

A CASE STUDY OF COLLEGE ADMINISTRATORS' EXPERIENCES RELATED TO
OPIOID USE AND MISUSE ON A COLLEGE CAMPUS IN SOUTH CAROLINA

by

Buck Wilson

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

James A. Swezey, Ed.D., Committee Chair

Frank S. Bailey, Ed.D., Committee Member

ABSTRACT

The purpose of the qualitative intrinsic case study was to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. Opioid misuse on campus was generally defined as currently enrolled students who use prescription opioids without a prescription or for recreation. Bronfenbrenner's bioecological theory guided this study. This conceptual model focused on the individual or the student situated in the center of microsystem, mesosystem, exosystem, and macrosystem level influences, enhancing the understanding of how interpersonal, community, and systems issues can influence behavior. The central research question for this study was: What experiences do college administrators have with college students' using and misusing opioids on college campuses? Data included semi-structured interviews with university administrators working for a South Carolina university, as well as a focus group and document reviews. The interviews were held via teleconference and the focus group was conducted on the university campus where the administrators worked. The data collection components for document review included written policies and procedures. Once the data was collected, it was reviewed to identify similarities or differences. Thematic analysis resulted in four emergent themes: resources and services, knowledge and perception, education and training for students and staff, and policies, laws, and guidelines. The results of the study revealed various experiences from the college administrators.

Keywords: opioids, opiates, collegiate recovery communities, administrators

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Institutional Review Board (IRB)

National Survey on Drug Use and Health (NSDUH)

CHAPTER ONE: INTRODUCTION

Overview

The use and abuse of opioids in the United States (U.S.) was an epidemic (Cicero, Ellis, & Kasper, 2020). This epidemic impacted colleges and universities throughout the country (Ashrafioun & Carels, 2014). This study addressed the experiences of administrators from one small college in South Carolina through interviews, a focus group, and document reviews.

Chapter One provided the background information regarding opioid use and abuse on university campuses across the U.S., and the challenges that opioid use and abuse created on campuses. The background included historical, social context, and theoretical segments. Chapter One also included my insight and experiences regarding the topic. The problem was the lack of information regarding the experiences of university administrators with college students using and misusing opioids on campus. The purpose of the qualitative intrinsic case study was to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. The theoretical framework used for this study was Bronfenbrenner's bioecological theory of human development. Bronfenbrenner's theory is composed of the following four constructs: microsystems, mesosystems, exosystems, and macrosystems. The significance of the study reflected potential benefits to the field of higher education. Four research questions were identified for use. The chapter ended with some useful definitions and a summary.

Background

Historically, there have been challenges with opioid use on college campuses. The impact of opioid use on college campuses and society has been significant. Bronfenbrenner's bioecological theory was appropriate for this study because opioid use and misuse is inextricably

linked to an individual's behavior. The system thinking framework was used to focus on the mesosystem and exosystem level of Bronfenbrenner's framework.

Historical Context

Opioids were a synthetic version of opiates, which are derived from opium (Brownstein, 1993). Opium was a derivative of the opium poppy (*papaver somniferum*), and has been used for hundreds of years (Passik & Kirsh, 2008). Opium was a mixture of alkaloids including morphine, codeine, and paramorphine, and its origin goes back to the Neolithic age and the European and Middle Eastern civilizations (Floyd & Warren, 2018). The people of Mesopotamia used the poppy plant recreationally about 5,000 years ago, and people of other civilizations have used it socially and medicinally since 400 B.C. (Lawler, 2018; Moallem, Balali-Mood, & Balali-Mood, 2004). Around 400 BC, Hippocrates used opium medicinally to treat women for pain (Pergolizzi et al., 2012). One of the first references of opium use in the U.S. occurred when Civil War soldiers took opium for pain and illness (Maisto, Galizio, & Connors, 2018). The U.S. learned of the challenges of addiction to opium through the soldiers' usage; their addiction was known as the "soldier's disease" (Wardenburg & Mason, 2018, p. 1245).

