are immeasurable; thank you.

Acknowledgments

I thank Dr. Raj Singh and Dr. Steven Matarelli for their undying dedication and support in pursuing my doctorate. The dissertation process took a long time to complete. Dr. Singh and Dr. Matarelli were pivotal in being supportive, positive, and outstanding professionals in achieving my goal. I could not have completed this journey without them on my side. Dr. Singh, Dr. Matarelli, and Dr. Greg Ozymy thank you sincerely. Thank you, Christina K., for all your assistance and input.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

The number of medicinal overdoses in the United States (U.S.) due to opioids was an epidemic and led to law enforcement being part of opioid overdose recovery efforts. A total of 70,237 individuals died from drug overdoses in the U.S. in 2017; 46,356 of fatalities involved an opioid (Kariisa et al., 2019; Scholl et al., 2018). This increase was mainly due to illicit fentanyl and heroin infiltrating the nation (Kariisa et al., 2019), therefore placing law enforcement officers in the first responder's role in overdose scenarios. Law enforcement officers were equipped with naloxone to help fight the current opioid epidemic.

Naloxone, an opioid antagonist, altered pneumonic paralysis that resulted from opioid use and had been administered for over 40 years (Wermeling, 2015). Naloxone had no after effect if there were no opioids in the system, lasting for 30 to 81 minutes, and had zero possibility for misuse (Darke & Hall, 1997). In my study, I focused on law enforcement officers' perceptions when responding to overdose scenarios in which naloxone administration may have been necessary.

NJ law enforcement officers who carried naloxone faced issues preventing overdose fatalities from increasing. In two counties in NJ, Monmouth and Ocean, heroin overdoses increased by 176% from February to March 2016 (Dudley et al., 2017). NJ had an escalation in drug overdose fatalities, with a 16.4% increase from 2014 to 2015 (Rudd & Seth, 2016). The national average of the purity of heroin was 26%; NJ had a median purity of 56% in some areas (Dudley et al., 2017). Seventy-two percent of the blended heroin collected in NJ was mixed with some form of fentanyl (Dudley et al., 2017). Data

was still emerging on the opioid overdose crisis, and some states were reporting emerging trends that were leading to several key initiatives to combat the overdose epidemic.

The opioid epidemic shifted from the consumption of prescribed medications to synthetic opioids, namely fentanyl. Avant-garde fabricated opioids contained varied fentanyl analogs and new rising non-fentanyl amalgams (Prekupec, 2017). These narcotics led to a present-day increase in overdose fatalities; conversely, deaths from prescribed opioids have leveled (Prekupec, 2017). Law enforcement encountered new designer narcotics that left them unsure of their responsibilities. Law enforcement needed to be alert for increased response efforts.

Paramedics had the most effective professional instruction; emergency medical technicians (EMTs) were certified at the basic level of life saving efforts. Historically, firefighters and law enforcement were not accredited but periodically had instruction on how to identify opioid overdoses and dispense naloxone (Kavanaugh, 2020). Greater doses of naloxone may be required to negate the more powerful and quicker-acting opioids (Bell et al., 2018; U.S. Food and Drug Administration [FDA], 2016; Prekupec et al., 2017). In 2015, the Drug Enforcement Agency (DEA) and CDC both announced national warnings warning fentanyl, mainly unlawfully reproduced fentanyl, was a hazard to public welfare (Peterson et al., 2016; Prekupec, 2017). Potential for increased fentanyl exposure led to speculation regarding on-scene safety for themselves and their fellow officers.

Overdoses are on the rise. In July 2017, the opioid crisis increase prompted the President's Commission on Combating Drug Addiction and the Opioid Crisis and led to a

government-declared emergency. The Commission suggested an initial and imperative proposal to impress upon federal leadership and congressional members to acknowledge the dilemma with a subsequent appropriation of increased resources and guidelines (Rutkow & Vernick, 2017). The Commission additionally recommended measures to address both perceptions and problems that law enforcement officers had to endure as first responders in overdose scenarios to create more crisis awareness at the front lines, not just from the federal government. In October 2017, President Trump worked with the Acting Secretary of the U.S. Department of Health and Human Services and acknowledged the opioid crisis as a national health emergency using the Public Health Services Act (Rutkow & Vernick, 2017).

The rising opioid epidemic was a local, state, and national concern that increased awareness of fentanyl alternatives. Furthermore, there were over 200 noted fabricated byproducts of fentanyl, with a potency that was 10,000 greater than morphine, and it was difficult for the user to know whether the product was heroin or a derivative (CDC, 2015; Lozier et al., 2015; Morgan et al., 2018). Prescribers of opioids inadvertently accelerated significant overdose rate increased by limiting patient prescribing of commercially prepared opioids, resulting in individuals seeking to acquire illicit opioid substances. Recognizing the increasing crisis, the White House equipped law enforcement officers with naloxone toolkits to help mitigate the opioid epidemic by having available responding patrol cars assess for potential overdose situations and administered initial doses of this life-saving reversal agent. The opioid epidemic did not discriminate, and presented problems for addicts, families, and surrounding communities.

Background

Law enforcement officers were an essential component of communities, and the marked increase in opioid overdoses challenged the limits of their daily activities. As first responders, law enforcement officers made decisions based on experience to initiate administration of naloxone. Law enforcement officers were vital to opioid overdose recovery efforts and were a key component to address the opioid epidemic.

Dismukes (2018) found Mexico was the most common origin for the heroin market in NJ. Covertly composed fentanyl and its analogs emerged in China. Once in the U.S., heroin distributors in NJ divided the heroin with synthetic opioids, primarily fentanyl, which was shipped to North Carolina. This left drug distributors who were unaware about their merchandise's synthetic content and left users unintentionally overdosing. Opioid response efforts had become a danger to law enforcement officers.

Moss et al. (2018) cited there was no known documentation of emergency responders overdosing due to accidentally touching opioids. Due to the potency of fentanyl, exposure was possible through inhalation, transdermal contact, and through the mucosal membranes. In 2016, the DEA issued a warning to law enforcement regarding the hazards of fentanyl and warned against conducting field examinations of questionable fentanyl substances. Fentanyl and fentanyl analogs were robust opioid agonist; however, the danger of serious risk to emergency responders was exceedingly low (Moss et al., 2018). Potential hazards of intentional fentanyl exposure were still under investigation, but law enforcement officers needed to be aware of potential problems during overdose responses.

Green et al. (2013) found law enforcement was often the first to respond to overdose scenarios. Banta-Green et al. (2013) found law enforcement officers were a cause for concern because of potential prosecution or imprisonment when they arrived on scene. According to Banta-Green et al. (2013), law enforcement officials were an essential part of protecting other medical staff as well as enforcing the law. Law enforcement officers might have had to perform life-saving techniques in overdose scenarios that may have required naloxone. Therefore, they needed to take necessary precautions regarding overdose responses to ensure they protected themselves and individuals on scene during an overdose scenario.

Due to the increased use of synthetic opioids, law enforcement officers were susceptible to potential opioid exposure and adverse events. According to the DEA (2016), two Atlantic County NJ detectives were exposed to a small amount of fentanyl during a potential arrest. They did not use proper precautions during a drug field test and exposed themselves to fentanyl due to lack of sufficient ventilation while they conducted the field test and used improper testing procedures. They experienced overdose like symptoms, including dizziness, respiratory complications, and shortness of breath. Runde (2018) stated it was impossible to overdose when touching fentanyl and carfentanil. These drugs could not be absorbed through the skin. Fentanyl had a depressed vapor tension, making it difficult to hover in the air, and an individual would have had to breathe the drug in for an extended duration for enough to reach the bloodstream (Runde, 2018). Despite this, both detectives experienced symptoms consistent with fentanyl ingestion.

My proposed research was not intended to disprove that fentanyl exposure was real, but rather to create more awareness of potential problems due to unintentional exposure during overdose responses. Fentanyl was a high risk for drug consumers and law enforcement, first responders, and health officials who interacted with its alternative forms. Fentanyl could react by penetrating the skin, resulting in significant risks (DEA, 2016). More research could provide safeguards to ensure that first responders were safe from the dangers of potent synthetic opiates.

Problem Statement

In the U.S., law enforcement officers were often the first line of defense against the opioid epidemic. However, there was minimal research on their perceptions of using naloxone during overdose recovery efforts. My proposed study involved exploring law enforcement overdose response scenarios as these events occurred with greater frequency during law enforcement officers' careers. When law enforcement officers responded to a scene that involved an unknown drug overdose, it placed these officers in a first responder role, specifically that of the naloxone administrator. This role may not have been comfortable or intuitive for all law enforcement officers due to lack of adequate medical education or experience to perform the role with confidence.

Saucier et al. (2016) suggested further research should analyze and evaluate the impact training had on law enforcement officers during an overdose, including how they retained and processed what they had endured in the field. Law enforcement officers being first responders to an overdose scenario were essential in an overdose recovery effort, and further inquiry into the overdose response was worthy of further investigation.

Illegal distribution had created an increase in the demand for fentanyl due to the low cost of the drug and high propensity for addiction. Synthetic opioids such as fentanyl had led to first responders' exposure to dangerous narcotics. Fentanyl included carfentanil and 15 other fentanyl analogues that had increased overdose fatalities (Lynch et al., 2017). Law enforcement officers were dealing with increased potential exposure to fentanyl analogues while responding to overdose scenarios. Lynch et al. (2017) noted unreliable reports of law enforcement exposure circulating in the media. The inception of illicitly manufactured fentanyl available nationwide has created unfounded stories of enforcement officers passing out and having another law enforcement officer administer naloxone. The stories are circumstantial and without concrete evidence. The reports in the media are concerning; exposure and illness have not been confirmed in peer-reviewed journals.

The problem affected law enforcement officers because they were often the first line of defense during the opioid treatment process. Wagner et al. (2014) said many possible factors contributed to this problem including lack of knowledge at the scene of overdose scenarios prompting unclear actions to be taken by civilians at the scene, unclear good Samaritan laws, civilians who were unsure of what to do during overdose scenarios, lack of access to naloxone, and improper naloxone training. This study contributed to addressing this problem by investigating lived experiences of responding officers regarding their scene response behaviors and scenarios when using overdose first responder protocols.

There was little information about what law enforcement officers endured during overdose scenarios. That problem, specifically, was unintentional exposure or contact with dangerous controlled substances. The CDC announced increased threats to law enforcement, public healthcare assistants, and first responders who may be unfamiliar with fentanyl or its analogues (Chiu et al., 2018). In 2016, the amount of lethal opioid overdoses in NJ hit 1409; rates of opioid overdoses per 100,000 escalated from 3.8 in 1999 to 16.0 in 2016, surpassing the nationwide average of 13.3 (Powell et al., 2018). Compared to other U.S. states, which had overdose estimates spanning from 2.4 to 43.4 per 100,000, NJ ranked 18th overall (Powell et al., 2018). In 2018, a total of 67,367 drug overdoses had occurred in the U.S., a 4.1% drop from 2017. Of these2017 reported overdoses, 46,802 (69.5%) involved opioids (Hedegaard et al., 2020). From 2017 to 2018, U.S. drug fatalities involving all opioids, prescribed opioids, and heroin declined by 2%, 13.5%, and 4.1%, respectively (Wilson et al., 2020). However, those fatalities between 2017 and 2018 stemmed from manufactured opioids, which increased fatality rates by 10%, along with fentanyl chemical relatives (Wilson et al., 2020).

To date, there was minimal research regarding the perceptions of law enforcement officers in northern NJ regarding perceptions or personal experiences when in the line of duty during overdose recovery efforts. The study was performed to help understand exactly what law enforcement officers' perceptions and lived experiences were when placed in first responder roles during overdose response scenarios. Evidence gathered from this study showed possible ways to combat the opioid epidemic in terms of law enforcement officers and their positions as first responders.

Purpose of the Study

The purpose of this phenomenological study was to explore how the opioid epidemic had affected law enforcement officers at local and county police departments in NJ in terms of opioid overdose interventions. Naloxone access laws were linked with an estimated 10% abatement in opioid-linked mortality when initially recommended (Rees et al., 2018). However, unlimited access to naloxone also led to expanded opioid delinquency due to decreasing the possibility of mortality and stimulating dangerous opioid adoption.

Doleac & Mukherjee (2018) analyzed panel data from across the United States and showed that such anecdotal stories reflected realistic disputes about the repercussions of naloxone. We used the measured approval of state-level naloxone access regulations as a routine analysis to measure the results of increased access and uncovered that the ethical risk initiated by naloxone was undoubtedly a dilemma that resulted in elevated opioid abuse and crime, and no net abatement in fatalities. The opioid epidemic continued to rise and placed law enforcement officers in lifesaving scenarios. To date, there was minimal research on law enforcement officers' lived experiences or perceptions of unintentional exposure to fentanyl when responding to overdose scenarios.

Research Question

The following research question (RQ) guided this study:

RQ: What was the lived experiences of law enforcement officers who have implemented naloxone administration protocols for suspected opioid overdoses and their actual or perceived unintentional scene-related chemical exposures?

Conceptual Framework

Roberts (2010) suggested that conceptual and theoretical frameworks were terms used synonymously. Ravitch and Riggan (2016) disputed Robert's assertion and argued that conceptual frameworks provided a skeleton for the chosen work so that the theoretical framework was located within the conceptual framework, satisfied the literature review path, and supported bridging the separation between the two (p. 9). My literature review included several challenges law enforcement officers faced during their daily roles in the opioid epidemic, naloxone training, the Good Samaritan Law, first-responders, emergency staff, family/community programs, and law enforcement's role in street-level bureaucracy. This study's conceptual framework was Lipsky's street-level bureaucracy theory, developed in 1980. Lipsky (2010, p. 3) defined street-level bureaucrats as public service employees serving the public as law enforcement officers.

Law enforcement officers were often first responders that reacted to situations that may have based their training on instinct in reaction to a specific scenario. Street-level bureaucrats, by definition, served and protected the public. In terms of law enforcement response efforts, these street-level bureaucrats needed to expand practices to identify and acknowledge types of scenarios that endangered their control or posed a threat (Lipsky, 2010). Therefore, street-level bureaucrats followed protocol and directions based on what management set as guidelines for overdose response scenarios.

The challenge law enforcement officer’s faced was the everyday threat of civilian overdose; law enforcement officers might attempt life-saving efforts, which could potentially cause them harm. Lipsky (2010) said street-level bureaucrats such as law

enforcement officers were required to respond when an unresponsive individual was reported. Street-level bureaucrats made decisions based on training they received and scenarios they encountered without regard for their safety. They followed protocols disseminated by their superiors and assessed the scene when they arrived.

Nature of the Study

The goal of my phenomenological study was to examine lived experiences and perceptions of local and county law enforcement officers who responded to overdose scenarios. A qualitative design was best suited for this research in order to offer first person narratives of law enforcement officers' perceptions and observations when responding to actual or potential opioid overdose situations.

My unit of analysis was interview transcripts of law enforcement officers within one NJ municipality in terms of what transpired during responses to on-scene fentanyl exposures. Using a qualitative approach, I sought to identify patterns and themes to help reduce this information gap regarding opioid scene responses among law enforcement officers.

Definitions

The following terms were defined for the purpose of this study:

Fentanyl: A synthetic opioid that is 80-100 times more potent than morphine (DEA, n.d.).

Law enforcement officer: A person during a designated tour of duty who operates by foot or vehicle and patrols a specific space to maintain support and security of persons (NJ Civil Service Commission, 2005).

Morphine: Medicine used to treat moderate to severe pain in the central nervous system that made from opium (NCI dictionary of Cancer TERMS, n.d.).

Naloxone: A strong opioid antagonist that mitigates probable catastrophic opioid-induced respiratory distress (Young et al., 2019).

Opioid: All medicinal compounds used to alleviate pain that are adopted from opium alkaloids, which bind to opioid receptors in the human brain and nervous system (Cobaugh et al., 2014).

Assumptions

I assumed participants possessed a working knowledge about effects of illicit drug overdoses, administering naloxone, and potential problems that may arise during life-saving scenarios. I also assumed participants were well versed in terms of policies and procedures of naloxone administration in NJ, were willing to engage in open discussions regarding their overdose experiences, answered questions honestly to the best of their knowledge, and experienced similar issues during overdose responses. In addition, to facilitate open dialogue, participant responses remained confidential. I also assumed participants responded honestly.

Scope and Delimitations

Using a phenomenological approach, I intended to investigate potential problems that may arise during overdose scenarios where naloxone might need to be used by responding law enforcement officers. I intended to collect data via in-depth Zoom virtual interviews using open-ended questions. Interviews were audio recorded and transcribed to ensure all details were captured.

I sought to include sworn-in law enforcement officers of any rank from NJ law enforcement agencies who dealt with opioid overdose and naloxone administration. This study's sample size consisted of seven law enforcement officers with varying police department roles and years of experience within northern NJ.

Limitations

I targeted a sample from municipal and county NJ law enforcement departments in northern NJ where officers had reportedly witnessed fentanyl exposure during overdose scene responses. There was a limited number of law enforcement officers from NJ who had encountered these scenarios.

Limitations are vulnerabilities of a study that are outside the purview of the researcher A phenomenological approach strives to divulge, explain, and grasp a participant's knowledge (Rahman, 2017; Tuohy et al., 2013; Wilson, 2014). Participants recounted particular events in which they encountered an adverse event while on scene during an opioid recovery effort.. Qualitative research involves descriptions and recollections (Rahman, 2016; Silverman, 2010). A lesser sample size and use of a qualitative methodological approach limited generalizability (Harry et al., 2014; Rahman, 2017; Thompson, 2011).

One limitation may have involved my role as a medicolegal death investigator. With a working knowledge of drug overdose scenarios, specifically fentanyl and its derivatives, my experience may have influenced my objective interpretation of findings. To reduce this potential bias, I minimized personal responses during interview sessions and followed proposed qualitative interview protocols. Another limitation was that

findings were not typical of fentanyl exposure encountered by other law enforcement officers in other policing agencies. Exposure may yield different adverse events.

Significance

Information from my study was essential to law enforcement, first responders, local health departments, and the local law enforcement agencies and community they police in northern NJ. My research findings provided perspectives regarding their lived experiences involving scene response overdose scenarios. I sought to create awareness of potential obstacles law enforcement officers experience, addressed their perceptions of overdose scenarios, and discussed potential problems that could occur during overdose responses. The opioid epidemic was forever evolving, and if law enforcement officers could play a pivotal role in providing insights regarding what they endured during overdoses, then lives can be saved. Creation or modification of exposure reduction programs for law enforcement and first responders would lead to positive social change.

However, there was minimal research on perceptions and problems law enforcement officers in local law enforcement agencies in northern NJ endured during these scenarios.

Summary

This research included information on how law enforcement officers perceived potential problems during an overdose response scenario. Law enforcement officers were often the first to arrive on scene to provide life-saving recovery efforts. Chapter 1 included the background, problem statement, purpose of the study, RQ, conceptual framework, nature of the study, definitions, assumptions, scope and delimitations, and

significance of the study. Chapter 2 included the literature search strategy, conceptual foundation, literature review, and a summary. Chapter 3 included information about the research design, rationale, methodology, data collection, analytical tools, and study trustworthiness.

Chapter 2: Literature Review

In this chapter, I presented a review of literature. This included information regarding the overall opioid epidemic in the U.S. I reviewed law enforcement officer training involving naloxone, followed by a description of the mechanism of action of naloxone. I then explained good Samaritan laws and implications during overdose responses. I addressed first responders, emergency medical technicians, local community programs, and hospital personnel. I included a description of the Street-Level bureaucrat theory and methodology. The chapter concluded with a summary.

Literature Search Strategy

In this study, I used the following databases: Google Scholar, EBSCO, LexisNexis, JSTOR, ProQuest, PubMed, SAGE Journals, and ScienceDirect. Federal and state databases were searched from the following organizations: U.S. Department of Health and Human Services, CDC, DEA, and NJ Department of Health. I searched databases and used the following key words: *naloxone, law enforcement officers' perceptions, Good Samaritan Laws, naloxone overdose scenarios, fentanyl, heroin, fentanyl exposure, opioid overdose scenario, naloxone use, police officers, naloxone training, naloxone, first responders,* and *street-level bureaucracy*.

I used peer-reviewed journal articles, books, and accompanying research that was published between 2010 and 2020.

Background

My goal was to address potential problems that occurred during law enforcement officer responses within local and county agencies in northern NJ to overdose scenarios.

Responses involved administration of naloxone or other life-saving efforts during an overdose. Continued success to stave off the opioid epidemic involved training, avoidance, and healing plans (Doleac et al., 2018; Lurigio et al., 2018).

In North Carolina, two separate law enforcement agencies implemented an opioid awareness and naloxone administration program. Kitch et al. (2016) identified a strain of fentanyl that was lethal within 2 days, and law enforcement officers revived four individuals from deadly overdose when they administered naloxone. The essential role law enforcement officers played in the opioid crisis was their ability to recognize an overdose and played a role in administering naloxone, an opioid reversal agent (Lurigio et al., 2018). The law enforcement officer's role was to help minimize or reduce overdose scenarios by providing support to local communities.

Fentanyl, a synthetic opioid, led to a rise in drug-induced fatalities in the U.S. Fentanyl deaths were similar in 2011 (1,663) and 2012 (1,615); in 2013, however, deaths rose to 18,335 in 2016 (National Institutes of Health [NIH], 2015). This increase in fentanyl and opioid-related deaths made law enforcement involvement that much more critical and warranted. With increasing synthetic derivatives, law enforcement officers could encounter unknown factors when responding to overdoses.

Chapter 2 included an overview of the opioid epidemic in the U.S., law enforcement officer training involving naloxone, mechanisms of action for naloxone, the street-level bureaucracy theory, and good Samaritan laws.

Opioid Epidemic in the U.S.

Pharmaceutical misuse and dependence, along with outcomes including overdose death and escalating adaptation to heroin use, established cataclysmic national health problems in the U.S. (Compton et al., 2015). Additionally, it was apparent that overprescribing of these pharmaceuticals over the past two decades had been a significant stressful cause of the opioid overuse epidemic (Compton et al., 2015). As the U.S. saw a considerable increase in opioid-related deaths, law enforcement officers' involvement was essential in administering naloxone in order to prevent fatal opioid overdoses (Davis et al., 2015; Green et al., 2013; Ray et al., 2015). An opioid was a drug that was used to treat different levels of pain, usually moderate to severe, via binding to opioid receptors in the central nervous system (NIH, 2016b). Opioids had many forms, and the most common were heroin, derived from morphine from a poppy plant, fentanyl, a synthetic opioid used for chronic breakthrough pain, usually with cancer patients, and carfentanil, a synthetic opioid derived from fentanyl.

Fentanyl caused an increase in overdoses in the U.S. (DEA, 2016; Rudd et al., 2016; Spies et al., 2016). Today, artificial opioids, mainly fentanyl and associated analogues, were the most dominant driver of narcotic overdose fatalities (CDC, 2019; Goodison et al., 2019). Derivatives ocfentanil and carfentanil were also hazardous opioid compounds that posed national security threats.

In the U.S. between 1999 and 2017, drug overdoses totaled 702,568, of which 399,230 involved opioids (NIH, 2015). In 2016, 66.4% of 63,632 drug overdose deaths were due to or involved opioids. In 2017, 47,600 (67.8%) of 70,237 drug overdose deaths

included opioids, showing rises in terms of race, gender, age, and socioeconomic status in various states. In the Unites States from 2016 to 2017, synthetic opioid-related overdose mortality rates rose by 45.2% (Scholl et al., 2018). Jones et al. (2018) estimated by 2018 that over 100 Americans succumbed to opioid overdoses daily.

The opioid epidemic existed partially due to accessibility of synthetic opioids. The opioid epidemic may have been underreported in the U.S. due to potential misclassification or uninvestigated uses of synthetic opioids. Ruhm (2017) discovered opioid mortality rates in NJ were 4.4%, as state reporting mechanisms may not accurately reflect actual opioid overdose fatalities. For example, disclosed rates did not accurately reflect the scale of opioid fatalities by a factor of 1.5 to 3.1 per 100,000 in Pennsylvania, Indiana, NJ, and Arizona (Ruhm, 2017). This may be because fentanyl was not detected via routine toxicology, as synthetic opioids were not easily detectable (Suzuki et al., 2017). New technology was not available to predict the specific synthetic opioid that may have proved fatal in an overdose.

Law Enforcement Officer Training with Naloxone

Numerous studies uncovered the necessity for law enforcement officers to be proficient in the use of naloxone, as they were often the first to respond to an overdose scenario. The U.S. Department of Health and Human Services (HHS) had discovered the opioid crisis was a significant concern and suggested several ways to address the dilemma; including better prescriber training, access to naloxone to the community, and treatment for opioid use disorder (Kerensky et al., 2017). Studies recognized a problem existed and have put plans in place but have had little success in the opioid crisis

declining. For example, according to Green et al. (2017), law enforcement officers were trained on the use of naloxone and were surveyed on the effectiveness of naloxone in overdose prevention. Green et al. (2017) noted that themes emerged such as law enforcement officers' feelings of uselessness and aggravation with their current options in the overdose response, minimal availability for drug treatment, easy access to prescribed opioids, and the unbroken loops of addiction.

The HHS further identified the problems with the opioid epidemic, and the law enforcement community identified what their hurdles were in responding and administering naloxone (Kerensky et al., 2017). The cycle of treatment became a juggernaut because the HHS was a governing body that tried to implement plans, and law enforcement officers were on the front lines seeing the project failures (Kerensky et al., 2017). Law enforcement officers used their life-saving efforts, administered naloxone, and could be left wondering what happens to victims once the victim encounters a fatal opioid overdose.

Law enforcement officers were often the first agency arriving on 911 reported scenes and might encounter an overdose scenario where naloxone might need to be administered. Purviance et al. (2017) surveyed 97 law enforcement officers in the state of Indiana by using Opioid Overdose Attitudes Scale (OOAS) in a follow up to naloxone opioid overdose training and concluded that naloxone training was essential. The surveys also captured law enforcement officer's ability to administer naloxone safely and effectively, but the study did not capture post training perceptions or attitudes (Purviance et al., 2017). However, law enforcement officers that were receptive to naloxone training

recognized more research could be performed to capture opinions before and after an overdose scenario where naloxone was administered (Purviance et al., 2017). In summary, law enforcement officers might respond to an overdose in which naloxone might be essential in a life-or-death scenario. The victim might need further intervention, but law enforcement's initial response with naloxone was still essential.

Lurigio et al. (2018) researched law enforcement officer's role in the opioid epidemic and discovered that the epidemic needed naloxone administration to reverse the deadly effects of an opioid overdose. Currently, 2,300 law enforcement agencies in 42 states identified naloxone recovery processes as part of first responder protocols (Lurigio et al., 2018). Naloxone administration was a critical process that law enforcement officers play to stave off the harmful effects of an opioid overdose. Lurigio et al. (2018) concluded that research was pivotal in discovering law enforcement officer's role had altered the perception concerning addiction that could help enhance therapy over criminality. In other words, the intervention law enforcement played in an opioid recovery effort steered the victim towards recovery instead of prosecution.

Law enforcement now faced a new challenge with the surge of synthetic opioids and naloxone administration. The consumption of imitation tablets consisting of fentanyl might follow delayed overdose delivery calling for repetitive administration of naloxone due to slowed toxicity (Sutter et al., 2017). Baumann et al. (2018) noted a larger than expected dose of naloxone to reverse the effects of an extremely powerful novel synthetic opioid remains an open inquiry. Moss and Rando (2019) suggested an increase in the dose of naloxone in the wake of the synthetic opioid era. The unforeseen increase in

synthetic opioid deaths was further realized by an inquiry that noted distinct synthetic opioids, particularly fentanyl, into a rare class between the years of 2013-2016 (Moss & Rando 2019; Seth et al., 2019). Bell et al. (2018, p. 3) stated more research was urgently needed to determine the naloxone dose needed for nonmedical and medical responders to reverse synthetic opioid overdoses. Numerous challenges still faced the governmental agencies' attack on the boundless fentanyl-related fatalities.

Individuals who die from fentanyl overdoses were often unaware that they consumed the drug or did not anticipate the ingested drug's dose or potency (DEA, 2016; Frank & Pollack, 2017). Law enforcement arrived on the scene of an overdose, and they were unsure of what the subject had ingested and administered naloxone without verified knowledge of what drug was used by the individual. A recent investigation in Canada identified fentanyl was present in 89% of confiscated phony OxyContin tablets (Frank & Pollack, 2017). In the United States, recent deaths were traced to fentanyl in fake alprazolam, acetaminophen-hydrocodone, and other medications (Frank & Pollack, 2017). Governments and police departments were desperate to control how to best position their efforts to address extensive fentanyl-related fatalities (Frank & Pollack, 2017). The threat of fentanyl related overdoses continued to rise despite law enforcement efforts to deploy harm reduction techniques to minimize overdose scenarios. Therefore, law enforcement officers needed to be ready for any unintentional chemical exposure during an overdose response.

Mechanism of Action of Naloxone

Naloxone was a drug that was available to reverse the effects of an opioid overdose. An opioid was defined as a drug that a medical professional prescribes to combat pain but the drug also inhibited a part of the brain that regulated respiration. An excessive amount of an opioid could cause respiratory arrest in turn, requiring naloxone to reverse the action of an opioid (Yaseen et al., 2007). Substance Abuse and Mental Health Services Administration (SAMHSA) noted Naloxone was FDA approved to prevent or reverse opioid overdoses. Given the current opioid epidemic, naloxone had transitioned from emergency room use to that of scene-based suspected opioid overdose scenarios where first responders were instructed by protocol to administer naloxone to reverse the respiratory depression effects that occurred during an opioid overdose (SAMHSA, n.d.). Two studies showed the optimal time to administer naloxone. The first study noted naloxone administration had a limited window of administration during a heroin overdose as mortality ordinarily occurs 20-30 minutes after use (Darke & Duflou, 2016). Comparable when injecting fentanyl, heroin injections resulted in life threatening respiratory arrest within minutes (Green & Gilbert, 2016).

Kim et al. (2009) noted the success of naloxone was ultimately time dependent. Mortality generally happened between 1 to 3 hours following an overdose (Kim et al., 2009). Consequently, naloxone was only effective in terminating an overdose if delivered preceding overdose symptomatology indicative of impending death (Giglio et al., 2015). A first responder or a bystander who was trained in the use of naloxone could administer the drug in any suspected overdose scenario (Bennett & Holloway, 2012). Naloxone was

not a medication that could be self-administered; it required bystander or first responder administration in suspected opioid overdoses to help minimize mortality (Piper et al., 2007). Therefore, knowing when to administer naloxone also required law enforcement officers to ensure the safety of themselves, the victims, and other persons present on the scene during in which an opioid overdose is suspected.

In May 2013, NJ Governor Chris Christie enacted the Overdose Prevention Act, which allowed the administration of naloxone as a life-saving effort. Law enforcement officers and first responders in NJ were included in this Act and began training to administer naloxone as a rescue medication during overdose scenarios. Fisher et al. (2016) had noted that law enforcement officers trained in naloxone administration could correctly identify an opioid overdose and effectively administer naloxone without negative consequences. Providing law enforcement officers with naloxone and teaching them to recognize the indications of an opioid overdose may potentially aid in decreasing fatal overdose rates (Fisher et al., 2016).

Suspected opioid ingestion and overdose treatment protocols had recognized law enforcement as an integral part of first responder training with a key focus on early administration of naloxone (Kitch et al., 2016). The variable potency and rapid onset of fentanyl posed an increased scene response challenge due to the potential for an accelerated death regardless of naloxone administration using stepwise dosages (Fairbairn et al., 2017). The opioid epidemic was far from over, but using the proper protocol, naloxone dosing, and prompt response to an opioid overdose may diminish mortality rates.

Street-Level Bureaucracy Theory and Law Enforcement

Law enforcement officers were on the front lines of crime prevention and civil patrol and directly interacted with the public applying free action (Lipsky, 2010). Law enforcement officers were often thrust into challenging situations that might alter the lives of the citizens they were aiming to serve and protect. In addition, officers faced situations that required quick decisions. Many officers had expressed appreciation for autonomy when deciding on a course of action in such situations (Buvik, 2016). Overdose scenarios, which were life-or-death encounters, were one such situation in which a quick and effective decision was paramount.

Street-level bureaucrats were public employees that included law enforcement officers. Lipsky (2010, p. 3) stated that public employees who interacted with the public daily had a valuable responsibility, labeling them "street-level bureaucrats." Although most street-level bureaucrats aimed to do great work within the boundary of these uncertain and discouraging environments, to do so, they frequently made judgments and corrections to survive (Lipsky, 2010, p. 31). Law enforcement officers made intuitive decisions within a variety of encounters. Lipsky (2010) said there were two ways to consider the street-level bureaucrat:

> One was to equate it with public services with which citizens typically interact. Another way was to define street-level bureaucracy as public service employment of a certain sort, performed under certain conditions. In this second approach, street-level bureaucrats interacted with citizens in the course of the job and have discretion in exercising their authority. (p. xviii)

Therefore, street-level bureaucrats had a particular way of handling difficult situations or interactions with the public. A drug overdose scenario contained many intricacies, and affected how law enforcement officers assisted in the focus of a street-level bureaucrat.