The opioid epidemic in the U.S. has continued since 1995 (Kanouse & Compton, 2015). Drug overdose deaths related to opioids and other drugs nearly tripled during a 15-year span from 1999 to 2014 (Rudd, Seth, Scholl, & David, 2016). Of the 47,055 drug overdose deaths that occurred in 2014 in the U.S., 28,647 (60.9%) involved opioids (Rudd, Aleshire, Zibbell, & Gladden, 2016). Several factors, including the introduction of Oxycontin, greater ambulatory use of opioids for chronic pain, and increased use of opioids for acute pain, have led to this epidemic (Kolodny et al., 2015). Prescription opioid use began increasing in the late 1990s leading to more research to better understand the problem (McHugh, Nielsen, & Weiss, 2014). Prescription

opioid abuse has rapidly increased in the U.S. over the past 20 years, leading to high rates of overdose deaths and a dramatic increase in the number of people seeking treatment for opioid dependence (Brady, McCauley, & Back, 2016).

Universities have always had challenges with substance misuse, but opioids were fairly new to the scene. Over the last two decades, the escalating misuse of opioids in the U.S. has become a major public health concern, with some calling the misuse of opioids an epidemic (Palombi, St Hill, Lipsky, Swanoski, & Lutfiyya, 2018). Between 1993 and 2005, the use of opiates by college students increased by 343% while 50% of college students were offered an opioid prescription for nonmedical or unintended use by their sophomore year (Daniels-Witt, Thompson, Glassman, Federman, & Bott, 2017).

Social Context

The misuse of opioids has had a detrimental impact on society. According to McCarthy (2015), opioid overdose was an injury death. Saloner et al. (2018) found that drug overdose, most involving opioids such as prescription medication, heroin, and illicit fentanyl, was now the leading cause of injury death in the U.S. In the U.S., drug overdose was the leading cause of injury death, and the mortality rate for drugs involving opioids was higher than the combined mortality rate for all other drugs (Han, Compton, Jones, & Cai, 2015). According to The New York Times Editorial Staff (2018), opioid misuse has destroyed families, medical offices, and communities, including toddlers and young children being found dead or unconscious, autopsies overwhelming medical examiners, and opioid users filling up jails across the country.

In 2017, the U.S. declared the opioid epidemic a national emergency because of the sharp increase in the number of opioid-related overdose deaths (Lee, Lin, Osgood, & Thomson, 2017). When prescription opioids were not available, individuals used heroin to support their habits

(Kertesz & Gordon, 2019). In the last few years, drug dealers started cutting heroin with fentanyl to make it cheaper. Fentanyl was very potent and has created even more overdoses. The increase of heroin abuse created challenges for the community, including increased violence and risk of death at an early age and diminished economic well-being (Rosenblum et al., 2014).

University administrators were often concerned with the costs to run their university. The financial impact that opioid use had on society could have affected the universities when it comes to securing the funding they need (Litton, 2018). If communities spent their resources addressing substance misuse and were forced to request state funds, there may have been limited resources available for universities. Communities across the U.S. spent roughly \$220 billion each year on treating substance use disorders, with almost \$70 billion going to prosecuting and incarcerating people charged with drug-related offenses (Krebs et al., 2017). According to Krebs et al. (2017), the \$220 billion was close to what the U.S. spent annually on obesity and diabetes care.

The more university administrators, such as presidents, vice presidents of student activities, and directors of school health centers can understand why students misuse opioids, the better they can prepare their plans to help prevent and treat drug use and misuse on their campuses. According to Bennett and Holloway (2017), a more thorough understanding of the motives for prescription opioid drug misuse, especially in relation to their influence on a student's behavior, should help administrators create university-based treatment and prevention programs. Researchers found a link between opioid use and mental health issues (Chan & Trant, 2018). A student with mental health issues may have had more challenges in the college setting, as well as create challenges for the administrators and professors. Providing information on how university administrators were addressing opioid use on their campuses may have benefit to the

students and university administrators at other universities. Information from this research will increase the body of knowledge regarding the best practices for university administrators in South Carolina. Current literature has limited information on the experiences that college administrators have had with opioid use and misuse on their campuses.

Theoretical Context

The theoretical framework for this study was Bronfenbrenner's bioecological theory of human development. Bronfenbrenner's theory focused on the following three areas: an individual's perspective of the environment, the environment surrounding that individual, and the interaction between the individual and the environment (Reifsnider, Gallagher, & Forgione, 2005). Those three areas are the college students' perspective related to the college campus, the societal and environmental surroundings, and how the college student interacts with the surroundings.

Bronfenbrenner's theory had many constructs that were related to this project. The constructs were microsystems, mesosystems, exosystems, and macrosystems. The microsystem level was the setting of college students, which included their peer relationships and interactions with parents. The mesosystem was their interaction with administrators, mentors, faculty, and non-faculty staff. The policies, guidelines, and other influences of administration and the board of trustees were examples of the exosystem. Macrosystem level areas included laws of the state, beliefs of the administrators, the influence of pharmaceutical companies, the media (including student newspapers), and other related areas.