Street-level bureaucrats strived to accomplish their daily role using their best judgment with the resources available in multiple scenarios. The less fortunate the human, the more power the street-level bureaucrats would have over them (Lipsky, 2010, p. 6). Street-level bureaucrats made judgements about individuals that altered their life opportunity (Lipsky, 2010). When responding to an overdose scenario that may have ended negatively, such as death, law enforcement had encountered others who passed judgement on their life-saving efforts. Law enforcement officers often served as first responders to medical emergencies, including overdoses. In 2013, Green et al. offered that minimal data was available on law enforcement officers' perceptions regarding overdose prevention and response, and to date little progress had been made to close this information gap. Law enforcement officers knew they must act in a timely fashion in an overdose scenario. Therefore, the law enforcement officer decided the need to administer naloxone, secured the scene for their safety, and interacted with family members. Each overdose scenario could pose a potential problem for law enforcement and increasing their routine activities.

Street-level bureaucrats additionally dealt with moral and ethical elements in making unrestricted judgements. Law enforcement officers made decisions under limited time and information (Lipsky, 2010, p. 29). Street-level bureaucrats worked under specific time constraints and decided within seconds in a life-threatening situation, such

as an opioid overdose. The efforts of street-level bureaucrats were to protect and serve the public in their appointed role as law enforcement officers.

Good Samaritan Law: A Primary Prevention Initiative

Three primary actions had emerged to mitigate fatal opioid overdoses: primary avoidance, increasing a path to powerful treatment, and misuse reduction procedures, including extensive circulation of naloxone and regulations to boost medical and support amid an overdose (Hawk et al., 2015). The Good Samaritan Law was passed in 2010, however not every state adopted the law at the onset. Through the years, some states had made provisions to the Good Samaritan Law specifically related to actions surrounding the rescue and recovery phase of illicit drug overdoses (Hawk et al., 2015). Forty-one states had implemented the Good Samaritan Law widening judicial amnesty to overdose observers who contacted emergency services (Latimore et al., 2017).

The Good Samaritan Law was enacted so that individuals responding to perceived or actual medical emergencies may call for medical assistance or act within their reasonable judgement and skills, without repercussions, including arrests and prosecution. In situations, such as suspected opioid overdoses, first responders, including law enforcement officers, with access to naloxone administration to begin overdose reversal. Current studies showed that bystanders of an opioid overdose were fearful in calling law enforcement due to anxiety of arrest for drug or materials possession, homicide, warrants, and/or misconduct (Latimore et al., 2017). Calling law enforcement officers in an overdose scenario was essential, and the availability of naloxone might reverse the overdose. However, the individuals who contacted law enforcement might be

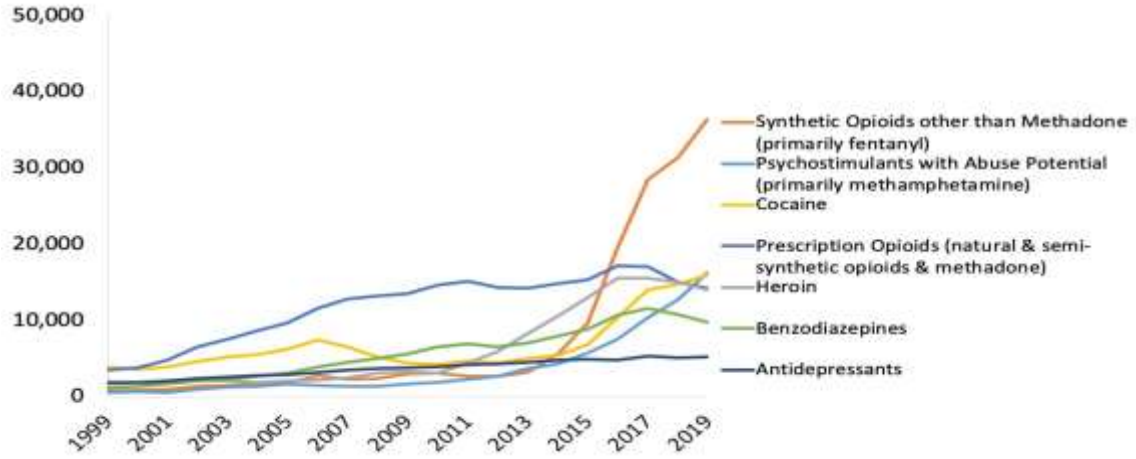
under the influence, in possession of an illegal drug, or might have prior arrests leaving them reluctant to call for help. This reluctance delayed law enforcement's scene arrival where rapid interventions may be warranted to reverse overdose situations. As of July 2018, 45 states and the District of Columbia had ratified specific Good Samaritan Law legislation specific to overdose interventions (Hamilton et al., 2021).

Fentanyl and Other Synthetic Opioids

Fentanyl, a highly addictive synthetic opioid, had been at the forefront in the rise of overdose death rates (see Figure 1). Janssen Pharmaceuticals developed fentanyl in the 1960's (Lozier et al., 2015). The CDC (2017) described pharmaceutical fentanyl as 50 to 100 times more powerful than heroin. In the United States, fentanyl was a prescription medication available as an injectable, transdermal patches, and oral lozenges. All forms could be diverted for misuse and abuse (CDC, 2017). Fentanyl was frequently blended with heroin to elevate the strength of heroin (Skolnick, 2018). Fentanyl and its synthetic derivatives resulted in unpredictable results based on individual body responses to varying dose strengths. This risk was ever more present with illegal synthetics due to improbable pharmaceutical dose standardization (Skolnick, 2018). With the rising demand for heroin domestically, traffickers manufactured synthetic opiates such as fentanyl to increase the supply without decreasing the strength (Bode et al., 2017).

Figure 1

Opioid-Involved Overdose Deaths in the U.S., 1999-2019



Note. https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates

Therefore, fentanyl and its byproducts were intrinsically hazardous by the power of their forces; it was a considerable belief that illegal synthetics were not cut with therapeutic certainty or exactness (Skolnick, 2018). The increasing synthetic opiate use continued but the rise in illicitly manufactured was still a cause for concern for drug users because they were unaware of the potency of the drug being ingested.

Synthetic opiates had received increased use due to lower costs and broader accessibility. The chemistry of fentanyl was basic compared to opiates, and this simplicity of composition was recognized in its low production costs. Frank and Pollack (2017) and Skolnick (2018) estimated that the cost of a kilogram of fentanyl was approximately $3,500 compared to $65,000 for a kilogram of heroin. Volkow and Collins (2017) described fentanyl as 50 times more potent than heroin and 20 times less costly to manufacture. Powered by these estimates, drug dealers were incentivized to change from heroin to these lower cost synthetics (Skolnick, 2018). Most synthetics were shipped

from China and Mexico (United States Drug Enforcement Administration, 2017). Fentanyl and its by-products were characteristically hazardous by the strength of their potencies. It was a logical presumption that black market synthetics were not manufactured with pharmaceutical rigor or standardization; therefore, dose strength inconsistency in production was likely (Skolnick, 2018).

A reliably fatal dose of fentanyl was estimated to be in the range of 2-3 milligrams, which was roughly a thousand times more than a standard pharmaceutical dose delivered in micrograms (DEA, 2017). Standard pharmaceutical administration was in the form of intravenous and intramuscular injections and used transdermal patches. Given that fentanyl's lipophilic particles could be absorbed through the epidermis and through mucosal contact, unintended exposure to incapacitating and fatal amounts due to unintended exposures was possible (DEA, 2017).

Multiple other compounds were analogs derived from fentanyl. Acetyl fentanyl, carfentanil, butyrylfentanyl were all fentanyl derivatives with a reformulation or a change in the functional group attached to the compound. In 2014, drug dealers were taking advantage of the permissible distinction. The Controlled Substance Act did not carry a scheduled drug classification for acetyl fentanyl, but it was an analogue of fentanyl (Stogner, 2014). Therefore, if the acetyl fentanyl was labeled unfit for human ingestion, law enforcement assumed it was used for something else, such as bath salts or potpourri (Roberts, 2013; Stogner, 2014). Stogner (2014) offered that the ability for drug distributors to take advantage of this analogue loophole had prompted a policy reclassification. The label "not for human consumption" left law enforcement officers

unsure of the chemical make-up of what substances were being sold, increasing their likelihood of unintentional chemical exposure. In July 2015, acetyl fentanyl was reclassified as a schedule 1 substance (Armenian et al., 2018). The reclassification of acetyl fentanyl helped to restrict illegal importation into the United States.

Multiple chemical structures were developed with a simple alteration of a chemical component of the parent fentanyl compound. In May 2016, butyrylfentanyl, like acetyl fentanyl, was placed on a schedule 1 substance list moving it to more restrictive importation rules (Prekupec et al., 2017). Analogs and butyrylfentanyl, other legal and illegal opioids, had gained use in the illegal drug trade (LE et al. 2019). Identification of substances was a key first line defense. Wharton et al. (2021) noted that it was now possible to discover up to 30 fentanyl analogs using rapid, commercial immunoassay kits. The development of these additional test kit assays had allowed the Drug Enforcement Agency and the National Forensic Laboratory Information System (NFLIS) to compile a list of metabolites associated with fentanyl. Under the correct safety precautions, the ability to field test for illegal opiates provided some assurance for law enforcement officers by helping them determine a substance's chemical composition, thus potentially enhancing their safety during an overdose response scenario.

Carfentanil was another derivative of fentanyl. Carfentanil was manufactured to anesthetize elephants and large mammals (DEA, 2016a). Carfentanil was 100 times more potent than fentanyl, and 10,000 times stronger than morphine (DEA, 2016b). Due to the lack of testing on humans, scientists were unsure of the fatal human dose of carfentanil. On September 22, 2016, the DEA alerted law enforcement and the community about

carfentanil availability in the social drug markets in numerous areas, most often concealed as heroin (DEA, 2016c). The reported distortion of a carfentanil additive in heroin, and the potential of its existence in different products or fraudulent pills, unveiled a critical public health danger (Prekupec et al., 2017). Carfentanil potency offered drug traffickers the ability to use smaller quantities, thus increasing profits. Additionally, without human testing, there were no qualified references to establish drug quantity leaving drug users potentially unaware of the composition of the ingested illicit drug. In summary, the law enforcement officers or first responders trying to save the individual who has ingested an unknown chemical were in danger during an opioid overdose response. Law enforcement officers could have been exposed to an unknown chemical that could cause distress in several ways; establishing a safe scene does not and should not include testing the suspected chemical outside of the proper facilities.

Law Enforcement Fentanyl Exposure

Inadvertent chemical exposure during scene responses was a threat to law enforcement officers and first responders nationally. There were two incidents involving law enforcement officer's responses and unintentional exposure to a chemical in 2017 and 2018. A law enforcement officer executed a vehicle search and located a substance contained within a package. The law enforcement officer proceeded to lift the package outside the vehicle. While outside the vehicle, a breeze propelled the powder over his person. The officer was taken to the emergency department of a nearby hospital, and the treating physician noted the encounter as a chemical exposure (Chiu et al., 2019, p. 441). The second encounter involved four law enforcement officers responding to a hotel room,

and there was powder in the ambient air. The law enforcement officers experienced chemical exposure, and each had a different reaction to the powder. Forensic laboratory testing of the chemicals from both law enforcement encounters found evidence of illicit drug compounds. In the first encounter, the powder was identified to contain fentanyl and methamphetamine. In the second encounter, the ambient air powder tested positive for opioids, cocaine, methamphetamine, and bath salts (Chiu et al., 2019, p. 441). These two reported cases illustrated examples of unintentional chemical exposure risks to law enforcement officers during their daily work activity and this risk continued if illicit opioid drugs were increasingly accessible.

Herman et al. (2020) conducted a review of articles pertaining to first responder opioid exposures. The initial search produced 1,408 articles with 1,016 meeting opioid exposure inclusion criteria and a further refinement narrowed usable research to 214 articles meeting both first responder and opioid exposure inclusion criteria. Content analyses did not highlight a possible channel of opioid exposure, medical symptoms related to exposure, or confirmatory laboratory analysis establishing exposure links to first responders (Herman et al., 2020). They noted the general opinion of the scientific consortium remained that ill-health from involuntary exposure was exceedingly doubtful. The phenomenon of first responder opioid exposures that was newsworthy had not been verified scientifically (Herman et al., 2020). One of the first reports of first responder exposure was in Montreal on May 14, 2013, in which several officers walked in on an illicit manufacturing facility that was manufacturing desmethyl fentanyl. Herman et al. reported:

> One officer was taken to the hospital with heart problems, while the three others, who handled the drugs wearing masks and gloves, developed a rash on their arms. The symptoms were not consistent with opioid poisoning (neither heart racing nor rashes are symptoms of opioid toxicity), and no confirmatory testing was described. Seemingly, the only proof of the exposure was that the victims thought they were exposed. (p. 113)

First responder law enforcement officers encountered an unintentional chemical exposure when they performed life-saving efforts on suspected overdose victims. Law enforcement officers had to take the necessary precautions to ensure their safety and proceed with caution where illicit drugs may be present. Precautionary approaches varied between law enforcement departments, but the safety of their personnel remained a focal point.

Summary

In this chapter, I presented my literature review regarding the history of the opioid epidemic, law enforcement officers' overdose responses, and potential exposure to synthetic opioids during naloxone administration. With proper policy generation and enactment, public officials helped mitigate potential workplace hazards that law enforcement officers encountered related to unintentional opioid exposure during overdose first responder calls. Their perceptions of overdose scenarios were still evolving as the U.S. combatted the opioid epidemic.

Chapter 3 included my research design, methodology, sample, and data analysis plan I used to explore law enforcement officers' perceptions of potential problems when responding to and while on the scene of overdose scenarios where naloxone needed to be

administered. Chapter 4 included a presentation of findings and analysis of collected data. Chapter 5 included a discussion of findings and comparison of those results to current literature in terms of the theoretical framework, study limitations, and future research needs.

Chapter 3: Research Method

In this phenomenological study, I explored perceptions of municipal and county law enforcement officers in northern NJ and potential hazards that were encountered during suspected overdose recovery efforts. My inquiry included exploration of decision-making steps involving law enforcement naloxone administration protocols. Chapter 3 included a description of the qualitative research method and design that was used to address the RQ. I discussed my role as the researcher, issues of trustworthiness, the methodology, including the process for sample selection, instrumentation, data collection, storage, and analysis.

Research Design and Rationale

RQ

The RQ that guided my study was: What were lived experiences of law enforcement officers who had implemented naloxone administration protocols for suspected opioid overdoses and their actual or perceived unintentional scene-related chemical exposures?

Research Methodology

In this phenomenological study, I explored perceptions of municipal and county law enforcement officers in northern NJ law enforcement officers during overdose recovery efforts in which they experienced actual or perceived unintentional scene-related chemical exposure. The phenomenon of my study was potential problems and challenges law enforcement officers face during overdose response scenarios. I analyzed law enforcement training involving naloxone, the importance of carrying naloxone to

save lives, and substances that led to the opioid epidemic. In the literature review, I identified minimal research involving law enforcement and their perceptions of potential problems during overdose recovery efforts with civilians who may or may not need naloxone, and I sought to close that gap. I investigated potential hazards involving unintentional chemical exposure and officer decision-making when administering naloxone protocols.

Heuristic Phenomenological Approach

Husserl (1913) described phenomenological research as the study of how individuals articulate circumstances and perceptions through their understanding. Moustakas stated, "heuristics is a way of engaging in scientific research through methods and processes aimed at discovery; a way of self-inquiry and dialogue with others aimed at finding the underlying meaning of important human experiences" (p. 18).

According to Moustakas (1990), the main concepts of heuristic inquiry are:

- Identify with the focus of inquiry
- Self-dialogue.
- Tacit knowing.
- Intuition: The connection between unspoken and stated knowledge.
- Intrinsic.
- Focusing: Deep exploration and persevering.
- Internal frame of reference

According to Moustakas (1990), there are seven phases of heuristic investigation:

- Initial engagement

- Immersion.
- Incubation.
- Illumination.
- Explication.
- Creative synthesis.
- Validation of heuristic inquiry: The ability of the researcher to rigorously, clearly, and authentically portray the phenomena.

Thematic Analysis

One process to code themes from researcher-collected data is thematic analysis. A theme is an elongated expression or phrase that highlights what a single fact is about and what it measures (Saldana, 2016, p. 199). Themes were used to explain behavior involving an experience, established observations, and actions in terms of the subject's narrative (Saldana, 2016). Braun and Clarke (2006) stated one of the advantages of thematic analysis is its adaptability.

In this phenomenological study, I explored perceptions of municipal and county law enforcement officers in northern NJ during their responses to overdose scenarios and naloxone administration. I used Braun and Clarke's six phases of thematic analysis to guide research (see Table 1).

Additionally, I investigated on-scene scenarios and potential hazards involving opioid exposure and decision-making methods when administering naloxone. I used in-depth semi-structured interviews with municipal and county law enforcement officers in northern NJ who experienced the phenomena of interest.

Table 1

Six Phases of Thematic Analysis

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking that the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic "map" of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Note. Cited from "Using thematic analysis in psychology," by Braun and Clarke. Used with permission from Rights Link (see Appendix A).

Role of the Researcher

As the researcher, I used Moustakas' phenomenological research method to help guide and better understand the phenomenon of interest, law enforcement officers, and overdose scenarios. Moustakas (1994) stated that each phenomenon becomes a good foundation for an investigation. Phenomena were the fundamentals of individual theory and the premise for all knowledge. In this phenomenological study, I was the proctor, data transcriber, and data examiner to develop themes from the participants' perspectives. Qualitative investigators were more apt to look at phenomena as they expanded over time, looking at groups of explanations and outcomes and searching for codes (Rubin & Rubin, 2012). Qualitative questioning helped re-enact circumstances the investigators

had never experienced (Rubin & Rubin, 2012). A challenge as the researcher was not guiding the data or predetermining a response based on my personal experiences and interactions with law enforcement officers as a senior medicolegal death investigator.

In my role as the researcher, the topic was of particular interest due to the lack of extensive research on law enforcement officers' perceptions surrounding their role as first responders and decision-makers on naloxone administration during an overdose scenario. Law enforcement officers may unintentionally had exposure to an opioid or unknown chemical during the overdose response when administering life-saving efforts, which I investigated further. I am currently a senior medicolegal death investigator, board-certified in forensic death investigation, and employed by a NJ County government. The interest in this topic arose from more than 19 years working in death investigation in which law enforcement officers, first responders, and other parties' safety from unintentional opioid exposure could affect multiple parties in overdose scenarios.

All overdose deaths fell under the medical examiner's jurisdiction in which the death investigators carried out a thorough investigation regarding the specific details that led up to the subject's death. The specific details included prior drug history, prior arrests, medical history, and any drugs found on the scene. Our role as death investigators was to work with multiple agencies, including the crime scene unit, prosecutor's office, and local or state law enforcement, and created a more complete, fact-based approach to the circumstances surrounding a death itself.

As the researcher, I informed the participants of my professional experience and the purpose of the research. In developing open-ended interview questions, I did not

solicit any law enforcement officers' guidance, and I was cautious in making sure my professional background did not influence participant recruitment or over-interpretation of thematic findings. I was not interviewing or collecting data from any of the agencies where I had been an employee. I am an employee at the county level and had no affiliation with a state or local law enforcement agency.

Methodology

The study's sample frame was NJ law enforcement officers who had responded to an overdose scenario and experienced unintentional opioid exposure. There was limited research on law enforcement officers' overdose recovery efforts and unintentional chemical exposure. Therefore, my role was to gain access to participants who have experienced the phenomenon and investigate law enforcement officers' opioid overdose response.

Due to the limited information regarding law enforcement officers' opioid exposure during an overdose recovery effort, purposeful, convenience sampling coupled with snowball sampling was applied to seek enough participants to reach data saturation for thematic analyses. Snowball sampling, a form of purposive sampling, involved establishing a few essential candidates that met the standards recognized for inclusion in the research (Merriam, 2009, p. 79). I recruited active duty or recently retired (within the past 5-years) NJ law enforcement officers who had experienced suspected opioid overdose scene responses where unintentional exposures had occurred. All recruited participants were screened to ensure they were free from any legally binding non-disclosure agreements with the NJ Police Benevolent Association (PBA; see Appendix

B) and the NJ State Troopers Fraternal Association (STFA; see Appendix C). The recruitment process commenced after obtaining Walden University's Institutional Review Board (IRB) approval. The target law enforcement agencies consisted of NJ State Police, Prosecutor's detectives, Sheriff's departments, and local municipalities.

Participant Selection Logic

Participant recruitment was conducted utilizing a non-random, purposive sampling approach seeking NJ law enforcement officers who had responded to an opioid overdose and encountered exposure to an opioid or unknown chemical. A form of purposeful sampling included snowball, chain, or network sampling. This plan included finding a few principal candidates who met the fundamentals I had recognized for inclusion in the research (Merriam, 2009). Therefore, the researcher's role was to gain access to participants who had experienced the phenomenon of interest. Three counties within NJ were my research setting, and law enforcement officers were recruited based on their personal lived experience of opioid overdose response and exposure to an opioid or unknown chemical during their resuscitative efforts (see Appendix D). Merriam (2009, p. 78) suggested that "a unique sample is based on unique, atypical, perhaps rare attributes or occurrences of the phenomenon of interest. You would be interested in them because they are unique or atypical." Law enforcement officers' opioid overdose response was not a rare occurrence, but exposure to an opioid or unknown chemical during an overdose recovery effort was worthy of research.

Sample

There was limited information of law enforcement officers' unintentional opioid or unknown chemical exposure during an opioid overdose recovery effort, and snowball sampling was utilized to enhance my participant sample size to reach data saturation. Snowball sampling, a form of purposive sampling, involved establishing a few essential candidates that met the standards recognized for inclusion in the research (Merriam, 2009). Once law enforcement officers meeting my inclusion criteria were recruited and participated in the semi-structured interview, their ability to reach fellow officers meeting the same study inclusion criteria may be much greater, thus a snowball recruitment approach is possible. The three NJ counties of interest had multiple law enforcement levels inclusive of state, county, and municipal levels offering a substantive participant pool in which to recruit those who would have experienced the phenomena of interest.

The goal with IRB approval was to enter into a research partnership agreement with the NJ PBA and the NJ STFA. The PBA and STFA were the unions or governing bodies that oversaw law enforcement officers in NJ. I contacted each agency, PBA and STFA, via an email listed on their website and ensured no conflict of interest in participating in a research study with law enforcement officers (see Appendix D). The three counties within the state of NJ included Morris, Sussex, and Warren counties, where target-rich law enforcement officers were located.

Phenomenological research allowed the investigator the ability to capture the essence of the participants' live experiences. Due to the phenomenon of interest being infrequent, there was no definitive study sample size proposed. My goal was to recruit at

least 6-8 participants to ensure sufficient depth and breadth of verbalized content for thematic analyses. Participant inclusion criteria were NJ law enforcement officer, active or retired, employed within three designated counties in NJ; Morris, Sussex, or Warren, have experienced a scene response to an opioid or unknown chemical overdose scenario when naloxone was administered, experienced unintentional exposure to an opioid or unknown chemical during the recovery effort. The participants met the above criteria, volunteered to be a participant, and agreed to the informed consent criteria. Participants could terminate their interviews at any time during the interview itself and they could skip question responses that may pose a conflict.

Instrumentation

Data were collected using semi-structured interviews (see Appendix E) with law enforcement officers about their perceptions and personal accounts of exposure to an opioid or unknown chemical during resuscitative efforts in which naloxone had been administered per protocol. The qualitative investigator's instrument preference was the individual investigator (Rudestam & Newton, 2012). Creswell (2009) offered that qualitative topics might be loosely established in the absence of distinct sources to the present publications. Therefore, due to my study's nature, the ability to capture leading-edge research to help uncover law enforcement officers' perceptions paved the way for future research as the opioid epidemic continued to flourish. The interviews with law enforcement officers were estimated to last 60 minutes in duration. Rubin and Rubin (2012) suggested that before the interview, “take time to learn something about the interviewee and the research setting so you do not feel you are meeting a complete

stranger" (p. 83). For example, I was familiar with several law enforcement officers and their respective departments where an unintentional opioid exposure occurred, but I did not know the exact details on each specific encounter.

The phenomenological interview questions the participants answered followed the same protocol, but the answers to the questions were more detailed based on their personal experiences. I followed an interview schedule to confirm all participants would be scheduled during the time allotment. There could have been follow-up interviews with the participants if there were time constraints to complete the agenda. I digitally audio recorded the interviews to ensure accurate documentation of the law enforcement officers' perceptions and experiences during an opioid overdose response. For participants who declined consent to being audio recorded, I documented their verbal responses accurately by hand. Digital audio recordings were captured using a personally owned transcription device.

Procedures for Recruitment, Participation and Data Collection

Each participant completed an informed consent process in which law enforcement officers were introduced to the research, provided sample semi-structured interview questions, and advised of their rights as a research participant. A researcher's fundamental responsibility was to the participants, not to cause disservice, and to keep pledges the researcher has promised (Rubin & Rubin, 2012). Rudestam and Newton (2015) stated that a frequent obstacle was a researchers' mistake to not carefully consider how distinct participants are expected to perceive the research. Law enforcement officers were a unique population because of the role they played in the community and a study

involving their daily activities was critical to the success of this phenomenological research. I was the primary data collection instrument; I scheduled the interviews based on participant availability and collected the data from the semi-structured interview question responses. Each interview was scheduled for roughly 60 minutes and recorded via Zoom meeting software.

My Zoom meeting software account provided audio and video recording options; only audio recordings were captured. Access was gained using my secure login credentials and participants were provided a secure access link specific to their arranged interview time using their provided email address. If a participant declined to share his or her email address to schedule a meeting, a meeting access code was generated and provided to each individual participant. They were able to log into the generic Zoom meeting access portal, entered the “meeting code”, and gained access to their meeting room.

Recruitment

The proposed research sample was at least 6-8 participants. A challenge in my research was to gain access to enough law enforcement officers who had unintentional exposure during an opioid overdose response. The qualitative investigator was conscious and ambitious in requesting credible participants to share a significant experience of the questions or circumstances raised in the research (Rudestam & Newton, 2015, p. 123). As the number of fatal overdoses continued to rise, gaining a better understanding of law enforcement officers' overdose response efforts could be pivotal in future policing policy.

To meet with participants, I chose to conduct the interviews with the prospective law enforcement officers via a recorded Zoom Meeting conference call. The researcher was accountable for developing an atmosphere in which the interviewee felt secure and answered candidly and thoroughly (Moustakas, 1994, p. 114). Zoom interviews were the required method to gather information from the law enforcement officers regarding their experience during an opioid overdose response due to the COVID-19 pandemic. Using Zoom meeting access provided interview setting flexibility allowing both the participants and me to connect in our private residences or in other settings that offered privacy elements. As the researcher, I used a paid Zoom subscription; participants downloaded a free version and there were no associated costs for their participation using the Zoom conference connection.

Recruitment Flyer

Upon Walden University IRB approval of my proposal recruitment materials, I sought to obtain several police chiefs in the Morris, Sussex, and Warren Counties' e-mail addresses to conduct purposive recruitment. I asked each police chief to disseminate the flyer via e-mail to their department's list-serve. Additionally, I asked each police chief to post a copy of the recruitment flyer (Appendix F) in staff break rooms or in other general department information posting locations. Law enforcement officers who were interested in volunteering for an interview used the contact details from my invitation email or from the flyer to reach me. Once contact was made, I provided additional details by sending a copy of the informed consent, and requested they contact me via the Walden University email to set up an interview time.

Reciprocity and Gifts

Ravitch and Carl (2016) discussed the term reciprocity as it pertains to a "social exchange" (p. 356) for their time and the sharing of their views and experiences in qualitative research. Ravitch and Carl did not discourage compensation but did mention that small denominations were appropriate. However, the researcher should be clear on the potential ethical issues that could affect the candidates and weaken the integrity and personal boundaries (Ravitch & Carl, 2016). Therefore, to avoid a potential pitfall, a modest gift was provided to study participants in the form of a $20.00 Amazon e-gift card.

Participation

Once I received a list of potential participants from different law enforcement departments in Morris, Sussex and Warren counties I contacted each participant with the following information and explained participation is voluntary, the informed and written consent form will be obtained prior to the start of the study, and electronic e-mail signatures will be acceptable on the returned consent form

To support participants' confidentiality, they were assigned a pseudonym for their interview, data transcripts, and data reporting. The pseudonyms I assigned to the participants included the NATO phonetical alphabet to remove any association with a particular participant. I removed several pseudonyms from the NATO alphabet that aligned with potential participant names, such as Charlie, Juliett, Mike, Oscar, and Romeo. I randomly assigned the pseudonyms according to the interview selection process based on which participant volunteered first, second, third to be named Alfa, Bravo,

Delta, Echo, Foxtrot, Golf, Hotel, Kilo, Lima, November, Sierra, Tango, Uniform, Whiskey, X-Ray, and Zulu.

Data Analysis Plan

The data collection linked to the research question; which included the lived experiences of law enforcement officers who had implemented naloxone administration protocols for suspected opioid overdoses and their actual or perceived unintentional scene-related chemical exposures. Study data was interviews conducted with law enforcement officers who had met the study's inclusion criteria. I was the only data collector and the sole collection tool helping to reduce any potential bias presented by my data collection and analysis approaches. The data collection focused on law enforcement who met the study inclusion criteria. Data transcripts underwent thematic analysis (Table 1) helping to guide developing common themes for further analysis. I used NVivo v.12 qualitative software in the data analysis procedures.

Issues of Trustworthiness

Credibility

Merriam (2009) stated that internal validity dealt with the inquiry of how research outcomes complemented the phenomenon. Law enforcement officers were the focus of inquiry in my research. Further, Merriam offered that human beings were the prime mechanism of evidence and investigation in qualitative research; explanations of factuality were obtained through their observations and interviews. To ensure credibility, I used interview transcript triangulation to compare and verify the data. Merriam (2009, p. 215) stated, "probably the most well-known strategy to shore up internal validity of a

study is what is known as triangulation." I used a form of triangulation called member checking. Merriam described member checking as a practice to solicit feedback on your emerging findings from some of the people you interviewed. I intended to seek member check feedback with every candidate using a requested second interview lasting approximately 30 minutes to verify that I had captured each participant's responses accurately and to ensure I had offered interpretations that were aligned with the participant's beliefs and experiences. In using this form of triangulation, the process was in depth and labor intensive, but the ability to capture personal lived experiences was the goal of the research.

Transferability

Transferability and external validity are terms that were interchangeable in qualitative research. Merriam (2009) stated external validity was concerned with the ability of the findings to be applied to similar scenarios. I cannot claim that my research could be applied to a similar scenario, but I could suggest that my research could involve paramedics and possibly firefighters because they may be the first responders in some locations. Additionally, my study could set a precedent for further research in other states and other countries to protect law enforcement officers from unintentional chemical or opioid exposure during a life-saving event. The benefit of additional research could also change the current protocols for overdose response scenarios from a law enforcement officer's perspective and naloxone administration in the field.

Dependability

To establish dependability, I followed the data source triangulation, my research notes, Zoom call audio recording transcripts, an analysis of each participant interviews before coding the data, and data entry into NVivo for further analyses.

Shenton (2004, p. 71) stated, "in order to address the dependability issue more directly, the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, if not necessarily to gain the same results."

Dependability was accomplished throughout the research process by documenting with a reflective journal and field notes during the interview process. Patton (2015, p. 668) stated, "researchers and evaluators can learn a great deal about the accuracy, completeness, fairness, and perceived validity of their data analysis having the people described in that analysis by having the reaction to what is described and concluded." Therefore, I helped reduce researcher bias and provided a replication plan to verify other potential research.

Confirmability

Establishing confirmability by the researcher was essential to ensure the findings were authentic. A path must be utilized to help confirm as far as possible that the research interpretations were the outcomes of the phenomena and discovery of the participants, rather than the details and preference of the investigator (Shenton, 2004). To establish confirmability for my research, I used reflexivity, a technique used in phenomenological inquiry. Patton (2015) stated that reflexivity stressed the significance of rumination, political awareness, cultural mindfulness, and controlling one's viewpoint. Additionally,

it provided a reflexive symmetry that was reciprocally collaboratively interchangeable. Patton offered that the investigator affected the participant, and the participant affected the investigator. The investigator and the participant's perception of the study could affect both parties, and awareness of their symmetry was essential for reflexivity.