The systems thinking framework was tied to the evaluation of the mesosystem and exosystem within Bronfenbrenner's framework. The study narrowed down to the mesosystem level of thinking. Stakeholders at the mesosystem level (administrators, mentors, faculty, and

professors) had a better understanding of their processes and what was done to improve those processes. Processes included policies or guidelines and how they were established and developed. Universities developed policies and guidelines to respond to opioid use or misuse among students. The systems thinking approach was concerned with connections between the various components of a system (environmental, social, or political) and how they related to one another (Minyard, Ferencik, Phillips, & Soderquist, 2014).

The systems thinking approach used multiple disciplines and critical thinking skills such as dynamic thinking (exploring a problem over time versus as a single event), system-as-cause thinking (drawing boundaries to ensure causes of a behavior are included), and forest thinking (using a 30,000 feet view to see how things fit together) (Richmond, 1997). The approach allowed for collaboration and discussion among experts that was valuable for policymakers to utilize strategic thinking (Minyard et al., 2014). According to Kang, Nembhard, Curry, Ghahramani, and Hwang (2017), the National Cancer Institute used the systems thinking approach to investigate various factors associated with tobacco prevalence and consumption in the U.S. By using the approach, the institute provided a better understanding of how population-level interventions affected individual smokers, physical environments, and social circumstances (Kang et al., 2017). Madsen, Garber, Martin, Gonzaga, and Linchey (2014) used the systems thinking approach to evaluate the feasibility of a referral network. They found that the referral system increased physical activity for youth, but additional work to influence the Body Mass Index of youth and the cost effectiveness of the referral network. The systems thinking approach's overall strength was dependent on the variety of stakeholders (Macmillan et al., 2016). The stakeholders and experts were administrators and their designees.

Situation to Self

South Carolina has experienced significant opioid-related deaths over the last few years (Butler & Batalis, 2017). In 2016, there were 616 deaths related to drug overdose of prescription opioids, which represented a 9% increase when compared to the number of deaths in 2015 (Arnold, Arshonsky, Bloch, Holzman, & Sade, 2019). In 2017, the governor of South Carolina declared a public health emergency because of the opioid crisis. As an employee for the department of health in South Carolina, I have worked under the direction of the governor. My roles included the Public Health Division Bureau Director of Community Health Services, Midlands Public Health Region Director and the Director of Legislative Affairs. My initial reason for investigating the experiences of university administrators related to opioid misuse on a college campus was related to my work in public health. I have collaborated with the Division of Injury and Substance Abuse Prevention on grant projects related to opioid use in primary schools. One project engaged schools and community leaders in trauma-informed school initiatives by setting up community distributors of naloxone.

I had two additional reasons I was passionate about conducting this research, and the first involved a friend and his family. A few years ago, one of my best friends had a son who battled opioid addiction. He was a student at a small university in South Carolina, and he hoped to attend pharmacy school. He secured a part-time job at a local pharmacy. While working at the pharmacy, he began to take opioids to get high. Before long, he was selling the opioids to his fraternity brothers for \$50 a pill. Eventually, he dropped out of school and entered a rehabilitation clinic. My friend (his father) said they had a hard time finding the right facility for him to get treatment, and the university offered very little help. He mentioned to me that it did not seem that the university considered the lack of help a problem. I asked if the university had

any programs in place to help students prevent or stop the misuse of drugs. He said they had only one program and it addressed alcohol. I am happy to report that his son is well and no longer using opioids. However, he never went back to college. The last reason I was passionate about conducting this research was my desire to help universities address opioid-related abuse problems among students on their campuses and help college students with substance abuse and misuse issues get the help they need.

In a previous job as the health director of a large county in North Carolina, I worked closely with the mayor of a large city, the attorney general for North Carolina, and other key community stakeholders as a member of an opioid task force. The county struggled with prescription opioid- and heroin-related deaths. The mayor established the task force and the community created public service announcements to help the effort. Local university presidents were involved in the task force and showed an interest in creating programs on their campuses to combat the effort. Although I will not include administrators from universities in North Carolina in my study, I look forward to sharing the results with my colleagues who serve as administrators on their campuses in the “Old North State.”