In my employment as a medicolegal death investigator in NJ, I worked closely with law enforcement officers in overdose response scenarios as a responder. I felt the law enforcement officers were enthusiastic about interacting, asking questions, and being supportive of creating safety protocols for their respective agencies. As the study's researcher, I anticipated the information gleaned from the law enforcement officers to be beneficial in understanding their viewpoints.

Ethical Procedures

Research recruitment commenced upon Walden University's IRB approval to conduct research. One ethical challenge was the phenomena of law enforcement officers discussing their current situations and exposures. In my role as a medicolegal death investigator, I interacted with law enforcement officers daily. The informed consent form instructions identified that my research was not associated with my professional position or relationship that I might have with law enforcement offers in the due course of our respective work. Study participation was voluntarily. Participants did not have to answer the questions if they felt uncomfortable about the question. Additionally, they may have concluded the interview at any time.

Another ethical challenge was confidentiality. An overdose scenario was a challenging event for law enforcement officers. Law enforcement officers were prideful

and loyal professionals who may have been hesitant to divulge their real experiences. Furthermore, they may have engaged in disclosure that involves prosocial prevarication leading to bravado beyond the limits of what was experienced. I encouraged participants to refrain from discussing the questions or scenarios with fellow officers who may qualify for study participation. Research data was protected on a personally owned external password protected hard drive. Data would be saved for 5-years and then destroyed by encrypting the data file and deleting. Handwritten notes and other non-electronic files will be secured for the same 5-year period and destroyed by shredding.

Summary

I sought to address municipal and county law enforcement officers in northern NJ perceptions of overdose responses, administration of naloxone, and potential hazards of unintentional opioid exposure. I addressed only law enforcement officers who had potential unintentional chemical or opioid exposure during overdose responses in which they experienced overdose unintentional chemical with an adverse event. My plan was to record participants via Zoom, take notes from interviews, and then perform coding using NVivo. Participants were chosen from municipal and county law enforcement officers in northern NJ to sign consent, recruitment, and confidentiality forms prior to inclusion in research. In Chapter 4, I presented and analyze data collected from the proposed plan in Chapter 3.

Chapter 4: Results

In this phenomenological study, I explored perceptions of municipal and county law enforcement officers in northern NJ and potential hazards that may be encountered during overdose recovery efforts. In this chapter, I presented my findings regarding how overdose scenarios affect law enforcement officers and the potential for unintentional chemical exposure during naloxone administration. Interview questions were composed and structured to explore how the opioid epidemic had affected law enforcement officers in northern NJ in response to interventions. Open-ended interview questions were used, and I provided some minor explanations during interviews to define terminology, specifically the conceptual construct of the street-level bureaucrat. The semi-structured interview guide helped guide conversation and kept me focused on participant responses. Interviews were conducted without interruption, flowed naturally, and involved minimal probing. This study's sample size consisted of seven law enforcement officers with varying police department roles and years of experience within northern NJ.

Setting

Interviews were conducted remotely via Zoom with law enforcement officers in a specific police station in northern NJ. I invited participants via a Zoom link with mutually agreed times and dates for interviews to be conducted. Participants were from various law enforcement agencies who performed their roles as law enforcement officers during overdose responses when unintentional chemical exposure occurred. The Walden University IRB approved the study (#06-27-22-0429156). Participants affirmed their

participation by sending me a confirmation email in response to invitations I sent to their personal email addresses. Informed consent replies were obtained from seven participants and saved prior to Zoom interviews. I reassured each participant at the start of interviews that their names and departments they represented would not be included or published. I reiterated participants could stop interviews at any time; all seven participants completed interviews. Participants was assigned a pseudonym for their own transcript using the NATO phonetic alphabet to prevent any possible identification. I randomly assigned pseudonyms chronologically based on the order in which participants volunteered, and referred to participants as Alfa, Bravo, Delta, Echo, Foxtrot, Golf, and Hotel.

Interviews were conducted between October 5, 2022 and January 13, 2023. Two of seven participants informed me before interviews started that they had requested permission from their department's Chief of Police, and permission to participate was received. These two participants wanted to ensure being involved in a voluntary study was permissible with their departments and did not affect operating procedures when discussing overdose scenarios.

Moustakas' phenomenological approach with thematic-based analyses using NVivo 12 software was used to investigate this RQ: What are lived experiences of law enforcement officers who have implemented naloxone administration protocols for suspected opioid overdoses and their actual or perceived unintentional scene-related chemical exposures? Chapter 4 included study results.

Demographics

Study participants were comprised of law enforcement officers with experience that ranged from 5 to 36 years. The study included seven law enforcement officers who volunteered, and all participants had responded to overdose scenarios where naloxone may have been administered and experienced an unintentional chemical/opioid exposure. All participants had been on active duty since June 1, 2013 in northern NJ with varied experiences involving opioid overdose responses (see Table 2).

To maintain the integrity and protection of participants, I have not included their rank, gender, or law enforcement agency in my reporting. Snowball recruitment was used with several departments to include officers, Chiefs of police, Captains, lieutenants, and Sergeants. All seven participants participated and completed interviews without conflict. To retain anonymity in the study, each participant was described as having less than or more than 15 years of law enforcement experience. Before starting the interview process, I provided a brief explanation of my background and the study's purpose, and explained that their experiences were private, and data would be in aggregate form only. There were no female officers who responded to the invitation to participate. Snowball sampling yielded only additional male officers.

I reviewed consent forms to ensure all participants were willing to participate and understood they had the right to withdraw for any reason, decline to answer any particular question, or exit the interview at any time. I asked participants before I started interviews if they had any questions about the interview process, and all seven participants had no questions.

Table 2

Participant Demographics

Participant NATO lettering	Description of participant
Alpha	Male officer with more than 15 years of experience who held multiple positions within the same law enforcement agency
Bravo	Male officer with less than 15 years of experience who held multiple positions with two law enforcement agencies
Delta	Male officer with less than 15 years of experience who held multiple positions with the same law enforcement agency
Echo	Male officer with less than 15 years of experience who held the same position with the same law enforcement agency
Foxtrot	Male officer with more than 15 years of experience and held the same position with the same law enforcement agency
Golf	Male officer with less than 15 years of experience who held the same position with the same law enforcement agency
Hotel	Male officer with less than 15 years experience who held multiple positions within the same law enforcement agency

Note. Alphabetical NATO lettering was applied, and sequential skips were purposeful.

Data Collection

Data collection involved one-on-one interviews with each participant; all seven were conducted via Zoom. All participants were currently employed with different municipal or county law enforcement agency in northern NJ. Once I received emails with the words “I consent” from participants, I responded with emails and scheduled Zoom calls with hyperlinks to join meetings. Interviews lasted between 21 to 38 minutes. After each interview, I listened to recordings, summarized key points of each recording, and transcribed significant comments. All participant interviews were transcribed using Zoom’s text transcription service. I used the Temi online transcription service to convert transcripts to MS Word documents and corrected any errors manually. I repeated the

same process for each participant. I did not encounter any problems during interviews that would have hindered data collection procedures.

Data Analysis

Before each interview, I informed each participant of the purpose the study. During interviews, I wrote down key terms and incorporated those terms as part of transcriptions. After interviewing each participant, I applied their NATO nomenclature to ensure data files remained separate and distinct in the event more detailed analyses were needed by participants.

One challenge I faced in qualitative data collection was the development of themes within each interview. Therefore, I listened to each recorded interview multiple times to ensure each interview and transcription was accurate. Listening to the recordings helped guide a better understanding of each participant's experience. Listening to the recordings multiple times helped frame a connection between the participants and the phenomenon. The written transcripts were then grouped into themes after looking for a connection between the participant's data.

To establish the themes distinctive to the research question, I reviewed each section of the transcript to identify words and themes with the interview and repeated this process for all participants. The participants provided a detailed explanation of the phenomenon of interest. All responses had similarities and distinct differences regarding their experiences during an overdose scenario.

Evidence of Trustworthiness

Gunawan (2015) noted that qualitative researchers had overlooked good narrations in their research description of their theory and process, particularly concerning data analysis. Trustworthiness has been separated into credibility, dependability, transferability, and confirmability. Credibility was established using member checking through email exchanges with each of the seven participants regarding their transcribed data to ensure I correctly captured his or her comments, thoughts, ideas, and opinions during the interview. Each participant confirmed the data was accurate, and there were no changes to the interview responses (see Appendix G).

Transferability provides a road map of how the study was performed to allow the readers and researchers to understand the process if the study is to be duplicated. Sundler et al. (2019) noted that transferability is not distinctly connected to any methodological concepts but may be the outcome of them. In qualitative research, transferability measures whether the results are robust and if the exploration adds new information to what is previously known. Transferability added to existing knowledge as it correlates to the topic of interest. All the interviews were recorded to ensure exact transcripts were available as a reference.

Dependability was essential for research to make the data available if another investigator needs to replicate the study. Participants must have been carefully chosen on the trust that participants had actual experiences and detailed insight into the phenomenon being investigated (Ramsook, 2018). Other researchers used the design to interpret the participants' recollections of their lived experiences objectively. In other words, the data

gathered was a transparent examination of the data collected and presented. I followed the same approach for each participant regarding the procedures and recruitment of law enforcement officers. Cope (2014) stated that dependability could be achieved when an additional clinician supports the conclusion pathway at each step of the investigation procedure. I duplicated the same process for each participant and validated the evolved codes.

Conformability was a process in which the investigator verified that the information from the research was accurate without personal opinion. Cope (2014) noted that the researcher established conformability by detailing how the outcomes and summarizations were acknowledged and illustrating that the conclusions were derived without deviation from the findings. The process of conformability ensured the researcher had documented the exact experiences the researcher had observed and recorded. I created the interview guide to ensure I asked each participant the same questions and had minimal input to the responses except for clarifying the information the participant provided. I informed each participant that they would receive an email summary of the recorded data.

Results

This study was developed to investigate law enforcement officers' lived experiences in response to an overdose scenario. The interview structure was outlined to gather basic information regarding their role as law enforcement officers, years of experience, and their role within their law enforcement agency. The questions were structured to include their interpretation of what a street-level bureaucrat means, their

role during an overdose scenario, and what happened during the overdose scenario. The goal was to gain insight into law enforcement officers' lived experiences when they are thrust into the role of a life-saving effort as a first responder. Law enforcement officers know they are needed, their role is perceived as essential and important to the communities in which they serve.

The data analyses illuminated four main themes: (a) lived experience, (b) medical intervention, (c) war on drugs, and (d) safeguards. Additionally, two subthemes emerged specific to themes 2, 3: (a) restrictions to perform role, and (b) support by the community.

Theme 1: Personal Experience

Each participants' perceptions regarding overdose were varied based on what they personally experienced. Several officers described the unintentional chemical exposure to be a strange or tingly feeling that reminded them of a childhood experience. Alpha stated:

> I had a tingly feeling, itchy around the torso and arm. Strange and very hard to describe. The best way to describe is when I was young, playing football on the lawn and rolling around on the grass. A weird itchiness brought me back to an experience when I was about 10 years old.

Bravo stated,

> I felt itchy on the top of my hands, not my legs or chest but my hands. I know this sounds weird but it reminds me rolling around on the grass and then getting up.

Delta stated,

> I had some residue on my cell phone and after I left the scene and started to experience a severe migraine to the point, where I threw up and then fell asleep.

Foxtrot stated,

> I opened the door to the residence and it created flow from the inside to the outside of the house. I experienced some itchiness, coughing, and breathing short, not shortness of breath but more coughing and sneezing.

Theme 2: Medical Intervention

Participants required some medical intervention based on what they experienced during an overdose response recovery effort. Three subthemes emerged specific to themes 2, 3 and 4: (a) restrictions to perform role, (b) support by community, and (c) impact on the war on drugs.

Subtheme 1: Restrictions to Perform their Role

Participants encountered some resistance when responding to an overdose scenario. Hotel stated:

> I arrived on scene after a cardiac arrest call came in. As I went to the basement, the individual was sitting on the floor and knew it was not cardiac arrest. The individual could not answer questions and the female on scene said the individual was a drug user and would not say what he was using. I looked around to see if the individual was possibly hiding something. I looked in the trashcan in the middle of the room and just as I starting looking in the garbage a flume of something came out of the trash can. Just as the flume of something came out, I inhaled at the very same moment. There was not anything blatantly obvious. I do not know if it was remnants or something, and then you know they try to hide things.

Golf stated:

> I began searching the immediate area, at which point I found a trash bin, which when I looked inside, I found drug paraphernalia. I collected the evidence and headed to my vehicle. When I drove back to headquarters, I started experiencing fatigue, then my respiratory began to be affected, and I started profusely coughing.

Several law enforcement officers experienced an altered mental status that could have hindered their ability to perform their job. This encounter occurred when on the scene of an overdose scenario where they were exposed to an unknown chemical that induced an altered mental status.

Echo stated:

> I was on a vehicle stop, and there was around a thousand fentanyl bags or doses. I noticed some substance on the floorboards in the vehicle. As I removed the packages, a powder got near my face. My heart rate went up to 200. It did not feel like blood was getting to my head and I was losing consciousness.

The law enforcement officers on the scene experienced unintentional chemical exposure that hindered their ability to perform their role. In the scenarios mentioned above, all the law enforcement officers had a partner on the scene that helped them overcome the exposure and help them to safety.

Subtheme 2: Support by the Community

Law enforcement officers expressed their thoughts if they felt the community they served supports them in their role. Alpha revealed:

> I do not think they were a big fan of people being arrested for marijuana. As far as it relates to heroin or opiates, I think people see the dangers involved in overdoses and with the fentanyl, I think you see a lot of cooperation in that way.

Echo said,

> I would say yes, but there is obviously mixed feelings, but in my honest opinion that there is a positive perception towards law enforcement.

Golf stated:

> The community recognizes our effort when it comes to put an end, I should say, on people using drugs and people selling drugs. The way we do it is try to be proactive, by conducting multiple motor vehicle stops in order to investigate possible drugs, or people that are using drugs and may be driving under the influence.

Foxtrot mentioned:

> Well, number one you're trying to get the drugs off the streets and number two officers are in the school trying to educate the children about the effects of drugs, I mean the community is positive about how and what we are doing.

Law enforcement officers expressed that the community supported their role and the challenge they faced is drugs are everywhere and their protection was just as important as the community in which they served and protected.

Foxtrot stated,

> drugs are everywhere, you cannot obviously monitor everybody but that is what you face as a law enforcement officer and what's around the corner.

Golf said,

> unfortunately, a lot of younger people fall into the trap, I know kids that have overdosed and I try to be a positive influence on the community not to do drugs or make bad decisions.

Theme 3: War on Drugs

Participants were asked if they felt their role as a law enforcement officer had a positive impact on the war on drugs. The question was asked of all the participants. Echo stated,

> there were many other aspects to drug involvement than just the drugs themselves.

While Foxtrot stated,

> number one is to try and get the drugs off the street, there are DARE programs in the schools, and you have to start to educate the dangers of drugs from young to old.

Golf said:

> I'm not quite sure that there is an impact, a positive impact, only because I truly believe that the people that want to expose themselves to drugs, do not take a moment to think you know, I'm going get in trouble or I am going put myself in a bad situation, or I may overdose.

Delta stated,

> even if you’re one person, there is some impact, but you don't know if it’s actually seen or heard.

Law enforcement officers were well respected within the community they served, and all the participants in the study felt the community supported them in their role in the war on drugs. Some law enforcement officers thought they were making some impact in their community but realized there was more to be done in the war on drugs.

Theme 4: Safeguards

Law enforcement officers were often the first responders on an overdose scenario and I asked all of them if they felt there were enough safeguards to protect them during an overdose recovery effort. Alpha stated:

> You don't know you're going into an overdose sometimes if it is suspected overdose, you throw your mask on, the N95 on and your gloves, and then that is it, and the next thing you know there is heroin and it is laced with fentanyl and, then there is an exposure.

Bravo said:

> Yes and no. I mean if you like you open up a trunk or whatever, and Fentanyl hits you right in the face. It is hard to do all the gear while dealing with someone with, if they're non-compliant when they wake up.

Delta stated:

> The sheriff is all about safety. We have, you know, gloves, I will double glove, or triple glove if I have to. We have Tyvex® suits and we have masks. The potential exposure is still there, but the protection should be universal.

Golf stated:

> No. there is definitely not, especially after the experience I had. People need to understand that when we respond to an overdose call, you are not you. Everything is so quick and so fast, and the adrenaline rush that you have because you are trying to save a life. Unfortunately, you can be in trouble very easily, even if you just, come in contact with fentanyl.