The research involved investigating human behavior and experiences; therefore, I used the interpretivist paradigm. The interpretivist paradigm and qualitative method were appropriate when researchers used the experiences, understandings, and perceptions of individuals as data (Thanh & Thanh, 2015). The interpretivist paradigm and qualitative method were appropriate for this study because administrators described their experiences with opioid use and misuse in their respective department on campus. Through the interpretivist paradigm, I viewed the college campus through the experiences of the administrators. Interpretivists recognized how well they understood the context in which they conducted their studies as critical in their interpretation of

the data (Willis, 2007). My philosophical assumptions were from my 24 years of working in public health, along with the research accomplished as part of the literature review. The ontological assumption was that colleges and universities were having challenges with opioid use and misuse on their campuses. This ontological assumption was based on the reality that the U.S. was experiencing an opioid epidemic and the college population was having challenges related to the epidemic. From the epistemological perspective, the connection between me, as the researcher, and the participants was minimally influential. I conducted interviews via tele-conference and a focus group with university administrators on the university campus.

Problem Statement

There were some studies on the use and misuse of opioids by college students. The problem was the lack of information regarding the experiences of university administrators with college students using and misusing opioids on their campus. According to Schulenberg et al. (2018), collegiate substance abuse was an enduring problem. The National Survey on Drug Use and Health (NSDUH), estimated that 11.4 million people misused opioids in 2017 while approximately one in four young adults ages 18-25 were current illicit drug users (SAMHSA, 2019). The focus of this research was on the experiences of university administrators with opioid use and misuse among students at their university in South Carolina. The sample pool for the research was administrators at the university, including the president, vice presidents, an associate vice president, the provost, the athletic director, a manager within the school health clinic, and one board of trustee member.

Universities had the option of utilizing Collegiate Recovery Communities (CRC) or naloxone programs. CRCs were needed to help college students recover from a substance abuse disorder; however, this model has yet to be systematically investigated and evaluated (Laudet,

Harris, Kimball, Winters, & Moberg, 2014). Georgetown University had an emergency response medical services agency on its campus. The emergency response medical service implemented medical protocol which allowed staff to use naloxone to save the lives of students who are suspected of opioid toxicity (Jeffery, Dickinson, Ng, DeGeorge, & Nable, 2017). Universities also had student-led groups such as the National Drug Free America Alliance, and members of these groups advocated for policy change regarding drug use (Daniels-Witt et al., 2017). While these groups have had success improving policies (Daniels-Witt et al., 2017), there was little information regarding university administrators' experiences with student opioid misuse on college campuses across the U.S. and in South Carolina specifically. This is likely due to the stigma and secrecy that often surrounds prescription misuse (Cooper & Nielsen, 2017). Intrinsic case studies concentrated on a specific group (university administrators) that was of primary interest. An intrinsic case study approach of university administrators yielded an enhanced understanding of opioid misuse among students on a South Carolina campus and allowed me to explore the natural settings, lived experiences, and knowledge of the administrators.

Purpose Statement

The purpose of the qualitative intrinsic case study was to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. The research was completed to learn more about a phenomenon for which there is limited information. In an intrinsic study, the researcher must define the uniqueness of the phenomenon and distinguish it from other phenomena, possibly based on a collection of features (Stake, 2010). According to Baxter and Jack (2008), researchers should use an intrinsic case study when their intent is to better understand a case. Defining the misuse of opioids can be defined on the basis of user characteristics, the reason for use, and the presence of clinically

significant symptoms (Barrett, Meisner, & Stewart, 2008). Bronfenbrenner's bioecological theory served as a guide. This conceptual model focused on the individual or the student situated in the center of microsystem, mesosystem, exosystem, and macrosystem level influences. This focus enhanced understanding of how interpersonal, community, and systems issues can influence behavior.

Significance of the Study

This research may have yielded information that university presidents and other top administrators can utilize to address opioid misuse on their campuses. Research pertaining to university administrators' experiences with opioid use and misuse on their campuses was limited as some focus on one method of prevention or one method of treatment for the use and misuse of opioids or other drugs. For example, Mason, Benotsch, Way, Kim, and Snipes (2014) found that delivering preventive interventions through automated texting programs worked well with decreasing alcohol use in college students. This was an example of a program college administrators could have implemented to help with opioid challenges.