Participants said there could be better safeguards when responding to overdose scenarios because of unknown encounters with chemicals that could be synthetic opiates, such as fentanyl.

Summary and Conclusions

This phenomenological study yielded evidence that suggested unintentional chemical exposure had affected certain law enforcement officers who served our communities. All participants experienced unintentional chemical exposure during life-saving scenarios. They said they never forgot feelings they experienced when exposed to substances that caused some unusual experiences.

There needed to be better information and training disseminated to law enforcement agencies on dangers of fentanyl exposure in order to address speculation that was used as propaganda by the media showing law enforcement officers becoming incapacitated on duty. In Chapter 5, I reviewed study results, study limitations, and suggestions for follow-up research to lead to social change within the municipal and county law enforcement agencies in northern NJ.

Chapter 5: Discussion, Conclusions, and Recommendations

This phenomenological study involved addressing law enforcement officers' perceptions of potential problems when responding to and on the scene of overdose scenarios. Above all, law enforcement officers feel a sense of duty when performing their everyday roles. Law enforcement officers face daily challenges, but ultimately they try to remain safe and protect the communities they serve. Seven active law enforcement officers participated in in-depth semi-structured interviews using Zoom to determine their individual lived experiences. All participants experienced unintentional chemical exposure during an overdose response.

To date, law enforcement officer reports of unintentional chemical exposures have been largely anecdotal and reported in sources with limited research. In this chapter, a detailed discussion of outcomes of the research performed is presented using comparative peer-reviewed literature with further discussions using street-level bureaucracy as an interpretive lens. I also address any study limitations, recommendations for future research, potential suggestions for positive social change, and concluding statements.

Interpretations of Findings

As outlined in Chapter 4, interviews led to four main themes: personal experience, medical intervention, war on drugs, and safeguards. Additionally, two subthemes emerged: restrictions to performing roles and support by the community. Theme 2 was

about whether participants had to seek medical intervention after overdose response scenarios.

All participants were able to perform their roles but had some adverse events after unintentional chemical exposure.

Participants had varied experiences and backgrounds in the field of law enforcement. There are challenges associated with current perceptions of law enforcement officer roles in the U.S. Six identified themes were applied to experiences of seven law enforcement officers who have responded to overdoses and deployed naloxone. Participants were trained to use naloxone and carry it with them during their shifts.

When law enforcement officers respond to suspected overdoses, they often receive calls about unresponsive individuals. Individuals at locations of overdoses may not be forthcoming about what happened for fear of getting into trouble. Law enforcement officers can become vulnerable when assessing individuals and deciding whether naloxone should be administered or not. They may search to see what individuals may have ingested. Law enforcement officers usually respond with multiple officers as a precaution to ensure if one officer becomes disabled, there is another officer to assist on the scene.

Personal Experience

All participants had experiences that involved a tingling feeling, severe migraine, disorientation, increased anxiety, coughing, sneezing, rapid breathing, increased heart rate, or disorientation. Events that led up to these experiences involved being on the scene

of overdoses in which individuals are taken to the hospital for medical treatment. Deployment of naloxone is decided by law enforcement officers after they have assessed and have asked individuals on scene what whoever has overdosed may have ingested. Those individuals are not always forthcoming for fear of getting into trouble. Participants said they made a difference when they carried naloxone and would continue to use every available resource to keep themselves safe as well as individuals they encounter during overdose scenarios.

The street-level bureaucracy theory allowed law enforcement officers' to protect and serve the public in their local communities in northern NJ. Attaway et al. (2021) performed a qualitative study to investigate awareness and concern of fentanyl risk by consulting with 23 law enforcement agencies and officers from five varied law enforcement agencies in the United States.

Attaway et al. (2021) discovered over one-third of law enforcement officers are aware of somebody in their organization overdosing. Attaway et al. (2021) noted officers indicated they had been exposed to fentanyl themselves and experienced no indications of opioid overdose. Still, those same officers were apprehensive about being unprotected while going to a scene and potentially overdosing. Attaway et al. (2021) concluded almost all law enforcement officers acknowledged fentanyl is a significant job-related danger with potentially lethal consequences, regardless of no actual confirmation of an officer sustaining an overdose after coming across fentanyl on duty. Creating proper safety protocols could minimize unintentional chemical exposure that have shown adverse events to street-level bureaucrats.

Medical Intervention

Some participants did require medical attention after encounters during overdose response recovery efforts. There are conflicting stories regarding potential fentanyl exposure and outcomes of exposure. del Pozo et al. (2021) said a body camera recording from the San Diego Sheriff showed a deputy unexpectedly dropping after field exposure to fentanyl, and claimed the deputy only lived because four doses of naloxone were administered. Unintentional overdose or other symptomatic incidences due to touching or inhaling fentanyl remain debatable, and information about the adverse events of fentanyl exposure should be concise and accurate. del Pozo (2021) noted misinformation could lead to unwarranted measures in response to scenes where fentanyl is rumored, reducing time during overdose responses. This prolongs community-wide stigma against persons who use illegal drugs by improperly branding them as toxiferous and hazardous to be around (del Pozo et al., 2021). Unintentional fentanyl exposure is still a risk to law enforcement officers; therefore, recognizing, educating, and acknowledging potential adverse events is essential in order to create more consistent safety protocols. According to Attaway et al. (2021), one officer described another officer's unintentional chemical exposure as follows: "the officer breathed in or touched fentanyl, felt light-headed, and primarily started to overdose; his colleague watched the officer and said something was not good and we needed medical attention for him" (Attaway, 2021, p. 3).

The events during unintentional fentanyl exposure may be unclear or not well established, but the medical intervention component is essential for law enforcement officers and the community they serve. Several law enforcement agencies in the United

States seek proper guidance on the safety protocols for fentanyl exposure. Attaway et al. (2021) noted that it is not hard to assume why officers would encounter anxiety or agitation on the scene if they feel fentanyl is nearby. To prevent officers from experiencing cognitive risks that could thwart them from efficiently performing an opioid recovery effort, there needs to be a priority on communicating factual material and reliable guidance (Attaway et al., 2021). Documenting an adverse event with law enforcement officers could be housed in a database with an agency that will allow that as a resource to communicate with law enforcement agencies globally.

Investigation on street-level bureaucrats has yet to examine how these specialists perform in dangerous situations that put them in jeopardy (Alcadipani et al., 2020). The ability of street-level bureaucrats to perform under pressure in situations and potentially save a life is challenging to capture. The ability to capture the lived experiences of law enforcement officers as street-level bureaucrats is challenging due to the accessibility to those individuals as well as capturing an event that may been seen as just part of their job when there is little known about the true risks of encountering fentanyl in an overdose scenario.

Safeguards

There are still minimal perceptions of street-level bureaucrats using their unrehearsed creative abilities during their regular responsibility to interpret developing challenges (Masood & Nisar, 2021). The safeguards for street-level bureaucrats, specifically law enforcement officers as first responders, still need to be clarified. del Pozo et al. (2021) stated that assumed overdoses have been derived as representations of

the delirious placebo effect, where erroneous views about an illegal drug initiate contradicting bodily results upon exposure. The law enforcement community is looking to protect their first responders by ensuring they follow safeguards proposed by the department they represent. Persaud et al. (2021) noted four main concerns in contrast with expert opinions. First, 32.6% believed hand disinfectant is safe to use after fentanyl exposure. Hand sanitizer could, in actuality, spread the fentanyl and may increase the absorption by first responders. Second, 38.5% of first responders could not determine nitrile as the suitable glove category, placing a threat of dermal susceptibility to the study group. Third, misinterpretation and misleading information may have led to 79.7% of replies confirming that transiently touching fentanyl is lethal.

Persaud et al. (2021) has revealed brief touching is not fatal and individuals should wash the affected and unprotected areas with soap and water. Lastly, it was noted that law enforcement did conclude they are not supplied with personal protective equipment (PPE) to address fentanyl exposure, while firefighters and emergency medical personnel are properly protected. In summary, disseminating safeguards may not be consistent within each law enforcement agency, but streamlining the safety protocols during an overdose response scenario may minimize any potential exposure to fentanyl while on an overdose response. Protecting the law enforcement officer could minimize misconceptions about fentanyl absorption with proper training and consistent communications from local, state, and federal agencies.

Applying the Conceptual Framework to Findings

I used Lipsky's street-level bureaucracy: dilemmas of the individual in public service. The goal was to explore law enforcement officers' lived experiences regarding their perceptions of potential problems when responding to and while on the scene of an overdose scenario when naloxone may need to be administered. According to Lipsky (2010):

> Street-level bureaucrats serve the public directly with citizens in their role as law enforcement officers. Street-level bureaucracy states that public servants (law enforcement officers) play an intricate societal role. Street-level bureaucrats work with a vast scope of unpredictability because of the population's intricacy. In law enforcement, response efforts, these street-level bureaucrats must expand practices to identify and acknowledge varied scenarios, especially those that endanger their control or pose a threat. Street-level bureaucrats are required to respond when an unresponsive individual is reported yet chastised for their failure to implement receptive and suitable assistance. (pp. xi-xvii)

In the context of what street-level bureaucrats endure during their role as noted by Camillo (2017), law enforcement officers work experiences are affected by common conditions:

1. Minimal availability of materials
2. Presence of direct tangible and/or psychological challenges
3. Unclear, contrasting or unbreakable task probability
4. Non-voluntary audiences

5. Audiences who do not serve as the principal source group
6. Limited control over audience representation, yet elevated criteria and challenges regarding that performance

Therefore, as street-level bureaucrats, law enforcement officers perform their duties disseminated by the law enforcement agency they represent and the community they serve. Law enforcement officers respond to the public, decide the best course of action based on any scenario and do so to the best of their ability.

Participants gave their perspectives during an overdose response scenario experience when encountering an unintentional chemical exposure to fentanyl. Each law enforcement officer understands their role regardless of the scenario they are thrust into that could cause considerable risk to their life. Street-level bureaucrats may have obstacles with the public they serve, but they perform their role even if put in harm's way to help an unresponsive individual. For law enforcement officers, the evident restraint is one of time; time to gather, and time to act. The dilemma of making a rapid determination in dangerous situations is a significant cornerstone of job-related traditionalism in law enforcement modus operandi (Lipsky, 2010, p. 30).

Gathering law enforcement officers' experiences led to new insight into the pivotal role of the street-level bureaucrat in the local communities they serve. The ability of law enforcement officers to make a decision based on an unknown scenario requires instinct few people know due to the unknown circumstances of what individuals believe a role of law enforcement is based. Camillo (2017) stated that with few allowances, street-level bureaucrats could not set aside or abandon individuals, even belligerent deficient

individuals, because government employees are required to assist all residents. The ultimate goal is to raise awareness of the dangers of unintentional fentanyl exposure. Law enforcement officers' insight into their lived experiences may yield more safety protocols that will change how they respond to the public.

Limitations

Study limitations can exist in any qualitative study a researcher or student performs. Conversely, emphasizing the limitations the study underwent should not ignore the foundational and central details of the study's research (Pathirange et al., 2021). There were study limitations that must be communicated. First is the number of participants. There were only seven law enforcement officers. This study is unique because law enforcement officers discuss their experiences during an overdose response scenario in which there was unintentional exposure to fentanyl. Secondly, all the participants were male law enforcement officers. The snowball sampling method yielded only male law enforcement officers who met the criteria for inclusion. Race is not a parameter of this study, and disclosing the participants' race could be an identifier of the participants.

In all qualitative studies, the compilation of data relies on the recollections of the participants; accuracy, honesty, and the ability of those participants to share their personal experiences. I addressed these challenges by allowing each participant to answer the questions freely without making minimal statements or personal experiences. For example, all the participants needed clarification on what street-level bureaucrat meant, so I briefly defined someone who serves the public in some capacity. Each participant answered the questions freely and without any hesitation.

Lastly, a final study limitation is the potential for research bias. As the sole investigator, data collector, and data researcher, I developed a presumption prior to my data collection activities. Perhaps the reason for the presumption was the role I currently serve as a medicolegal death investigator; I am faced with death daily and multiple opioid overdoses. However, my passion for protecting first responders allowed me to remove my potential bias and look at the data through the lens of a law enforcement officer. By performing this research, it is essential to remove bias by being aware of the goal of the research and not letting your experiences cloud your judgment.

Delimitations

The delimitations I set as the researcher include focusing on a particular group of street-level bureaucrats, specifically law enforcement officers, and their role in the community they serve. Delimitations are, in summary, the limitations purposively set by the researcher. They are relative to the views the researchers determine to set as limits or confines of their job so that the inquiry's intentions and motives do not become unattainable (Theofanidis & Fountouki, 2019). I focused on the study's research question, which was law enforcement officers lived experiences during an overdose scenario and the problems they may encounter. The research included other information such as the perspective of community support, effectiveness in the war on drugs, and safeguards to protect law enforcement officers. Theofanidis et al. (2019) noted delimitations are primarily accountable for the study's theoretical framework, intentions, research topics, factors under consideration and study sample. Therefore, by defining the theoretical

framework, objectives of the study, research question, and sampling strategy will allow for full disclosure and minimizing delimitations.

I chose a phenomenological approach with Moustakas as a guide because of the focus on a lived experience in a particular situation. The research question was based on law enforcement officers ability to arrive on the scene of an individual who may have overdosed and capture what they endured during the life saving effort. I was able to use purposeful sampling coupled with snowball sampling to gather participants who may have knowledge of another law enforcement officer who may have encountered a problem. Snowball sampling was essential to expand the reach through various law enforcement agencies superior officers without divulging any information about the study, except looking for voluntary law enforcement officers' perception of using naloxone in overdose scenarios. There was no direct contact with potential law enforcement officers regarding the study until a formal consent to participate in a research study was received. The sample size was small, but considering the circumstances surrounding unique scenario, the ability to capture viable data with a small sample was very successful. The sampling technique was chosen due to time constraints, accessibility to law enforcement officers in a designated area, and minimal knowledge of such exposure is still in its infancy.

Recommendations for Future Studies

The study results focused on a small sample size of law enforcement officers from Northern NJ. However, the research can be more expansive to include a larger area in NJ to yield a greater sample size. Future studies could expand the recruitment process to

firefighters, emergency medical services, and hospital staff, including nurses and physicians. The awareness of law enforcement officers could lead to a change in law enforcement protocols at the federal, state, county, and municipal levels. In NJ, the jurisdictional coverage may vary from town to town with small geographic areas. For instance, NJ State Police may cover two towns in a small area, and a mile away could be a municipal law enforcement agency. I cannot comment on sharing safety protocols with any law enforcement agency but streamlining precautions for suspected overdose scenarios may lead to a lower incidence of fentanyl exposure. In summary, creating more awareness of the potential adverse effects of fentanyl exposure may lead to increased protocols and safety measures. Proper documentation of any adverse event during an overdose response could minimize misinformation.

Implications

This study can help create positive social change by creating more concrete awareness of law enforcement officers' potential fentanyl exposure by developing and instituting more safety protocols. Each law enforcement officer expressed their personal experiences and inevitably had some adverse event ranging from disorientation to coughing and shortness of breath. The potential for a lethal dose of fentanyl to be absorbed in the ambient air or transdermal is still anecdotal, but having safety protocols could minimize a potentially lethal outcome for a workforce that protects and serves the public as a street-level bureaucrat.

Alleviating any misconceptions about fentanyl exposure during an overdose response would allow law enforcement agencies to have increased safety protocols in

place and have continuing educational training on what to do if unintentional fentanyl exposure while on the scene of an overdose. The questions asked during the interviews allowed law enforcement officers to disclose their experience while creating more insight into what occurs during an overdose scenario where naloxone may or may not need to be administered.

Conclusion

This phenomenological study captured the lived experiences of law enforcement officers during an overdose response in their role as street-level bureaucrats. Investigation on street-level bureaucrats has also not uncovered how these specialists act in crisis scenarios that put them in harm's way (Alcapandi et al., 2020). More research is needed to uncover what law enforcement officers endure as they serve their community in multiple capacities. In order to contribute to street-level bureaucrat research exploring actions to emergency scenarios in unnatural surroundings of law enforcement officers, a specific type of street-level bureaucrats apply large measures of control (Alcapandi et al., 2020). As it relates to this study, application of safety protocols still needs to be consistently implemented. Law enforcement officers are essential as first responders to the communities they serve.