With the data from this research, university administrators may reduce the impact of the opioid epidemic on college campuses in South Carolina and across the U.S. Colleges and universities throughout the U.S. may also utilize the findings of this study to assist with opioid challenges on their campuses. College administrators may use the results to assist with improving college students' overall academic success, dropout rates, health, and living conditions (Daniels-Witt et al., 2017; Holloway, Bennett, Parry, & Gorden, 2014). The findings of this study may also be helpful to community colleges that are collaborating with community partners to help prevent or curtail opioid misuse in the community. Community partners may look to their education partners for assistance throughout the community. When it comes to

opioid misuse, educated communities have the potential to inform programs and their participants in powerful and educative ways (Lees, 2016).

In addition to communities, the results of this study may guide appropriate policies, guidelines, education, and programs that will ultimately benefit students. An example of a program that benefits students who use drugs was found at two universities. The State University of New York and Indiana University supplied their campuses with naloxone (Daniels-Witt et al., 2017). While it was not directly related to colleges and universities, the U.S. Department of Health and Human Services created four main objectives to help with opioid challenges: (a) provide prescribers with the knowledge to improve their prescribing decisions and the ability to identify patients' problems related to opioid abuse, (b) reduce inappropriate access to opioids, (c) increase access to effective overdose treatment, and (d) provide substance-abuse treatment to persons addicted to opioids (Volkow, Frieden, Hyde, & Cha, 2014). College administrators may work with the Department of Health and Human Services to incorporate reducing access and increasing treatment options on and around college campuses.

Bronfenbrenner's (1986) bioecological theory stressed that individuals need the environment to help them develop. This was a theoretical significance as it relates to college students and the impact the environment has on their development. According to Evans (2010), there were four main components of Bronfenbrenner's theory: process, person, context, and time. Each of these components were critical, even during a student's college years. The systems thinking framework narrowed down and guided the sub-questions utilizing the mesosystem and exosystem of Bronfenbrenner's framework. The systems thinking approach aided the researcher in understanding the experiences of college administrators related to opioid challenges on their campus.

Interviews were used to gather data. Data was compiled into sections based on relevancy and usefulness and according to the administrator interviewed. The information was gathered based on the experiences of university administrators. Each administrator was interviewed via tele-conference utilizing a set of questions.

Research Questions

Central Research Question: What experiences do college administrators have with college students using and misusing opioids on college campuses? Although the demographics and overall role of presidents have not altered significantly over the years, university presidents must address controversial issues on campuses (Briscoe & Freeman, 2019). The responses to these questions allowed me to learn about administrators' experiences and to gather information for the study (Thomas & Van Horn, 2016).

Sub-questions

1. What training and background have administrators had that helped address opioid use and misuse on college campuses? According to Kenedi and Mountford-Zimdars (2018), an administrator's role requires managerial skills, academic credibility, and knowledge of institutional processes. This sub-question focused on gathering knowledge of university administrators (Linnan et al., 2017).
2. What policy and procedures do administrators have in place that address opioid use and misuse on the campus where they work? In a survey of 400 U.S. colleges and universities, 279 (70%) reported they had a student assistance program to help individuals with problems related to drug or alcohol abuse (Fudala, Fields, Kreiter, & Lange, 1994). This sub-question allowed for comparison to the responses that the university administrators share. Policies and procedures are important to establish

- written work, related to opioid use and misuse, that has been developed (Creameens et al., 2011).
3. From the administrators' viewpoint, what are the attitudes of direct reports related to opioid use by college students? Universities have become larger, more complicated, and more difficult to administer, leading administrators to lean on their staff more (Bok, 2014). Obtaining this information gave an idea of the culture related to opioid use (Weatherson, Bourne, Hucul, Anand, & Jung, 2015).

Definitions

1. *collegiate recovery community* - an innovative and growing model of peer-driven recovery support delivered on college campuses (Laudet et al., 2014).
2. *naloxone* - is an opioid antagonist that can rapidly reverse the respiratory depression associated with opioid toxicity (Jeffery et al., 2017).
3. *non-medical prescription opioid* - medications that are not prescribed for an individual or are taken for the experience or feeling (Compton, Jones, & Baldwin, 2016).
4. *opiates* - derived from the opium puppy; depresses activity of the Central Nervous System (Monwell & Gerdner, 2017).
5. *opioid* - a synthetic chemical that interacts with opioid receptors and reduces pain (Monwell & Gerdner, 2017).
6. *opioid misuse* - using opioids outside of how it is prescribed (Ballantyne, 2015).
7. *systems thinking* - a rubric focused on increased attention to how new knowledge is gained, emphasis on network-centric approach that emphasizes relationship building, and the development of models using analytic approaches (Leischow et al., 2008).

8. *systems thinking framework* - Systems thinking is concerned with connections between the components of a system, including environmental, social, or political, and how those components relate to one another (Minyard, Ferencik, Phillips, & Soderquist, 2014).
9. *young adults*- Fortuna, Robbins, Caiola, Joynt, and Halterman (2010) defined young adults as 29 years old and younger.

Summary

The problem of lack of information related to experiences of university administrators with college students using and misusing opioids on campus was addressed. The purpose of the qualitative intrinsic case study was to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. The opioid epidemic has negatively impacted students at colleges and universities throughout the U.S. Utilizing Bronfenbrenner's biological theory, I conducted research and described the experiences of university administrators related to opioid use and misuse. Research questions were used to build the study. Results of the research may be used as a resource and guideline for university administrators throughout the country to help them battle the opioid misuse on their university campuses.

CHAPTER TWO: LITERATURE REVIEW

Overview

This literature review identified research studies related to opioid use and misuse, including college students using medical and non-medical prescription opioids. Opiate abuse in the U.S. has increased among college students (Daniels-Witt et al., 2017). College administrators and other stakeholders needed to take action. Additional information and resources were needed to help battle this opioid epidemic. This chapter provided an overview of the existing literature.

There were seven sections and subsections within the chapter. The first section included a description of the theoretical framework that was used. There was an explanation of the theory and definitions and examples of how the theory was used. The second section was a description of the related literature regarding the medical and non-medical prescription opioids used among college students. Section three was a summary of the research pertaining to prescription opioid use and the impact that the overprescribing of drugs had on opioid use among college students. Section four was a summary of non-medical opioid use and the concern and challenges related to opioid use. Section five included research on contributory factors or reasons college students used and misused opioids. This section also included perceptions of opioid use. Section six reviewed literature and the impact that opioid use and misuse had on the academic performance of college students. The final section provided research on what college administrators did to help college students who used or were addicted to opioids. Information in the final section was used to develop the interview questions and prepare the focus groups with the college administrators. Upon completion of the literature review, the gap in the literature was established and a focused area of need was determined.

Theoretical Framework

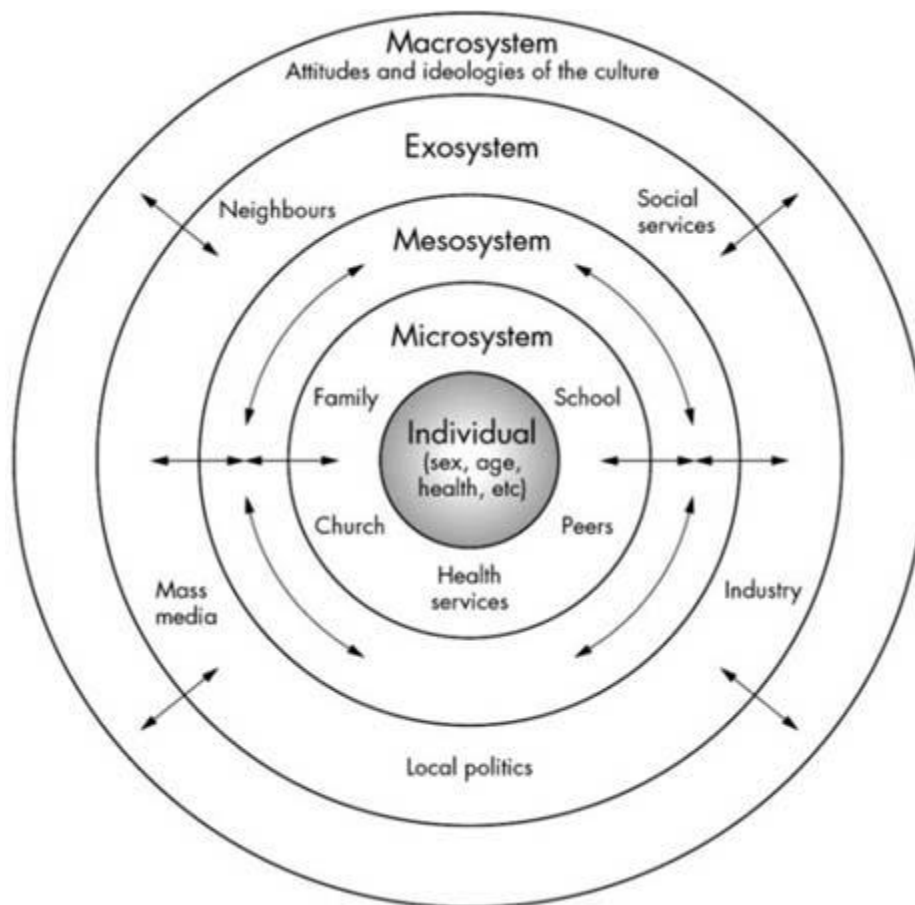
The meaning of theory in any scientific field was to provide a framework that researchers used to explain connections among the phenomena under investigation and to offer insights leading to the discovery of new connections (Tudge, Mokrova, Hatfield, & Karnik, 2009). According to Yin (2018), theory can be used to guide a case study in an exploratory way. This literature review addressed the phenomenon of opioid use and the related experiences with the phenomenon. According to Egbert (2013), the theoretical framework was one of the most important parts of any research study as it helped novice researchers clearly plan and conduct their studies. In his bioecological theory of human development, Bronfenbrenner described human development by focusing on the following three areas: an individual's perspective of the environment, the environment surrounding that individual, and the interaction between the individual and the environment (Reifsnider et al., 2005). This theory helped guide the examination of the experiences of the college administrators regarding opioid use and misuse among students on their college campus.