References

Adom, D., Hussein, E. K., & Agyem, J. A. (2018). Theoretical and conceptual framework: Mandatory ingredients of quality research. *International Journal of Scientific Research*, *7*(1), 438-441. https://shyamguragain.com.np/theoreticalconceptual-framework/

Alcadipani, R., Cabral, S., Fernandes, A., & Lotta, G. (2020). Street-level bureaucrats under COVID-19: Police officers' responses in constrained settings. *Administrative Theory & Praxis*, *42*(3), 394–403. https://doi.org/10.1080/10841806.2020.1771906

Armenian, P., Vo, K. T., Barr-Walker, J., & Lynch, K. L. (2018). Fentanyl, fentanyl analogs and novel synthetic opioids: A comprehensive review. *Neuropharmacology*, *134*, 121–132. https://doi:10.1016/j.neuropharm.2017.10.016

Attaway, P. R., Smiley-McDonald, H. M., Davidson, P. J., & Kral, A. H. (2021). Perceived occupational risk of fentanyl exposure among law enforcement. *International Journal of Drug Policy, 95*, 103-303. https://doi.org/10.1016/j.drugpo.2021.103303

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

013-9814-y

Baumann, M. H., & Pasternak, G. W. (2017). Novel synthetic opioids and overdose deaths: Tip of the iceberg? *Neuropsychopharmacology, 43*(1), 216–217. https://doi.org/10.1038/npp.2017.211

Bell, A., Bennett, A. S., Jones, T. S., Doe-Simkins, M., & Williams, L. D. (2018). Amount of naloxone used to reverse opioid overdoses outside of medical practice in a city with increasing illicitly manufactured fentanyl in illicit drug supply. *Substance Abuse*, *40*(1), 52–55. https://doi.org/10.1080/08897077.2018.1449053

Camillo, C. A. (2017). Street-level bureaucracy. *Global Encyclopedia of Public Administration, Public Policy, and Governance,* 1–5. https://doi.org/10.1007/978-3-319-31816-5_654-1

Camp, W. G. (2001). Formulating and evaluating theoretical frameworks for career and technical education research. *Journal of Vocational Education Research, 26*(1), 4–25. https://doi.org/10.5328/jver26.1.4

Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum, 41*(5), 545–547. https://doi.org/10.1188/14.onf.545-547

Centers for Disease Control and Prevention. (2015). *Increases in fentanyl drug confiscations and fentanyl-related overdose fatalities.* https://emergency.cdc.gov/han/han00384.asp

Centers for Disease Control and Prevention. (2017). Fentanyl. https://www.cdc.gov/drugoverdose/opioids/fentanyl.html

Christie, C., Baker, C., Cooper, R., Kennedy, P. J., Madras, B., & Bondi, P. (2017). The President's commission on combating drug addiction and the opioid crisis. *Washington, DC, US Government Printing Office, Nov, 1*. https://doi.org/10.1002/cpt.1050

Chiu, S. K., Hornsby-Myers, J. L., de Perio, M. A., Snawder, J. E., Wiegand, D. M., Trout, D., & Howard, J. (2019). Health effects from unintentional occupational exposure to opioids among law enforcement officers: Two case investigations. *American Journal of Industrial Medicine*, *62*(5), 439-447. https://doi.org/10.1002/ajim.22967

Chiu, S., Hornsby-Myers, J., & Trout, D. (2018). Evaluation of occupational exposures to illicit drugs. *National Institute for Occupational Safety and Health, Health Hazard Evaluation Report 2018-0118-3331*. https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0083-3332.pdf

Compton, W. M., Boyle, M., & Wargo, E. (2015). Prescription opioid abuse: Problems and responses. *Preventive Medicine, 80,* 5–9. https://doi.org/10.1016/j.ypmed.2015.04.003

Cobaugh, D. J., Gainor, C., Gaston, C. L., Kwong, T. C., Magnani, B., McPherson, M. L., Painter, J. T., & Krenzelok, E. P. (2014). The opioid abuse and misuse epidemic: implications for pharmacists in hospitals and health systems. *American Journal of Health-System Pharmacy*, *71*(18), 1539–1554. https://doi.org/10.2146/ajhp140157

Cope, D. G. (2013). Methods and meanings: Credibility and trustworthiness of

qualitative research. *Oncology Nursing Forum*, *41*(1), 89–91. https://doi.org/10.1188/14.onf.89-91

Creswell, J. W. (2009). *Research design: Qualitative & quantitative approaches*. SAGE Publications.

Cumming, A. (2001). ESL/EFL instructors' practices for writing assessment: Specific purposes or general purposes? *Language Testing*, *18*(2), 207-224. https://doi.org/10.1177/026553220101800206

Darke, S., & Hall, W. (1997). The distribution of naloxone to heroin users. *Addiction*, *92*(9), 1195–1200. https://doi:10.1111/j.1360-0443.1997.tb03681.x

del Pozo, B., Sightes, E., Kang, S., Goulka, J., Ray, B., & Beletsky, L. A. (2021). Can touch this: training to correct police officer beliefs about overdose from incidental contact with fentanyl. *Health & Justice*, *9*(1). https://doi.org/10.1186/s40352-021-00163-5

Dismukes, L. C. (2018). How did we get here? Heroin and fentanyl trafficking trends: A law enforcement perspective. *North Carolina Medical Journal*, *79*(3), 181-184. https://doi.org/10.18043/ncm.79.3.181

Doleac, J. L., & Mukherjee, A. (2018). The moral hazard of lifesaving innovations: Naloxone access, opioid abuse, and crime. *SSRN Electronic Journal*. https://doi:10.2139/ssrn.3135264

Drug Enforcement Administration (a). (2016). *DEA warning to police and public: Fentanyl exposure kills.* https://www.dea.gov/sites/default/files/divisions/hq/2016/hq092216_attach.pdf

Drug Enforcement Administration (b). (2016). *Fentanyl* [Press Release]. https://www.deadiversion.usdoj.gov/

Drug Enforcement Administration (c). (2016, September 22). *DEA issues carfentanil warning to police and public*. https://www.dea.gov/divisions

Drug Enforcement Agency (n.d.) *Fentanyl*. https://www.dea.gov/factsheets/fentanyl

Dudley, L. S., Konomos, D., Robbins, V., Qiu, L., Bauter, R., & Merlin, M. A. (2017). Opioid crisis at the Jersey Shore—special report. *Journal of Public Health, 40*(2), e112–e117. https://doi:10.1093/pubmed/fdx106

Fairbairn, N., Coffin, P. O., & Walley, A. Y. (2017). Naloxone for heroin, prescription opioid, and illicitly made fentanyl overdoses: Challenges and innovations responding to a dynamic epidemic. *International Journal of Drug Policy*, *46*, 172–179. https://doi:10.1016/j.drugpo.2017.06.005

Faul, M., Lurie, P., Kinsman, J. M., Dailey, M. W., Crabaugh, C., & Sasser, S. M. (2017). Multiple naloxone administrations among emergency medical service providers is increasing. *Prehospital Emergency Care*, *21*(4), 411–419. https://doi.org/10.1080/10903127.2017.1315203

Fisher, R., O'Donnell, D., Ray, B., & Rusyniak, D. (2016). Police officers can safely and effectively administer intranasal naloxone. *Prehospital Emergency Care, 20*(6), 675– 680. https://doi:10.1080/10903127.2016.1182605

Frank, R. G., & Pollack, H. A. (2017). Addressing the fentanyl threat to public health. *New England Journal of Medicine*, *376*(7), 605–607. https://doi:10.1056/nejmp1615145

Giglio, R.E., Li, G. & DiMaggio, C.J. (2015). Effectiveness of bystander naloxone administration and overdose education programs: a meta-analysis. *Injury Epidemiology*, *2*(10). .https://doi.org/10.1186/s40621-015-0041-8

Green, T. C., Zaller, N., Palacios, W. R., Bowman, S. E., Ray, M., Heimer, R., & Case, P. (2013). Law enforcement attitudes toward overdose prevention and response. *Drug and Alcohol Dependence*, *133*(2), 677–684. https://doi.org/10.1016/j.drugalcdep.2013.08.018

Guest, G., MacQueen, K., & Namey, E. (2012). *Introduction to thematic analysis.* Sage.

Gunawan, J. (2015). Ensuring trustworthiness in qualitative research. *Belitung Nursing Journal, 1*(1), 10–11. https://doi.org/10.33546/bnj.4

Hamilton, L., Davis, C. S., Kravitz-Wirtz, N., Ponicki, W., & Cerdá, M. (2021). Good Samaritan laws and overdose mortality in the United States in the fentanyl era. *International Journal of Drug Policy*, *97*, 103294. https://doi:10.1016/j.drugpo.2021.103294

Harm Reduction Coalition. (2016). What is an overdose? http://harmreduction.org/issues/overdose-prevention/overview/overdosebasics/what-is-an-overdose/

Harry, B., & Lipsky, M. (2014). Qualitative research on special education teacher preparation. In M. McCray, T. Brownell, & B. Lignugaris Kraft (Eds.), *Handbook of research on special education teacher preparation* (pp. 445-460). Routledge.

Hedegaard, H., Miniño, A. M., & Warner, M. (2020). Drug overdose deaths in the United States, 1999-2018. https://www.cdc.gov/nchs/data/databriefs/db329-h.pdf

Herman, P. A., Brenner, D. S., Dandorf, S., Kemp, S., Kroll, B., Trebach, J., & Stolbach, A. I. (2020). Media Reports of Unintentional Opioid Exposure of Public Safety First Responders in North America. *Journal of Medical Toxicology*, *16*(2), 112-115. https://doi:10.1007/s13181-020-00762-y

Jorgensen, C. (2018). *Badges and bongs: Police officers' attitudes toward drugs.* SAGE Open. https://doi.org/10.1177/2158244018805357

Kariisa, M., Scholl, L., Wilson, N., Seth, P., & Hoots, B. (2019). Drug overdose deaths involving cocaine and psychostimulants with abuse potential - United States, 2003-2017. *Morbidity and Mortality Weekly Report*, *68*(17), 388–395. https://doi.org/10.15585/mmwr.mm6817a3

Kavanaugh, P. R. (2020). Narcan as biomedical panic: The war on overdose and the harms of harm reduction. *Theoretical Criminology*. https://doi.org/10.1177/1362480620964779

Kerensky, T., & Walley, A. Y. (2017). Opioid overdose prevention and naloxone rescue kits: what we know and what we don't know. *Addiction Science & Clinical Practice*, *12*(1). https://doi.org/10.1186/s13722-016-0068-3

Kim, D., Irwin, K. S., & Khoshnood, K. (2009). Expanded access to naloxone: Options for critical response to the epidemic of opioid overdose mortality. *American Journal of Public Health*, *99*(3), 402–407. https://doi:10.2105/ajph.2008.136937

Kitch, B. B., & Portela, R. C. (2016). Effective Use of Naloxone by Law Enforcement in Response to Multiple Opioid Overdoses. *Prehospital Emergency Care*, *20*(2), 226–229. https://doi.org/10.3109/10903127.2015.1076097

Kulbarsh, P. (2016, September 30). DEA warning to law enforcement: Fentanyl and carfentanil exposure kills. https://www.officer.com/investigations/article/12263320/dea-warning-to-law-enforcement-fentanyl-and-carfentanil-exposure-kills

Le, A. D., & Alzghari, S. K. (2019). Systematic review of the clinical consequences of butyrfentanyl and corresponding analogues. *Interdisciplinary Toxicology*, *12*(2), 83–88.https://doi.org/10.2478/intox-2019-0009

Lipsky, M. (2010). *Street-Level bureaucracy: Dilemmas of the individual in public services 30th anniv.* Russell Sage Foundation. https://doi.org/10.1177/003232928001000113

Lozier, M. J., Boyd, M., Stanley, C., Ogilvie, L., King, E., Martin, C., & Lewis, L. (2015). Acetyl fentanyl, a novel fentanyl analog, causes 14 overdose deaths in Rhode Island, March-May 2013. *Journal of Medical Toxicology, 11*(2), 208–217. https://doi.org/10.1007/s13181-015-0477-9

Lurigio, A. J., Andrus, J., & Scott, C. K. (2018). The opioid epidemic and the role of law enforcement officers in saving lives. *Victims & Offenders*, *13*(8), 1055-1076. https://doi.org/10.1080/15564886.2018.1514552

Lynch, M. J., Suyama, J., & Guyette, F. X. (2018). Scene safety and force protection in the era of ultra-potent opioids. *Prehospital Emergency Care*, *22*(2), 157-162. https://doi.org/10.1080/10903127.2017.1367446

Masood, A., & Nisar, M. A. (2021). Repairing the state: policy repair in the frontline bureaucracy. *Public Administration Review, 82*(2), 256–268. Portico. https://doi.org/10.1111/puar.13414

Merriam, S. B. (2009) *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Morgan, J., & Jones, A. L. (2018). The role of naloxone in the opioid crisis. *Toxicology Communications*, *2*(1), 15-18. https://doi.org/10.1080/24734306.2018.1458464

Moss, M. J., Warrick, B. J., Nelson, L. S., McKay, C. A., Dubé, P. A., Gosselin, S., ... & Stolbach, A. I. (2018). ACMT and AACT position statement: preventing occupational fentanyl and fentanyl analog exposure to emergency responders. *Clinical Toxicology*, *56*(4), 297-300. https://doi.org/10.1080/15563650.2017.1373782

Moustakas, C. (1990). *Heuristic Research: Design, methodology and applications.* Sage Publications, Inc.

Moustakas, C. (1994). *Phenomenological research methods*. SAGE Publications. https://dx.doi.org/10.4135/9781412995658

National Conference of State Legislatures. (2019). Drug overdose immunity and Good Samaritan Laws. http://www.ncsl.org/research/ civil-and-criminal-justice/drug-overdose-immunity-good-samaritan-laws.aspx

National Institute on Drug Abuse. (2021). *Overdose death rates*. National Institute on Drug Abuse. https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates.

National Institute for Occupational Safety and Health. (2016). *Fentanyl: Preventing occupational exposure to emergency responders.* https://www.cdc.gov/niosh/topics/fentanyl/risk.html.

NCI dictionary of Cancer TERMS. (n.d.). Morphine sulfate. https://www.cancer.gov/publications/dictionaries/cancer-terms/def/morphine-sulfate

NJ Civil Service Commission. (2005, August 20). Police officer: Job specification. Retrieved April 28, 2020, from https://info.csc.state.nj.us/jobspec/02728.htm

Pathiranage, Y. L., Jayatilake, L. V. K., & Abeysekera, R. (2021). Exploring strategies to establish an effective organizational culture to enhance corporate performance: a concept paper. *Wayamba Journal of Management, 12*(2), 189. https://doi.org/10.4038/wjm.v12i2.7537

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage Publications.

Persaud, E., & Jennings, C. R. (2019). Pilot study on risk perceptions and knowledge of fentanyl exposure among New York state first responders. *Disaster Medicine and Public Health Preparedness, 14*(4), 437–441 https://doi.org/10.1017/dmp.2019.95

Peterson, A. B., Gladden, R. M., Delcher, C., Spies, E., Garcia-Williams, A., Wang, Y., Goldberger, B. A. (2016). Increases in fentanyl-related overdose deaths — Florida and Ohio, 2013–2015. *Morbidity and Mortality Weekly Report*, *65*(33), 844–849. https://doi:10.15585/mmwr.mm6533a3

Powell, K.G., Treitler, P., Peterson, N.A., Borys, S., Hallcom, D. (2018). Promoting opioid overdose prevention and recovery: An exploratory study of an innovative intervention model to address opioid abuse. *International Journal of Drug Policy, 64*, 21-29. https://doi:10.1016/j.drugpo.2018.12.004

Prekupec, M. P., Mansky, P. A., & Baumann, M. H. (2017). Misuse of novel synthetic opioids: a deadly new trend. *Journal of Addiction Medicine*, *11*(4), 256. https://doi:10.1097/adm.0000000000000324

Purviance, D., Ray, B., Tracy, A., & Southard, E. (2016). Law enforcement attitudes towards naloxone following opioid overdose training. *Substance Abuse, 38*(2), 177–182. https://doi:10.1080/08897077.2016.1219439

Rahman, M. S. (2016). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "Testing and Assessment" research: A literature review. *Journal of Education and Learning, 6*(1), 102-112. https://doi.org/10.5539/jel.v6n1p102

Ramsook, L. (2018). A methodological approach to hermeneutic phenomenology. *International Journal of Humanities and Social Sciences, 10*(1), 14-24. https://www.researchgate.net/profile/Leela-Ramsook/publication/323687948_A_Methodological_Approach_to_Hermeneutic_Phenomenology/links/5aa921fbaca272d39cd50403/A-Methodological-Approach-to-Hermeneutic-Phenomenology.pdf

Ravitch, S. M., & Riggan, M. (2016). *Reason & rigor: How conceptual frameworks guide research* (2nd ed.). Thousand Oaks, CA. SAGE Publications.