Bronfenbrenner (1974) defined ecological theory as the study of human development in enduring environments. He developed the theory further in 1977 by adding complex systems to the model (Bronfenbrenner, 1977). The model included the following four systems: microsystems, mesosystems, exosystems, and macrosystems. According to Bronfenbrenner (1977), the macrosystem was what exists in a culture that influenced behaviors and could include policies, laws, and rules. The macrosystem, within the systematic approach, represented beliefs and organizational patterns that affected the student and consisted of broad influences such as gender, race, ethnicity, or sexual orientation (Beck-Cross & Cooper, 2015). The microsystem

was interaction with persons, objects, and symbols (Bronfenbrenner, 1999), or the “activities, roles, and relations in which a person engages” (Bronfenbrenner, 2005, p. 57).

In 1994, Bronfenbrenner made additional changes to his model by creating the bioecological theory and introduced the process-person-context notion (Bronfenbrenner & Ceci, 1994). Bronfenbrenner’s (2005) model examined the impact of macrosystems and microsystems on individual behaviors. These systems helped address the opioid crisis on university campuses. Beck-Cross and Cooper (2015) investigated male adolescent suicide and found that microsystem and macrosystem predictors helped social workers provide effective prevention programming and address the crisis of suicide.

Researchers used Bronfenbrenner’s bioecological theory of human development as their framework for research on adolescents and the impact their parents had on them (Darling, 2007). Bronfenbrenner’s theory worked well when focusing on individuals and the effects of the environment around them (Vélez-Agosto, Soto-Crespo, Vizcarrondo-Oppeneheimer, Vega-Molina, & García Coll, 2017). Proponents of biological theory stressed that researchers should study the settings in which developing individuals spent time and the relationships they have with others in the same settings, the personal characteristics of individuals (and those with whom they typically interact), the development over time and the historical time in which these individuals live, and the mechanisms that drive development or proximal processes (Rosa & Tudge, 2013). The ecological theory was a set of structures, each within the next, like a set of increasingly smaller circles (Reifsnider et al., 2005).

Figure 1*Ecological Theory*

Note: Ecological Theory. Reprinted from *An Investigation into the Social Factors that Influence Sport Participation: A Case of Gymnastics in the Western Cape* (p. 51), by Warren Lucas, 2016.

Culture played an integral role within the framework of Bronfenbrenner's model. Culture was a constantly changing system made up of the daily practices of families, schools, and neighborhoods (Vélez-Agosto et al., 2017). It was important to consider culture when studying communities (Sternberg, 2014). The college campus created its own culture within the boundaries of the campus. According to Billings and Terkla (2014), the institutional culture of a college campus impacted the behavior of a college student.

Related Literature

Prescription drug misuse in college was creating challenges for college administrators. The use and misuse of opioids by college students increased significantly since the early 1990s (Kenne et al., 2017). According to Schepis, Acheson, Zapp, and Swartzwelder (2019), college students' misuse rate of non-medical opioid use exceeded that of adults over the age of 25. According to Chinneck et al. (2018), young adults (18 to 25 year-olds) used opioids more than they used stimulants, sedatives, or tranquilizers. In the U.S., 18 to 25 year-olds had the highest rate of substance use disorders (Laudet et al., 2014). College students frequently used opioids without a physician's prescription, resulting in an increasing epidemic (Meisel & Goodie, 2015).