Rees, D., Sabia, J., Argys, L., Latshaw, J., & Dave, D. (2017). With a little help from my friends: The effects of naloxone access and Good Samaritan Laws on opioid-related deaths. https://doi.org/10.3386/w23171

Roberts, C. (2010). *The dissertation journey.* Corwin Press.

Rudd, R. A., Aleshire, N., Zibbell, J. E., & Matthew Gladden, R. (2016). Increases in drug and opioid overdose deaths—United States, 2000–2014. *American Journal of Transplantation*, *16*(4), 1323-1327. https://doi.org/10.1111/ajt.13776

Rudd, R. A., Seth, P., David, F., & Scholl, L. (2016). Increases in drug and opioid-involved overdose deaths—United States, 2010–2015. *Morbidity and Mortality Weekly Report*, *65*(50 & 51), 1445-1452. https://doi:10.15585/mmwr.mm655051e1

Rudestam, K. E., & Newton, R. R. (2015). *Surviving your dissertation: A comprehensive guide to content and process* (4th ed.). Thousand Oaks, CA: SAGE.

Runde, D. (2018). Myths in emergency medicine: First responders worried about Fentanyl OD? Minimize fear by quashing that myth. *Emergency Medicine News*, *40*(12), 1-33. https://doi.org/10.1097/01.EEM.0000550361.51954.6d

Roberts, J. R. (2013) Acetyl fentanyl: New drug of abuse more common than assumed. In Focus. *Emergency Medicine News*, *35*(12), 1. https://doi:10.1097/01.eem.0000440686.75528.a2

Rutkow, L., & Vernick, J. S. (2017). Emergency legal authority and the opioid crisis. *New England Journal of Medicine*, *377*(26), 2512-2514. https://doi.org/10.1056/NEJMp1710862

Saldaña, J. (2021). *The coding manual for qualitative researchers.* Sage.

Saucier, C. D., Zaller, N., Macmadu, A., & Green, T. C. (2016). An initial evaluation of law enforcement overdose training in Rhode Island. *Drug and Alcohol Dependence*, *162*, 211-218. https://doi.org/10.1016/j.drugalcdep.2016.03.011

Saunders, M. (2021). 'It's an invisible killer': San Diego sheriff's release body cam of deputy's exposure to fentanyl. ABC 10 news san Diego. https://www.10news.com/news/local-news/its-an-invisible-killer-san-diego-sheriffs-release-body-cam-of-deputys-exposure-to-fentanyl

Scholl, L., Seth, P., Kariisa, M., Wilson, N., & Baldwin, G. (2018). Drug and opioid-involved overdose deaths - United States, 2013-2017. *Morbidity and Mortality Weekly Report*, *67*(5152), 1419–1427. https://doi.org/10.15585/mmwr.mm675152e1

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63–75. https://doi:10.3233/efi-2004-22201

Silverman, D. (2010). *Qualitative research*. London: Sage.

Skolnick, P. (2018). On the front lines of the opioid epidemic: rescue by naloxone. *European Journal of Pharmacology*, *835*, 147-153. https://doi.org/10.1016/j.ejphar.2018.08.004

Solis, E., Cameron-Burr, K. T., & Kiyatkin, E. A. (2017). Heroin contaminated with fentanyl dramatically enhances brain hypoxia and induces brain hypothermia. *eNeuro, 4*(5). https://doi:10.1523/eneuro.0323-17.2017

Stogner, J. M. (2014). The potential threat of acetyl fentanyl: legal issues, contaminated heroin, and acetyl fentanyl "disguised" as other opioids. *Annals of Emergency Medicine, 64*(6), 637–639. https://doi:10.1016/j.annemergmed.2014.07.017

Sundler, A. J., Lindberg, E., Nilsson, C., & Palmér, L. (2019). Qualitative thematic analysis based on descriptive phenomenology. *Nursing Open, 6*(3)733–739. https://doi.org/10.1002/nop2.275

Theofanidis, D., & Fountouki, A. (2019). Limitations and delimitations in the research process. *Perioperative Nursing-Quarterly scientific, online official journal of GORNA, 7*(3), 155-163. http://doi.org/10.5281/zenodo.2552022

The White House. (2013). *Announcing the Opioid Overdose Toolkit*. Washington, DC: Office of National Drug Policy; 2013.

Thomson, S. B. (2011). Qualitative research: Validity. *JOAAG, 6(1),* 77-82.

Tuohy, D., Cooney, A., Dowling, M., Murphy, K., & Sixsmith, J. (2013). An overview of interpretive phenomenology as a research methodology. *Nurse Researcher, 20(6*), 17-20. https://dx.doi.org/10.7748/nr2013.07.20.6.17.e315

U.S. Department of Health and Services (2021) *Naloxone*. https://www.samhsa.gov/medication-assisted-treatment/medications-counseling-related-conditions/naloxone

United States Drug Enforcement Administration. (2017). Fentanyl–a briefing guide for first responders.

https://www.dea.gov/druginfo/Fentanyl_BriefingGuideforFirstResponders_June2017.pdf

Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2019). The distinctions between theory, theoretical framework, and conceptual framework. *Academic Medicine, 95*(7), 989–994. https://doi:10.1097/acm.0000000000003075

Volkow, N. D., & Collins, F. S. (2017). The role of science in addressing the opioid crisis. *New England Journal of Medicine*, *377*(4), 391–394. https://doi:10.1056/nejmsr1706626

Wagner, K. D., Davidson, P. J., Iverson, E., Washburn, R., Burke, E., Kral, A. H., ... Lankenau, S. E. (2014). ‘‘I felt like a superhero’’: The experience of responding to drug overdose among individuals trained in overdose prevention. *International Journal of Drug Policy*, *25*, 157–165. https://doi:10.1016/j.drugpo.2013.07.003

Wharton, R. E., Casbohm, J., Hoffmaster, R. Brewer, B.N., Finn, M.G. Johnson, R. C., (2021, March). Detection of 30 fentanyl analogs by commercial immunoassay kits, *Journal of Analytical Toxicology*, *45*(2), 111–116. https://doi.org/10.1093/jat/bkaa181

Wilson, A. (2014). Being a practitioner: An application of Heidegger’s phenomenology. *Nurse Researcher, 21(*6), 28-33. http://dx.doi.org/10.7748/nr.21.6.28.e1251

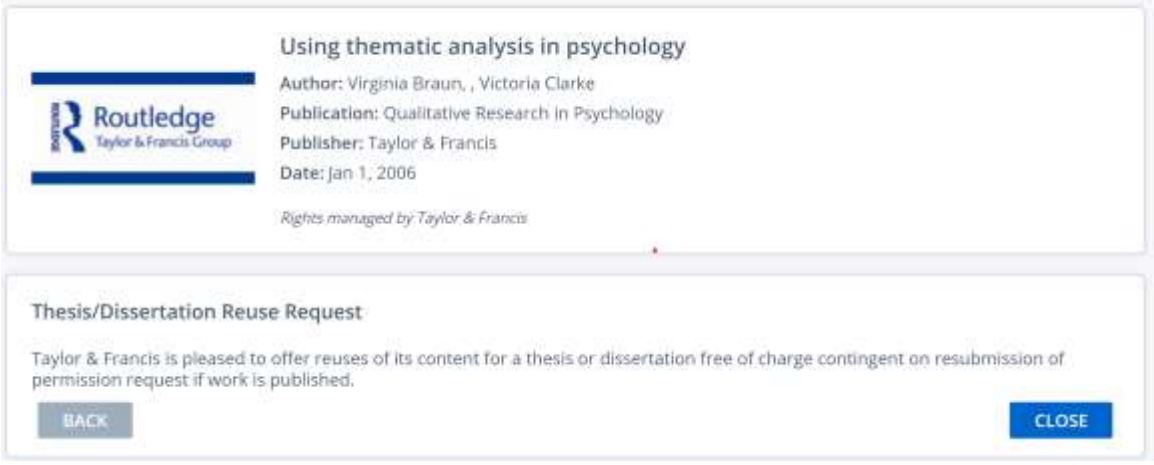
Wilson, N., Kariisa, M., Seth, P., Smith, H., & Davis, N. L. (2020). Drug and opioid-involved overdose deaths - United States, 2017-2018. *Morbidity and Mortality Weekly Report*, *69*(11), 290–297. https://doi.org/10.15585/mmwr.mm6911a4

Yeginsu, C., (2018, February 4). Fentanyl adds deadly kick to opioid woes in Britain. *The*

New York Times, A, 11. https://www.nytimes.com/2018/02/04/world/europe/uk-fentanyl-opioid-addiction.html

Young, S., Williams, S., Otterstatter, M., Lee, J., & Buxton, J. (2019). Lessons learned from ramping up a Canadian Take Home Naloxone programme during a public health emergency: a mixed-methods study. *BMJ open*, *9*(10). https://doi.org/10.1136/bmjopen-2019-030046

Appendix A: Permissions: Using Thematic Analysis in Psychology



Routledge
Taylor & Francis Group

Using thematic analysis in psychology

Author: Virginia Braun, , Victoria Clarke
Publication: Qualitative Research in Psychology
Publisher: Taylor & Francis
Date: Jan 1, 2006

Rights managed by Taylor & Francis

Thesis/Dissertation Reuse Request

Taylor & Francis is pleased to offer reuses of its content for a thesis or dissertation free of charge contingent on resubmission of permission request if work is published.

BACK

CLOSE

Appendix B: Partnership Agreement with NJ State PBA

NJ State Police Benevolent Association (PBA)

President Patrick Colligan

Dear Mr. Colligan,

I am seeking your help to ask the PBA to endorse my doctoral research study on the lived experiences of law enforcement officers who have responded to an overdose scenario and may have experienced an unintentional opioid or chemical exposure. I am currently a senior medicolegal death investigator, board-certified in forensic death investigation, employed by a NJ county government, and have a working knowledge of responding to overdose fatalities. There will be more information to follow in the initial participant recruitment announcement, and specific selection criteria will follow. The research study will satisfy the dissertation requirements for a Doctoral degree in Public Policy and Administration with an emphasis in Criminal Justice at Walden University.

There is a multitude of research on the opioid epidemic; my research will potentially uncover law enforcement officers' perceptions during an overdose response and potential problems on the scene. There is limited research in this area and interviewing law enforcement officers, who have administered naloxone, and may have experienced an unintentional opioid or chemical exposure in their life-saving efforts. The information collected from this study can educate the law enforcement community on future precautions and safeguards to protect the protectors, known as police officers.

1. Support in posting the recruitment flyer in break rooms and other workplace bulletin boards.
2. Forwarding of a brief introductory email and contact details to the list server of the officer's emails.

The law enforcement officers and the department they are employed will remain anonymous. If they so choose to participate, only aggregate data or individual data reported with pseudonyms from the interviews will be published. I want to verify that there is no conflict with the PBA in recruiting law enforcement officers for my research study.

Thank you,

Wayne J. Jackson, PhD student, MBA, CPhT

Walden University wayne.jackson@xxxxxxx.xxx

Appendix C: Partnership Agreement with NJ STFA

NJ State Police Troopers Association (STFA)

President Wayne Blanchard

Dear Mr. Blanchard,

I am seeking your help to ask the STFA to endorse my doctoral research study on the lived experiences of law enforcement officers who have responded to an overdose scenario and may have experienced an unintentional opioid or chemical exposure. I am currently a senior medicolegal death investigator, board-certified in forensic death investigation, employed by a NJ county government, and have a working knowledge of responding to overdose fatalities. There will be more information to follow in the initial participant recruitment announcement, and specific selection criteria will follow. The research study will satisfy the dissertation requirements for a Doctoral degree in Public Policy and Administration with an emphasis in Criminal Justice at Walden University.

There is a multitude of research on the opioid epidemic; my research will potentially uncover law enforcement officers' perceptions during an overdose response and potential problems on the scene. There is limited research in this area and interviewing law enforcement officers, who have administered naloxone, and may have experienced an unintentional opioid or chemical exposure in their life-saving efforts. The information collected from this study can educate the law enforcement community on future precautions and safeguards to protect the protectors, known as police officers.

3. Support in posting the recruitment flyer in break rooms and other workplace bulletin boards.
4. Forwarding of a brief introductory email and contact details to the list server of the officer's emails.

The law enforcement officers and the department they are employed will remain anonymous. If they so choose to participate, only aggregate data or individual data reported with pseudonyms from the interviews will be published. I want to verify that there is no conflict with the STFA in recruiting law enforcement officers for my research study.

Thank you,

Wayne J. Jackson, PhD student, MBA, CPhT

Walden University

wayne.jackson@xxxxxxx.xxx

Appendix D: Approval Letter for Law Enforcement Agency Participation

Law enforcement department

(xxx)-xxx-xxxx

Date

Dear Student (Wayne J. Jackson)

After reviewing your Proposal, I permit you to conduct the study entitled "Law Enforcement Officers' Perception of Administering Naloxone in Overdose Scenarios" within the (law enforcement agency). As part of the study, I authorize you to recruit law enforcement officers who have met the criteria proposed in your flyer. You may recruit law enforcement officers during the morning roll call. Once the law enforcement officer has accepted recruitment, I understand the questions will include a specific event while responding to an overdose scenario. Law enforcement officers' participation is voluntary and at their discretion.

(Law enforcement agency) understand the confidentiality of the participant will be private. The communication will take place via a Zoom call recorded and only seen by Wayne J. Jackson (Walden University student) for research inclusion requirements. The (law enforcement agency) reserves the right to withdraw from the study at any time.

I understand the student will NOT be naming our organization to protect the (law enforcement agency).

I understand the data collection process will remain confidential and will not be disseminated to anyone outside Wayne J. Jackson and the supervisory faculty of the named student. The information will adhere to the Walden University Institutional Review Board (IRB).

Sincerely,

Supervisory representative from law enforcement department

Email of supervisory representative.

[Phone number of supervisory representative]

Appendix E: Semi-structured Interview Guide

Semi-structured Interview-Part 1 Demographics

ID pseudonym assigned to Interviewee: _____ Date: ____/____/_____

1. My total years of law enforcement experience is: _____ years

2. My current rank is: _____

3. Describe your current work position:

4. How long have you been working in your current position?

Semi-structured Interview- Part 2 Interview Questions

1. How familiar are you with the term street-level bureaucrat?
2. As a street-level bureaucrat, do you feel the public supports you in your role as a law enforcement officer? Why or Why not?
3. How do the settings or response conditions affect the autonomy and discretion of your role as a street-level bureaucrat?
4. How does your role as street-level bureaucrats' and your core beliefs affect your decision-making and actions in an overdose recovery effort?
5. How does your role as a law enforcement officer affect implementing decisions in an overdose recovery effort that may affect the autonomy and discretion in your role as a street-level bureaucrat?
6. How often have you responded to an overdose scenario?
7. Tell me if you have personally experienced any medical events during an overdose response when on scene or administering naloxone?
8. If so, what specifically did you experience?

9. Did your experience require medical intervention?
10. Did your experience require a visit to a medical facility?
11. Do you feel your role as a law enforcement officer positively impacts your community in the war on drugs and how do you think your role is perceived by the community you serve?
12. Do you feel there are enough safeguards to protect law enforcement officers in their role as first responders in response to overdose scenarios?

Appendix F: Recruitment Flyer

RESEARCH PARTICPANTS WANTED

Law Enforcement Officers' Perception of Administering Naloxone in Overdose Scenarios

Are you:

- Active law enforcement officers since June 01, 2013

Have you:

- Responded to an overdose scenario where naloxone was administered and you may have experienced an unintentional chemical/opioid exposure?

If so, I invite you to participate in a voluntary research study

Conducted by Wayne J. Jackson, MBA, D-ABDMI
Doctoral Student, Walden University

Upon participation in an interview, participants will receive a $20.00 Amazon gift card

For more information contact:
Wayne Jackson
wayne.jackson@xxxxxxx.xxx

Appendix G: Member Checking Email Script

Dear Participant,

Thank you for being part of my research study titled The Law Enforcement Officers' Perception of Administering Naloxone in Overdose Scenarios.

As part of the participation process, checking with the participants that the information captured during the Zoom interview call is correct and accurate on your experiences is pivotal. I have attached your responses to the questions asked during the interview.

Please reply to my email with yes or no to verify.

Thank you,

Wayne Jackson

wayne.jackson@xxxxxxx.xxx