Research pertaining to opioid use focused on several areas: the use of opioids, prescription of opioids, and relation to other drug use. However, there was limited research investigating the experiences of college administrators regarding opioid use (Ashrafioun & Carels, 2014; Gould & Berke, 2019; Kenne et al., 2017). College administrators had reason to be concerned because research has shown that drug misuse in college students increased at a higher rate than it did in individuals their same age that were not attending college (Bennett & Holloway, 2017). According to Ford, Pomykacz, Veliz, McCabe, and Boyd (2018), the U.S. was dealing with a prescription drug epidemic, particularly related to opioids. They recognized that research was needed to identify populations who were at an increased risk of misusing drugs.

The dynamic of opioids has changed over the past 20 years. Of the 47,055 drug overdose deaths that occurred in 2014 in the U.S., 28,647 (60.9%) involved opioids (Rudd, Aleshire, et al., 2016). Prescription drug abuse reached an epidemic level in the U.S. With an estimated 130 opioid overdose deaths occurring each day in the U.S., the U.S. Department of Health and Human Services declared the opioid crisis a public health emergency (National Institute on Drug

Abuse, 2019). There was an increase in prescriptions for opioid use and a decrease in access to health care (Dasgupta, Beletsky, & Ciccarone, 2018). The increase in prescribing of opioids was supported by hospital administrators due to their fear of losing federal funding and concern with patient satisfaction ratings being lower related to pain management (Chang, Murimi, Jones, & Alexander, 2018). Over a 20-year period, there was a significant increase in the number of opioid prescriptions written to young adults (Ashrafioun & Carels, 2014). According to Han et al. (2017), the 2015 NSDUH found that 91.8 million adults used prescription opioids, with 4.7% misusing them. In the U.S., young adults in the 18 to 25 year-old age group were more likely to engage in nonmedical prescription drug use than adults in the other age groups (Hedegaard, Warner, & Chen, 2015). According to Ashrafioun and Carels (2014), young adults were among the most vulnerable age group using prescription opioids. McNeely et al. (2019) found that over 38% of college students that visited their student health center had used illicit drugs. Over 15% of adolescents in the U.S. used opioids or stimulants in the past year without a prescription (Schaefer & Petkovsek, 2017). A challenge that was out of the control of college administrators was the availability of pain-relieving opioids on a college campus (Stoicea et al., 2019). College administrators could have decreased the availability of opioids on a college campus by establishing rules, policies, and guidelines.

According to Azagba, Shan, Mansione, Quedan, and Wolfson (2019), U.S. marijuana use was on the rise. Marijuana was used more than any other illicit drug in the U.S., and adults saw it as less risky than they did in the early 2000s (Tzilos, Reddy, Caviness, Anderson, & Stein, 2014). Marijuana continued to be a gateway drug, whether it was used legally or illegally (Balon, 2018). College students may have used it as a gateway drug and moved on to using opioids. According to Keith, Hart, McNeil, Silver, and Goodwin (2015), frequent marijuana use (defined

as using 10 days in a month) increased the likelihood that a college student will use other substances.

Marijuana was legal in many states, and there were many university and colleges in these states. According to Gould and Berke (2019), 11 states and Washington, D.C. legalized the recreational marijuana use by 2020. Evidence showed that the prevalence of marijuana used among college students increased in states that legalized recreational marijuana use (Alley et al., 2020). College students in states where recreational marijuana was legalized were using marijuana more due to the legalization (Alley, Kerr, & Bae, 2020). While college administrators should have been concerned about legalization of recreational marijuana because of its impact on the lives of colleges students, they should know that annual death rates caused by opioid overdoses were significantly lower in states that permitted medical marijuana use (Olfson, Wall, Liu, & Blanco, 2018). When thinking about opioid-related death rates on college campuses, college administrators needed to be strategic about their support for the legalization of medical marijuana versus recreational marijuana. Considering the national trends of increased marijuana use, the prevalence of marijuana used among students attending college increased more following legalization in states where marijuana was legalized for recreation (Kerr, Bae, & Koval, 2018). Increased marijuana availability, through legalization, may have increased the use of other drugs, including opioids (Bostwick, 2012). According to Balon (2018), the legalization of marijuana led to an increase in marijuana use and increased the risk of marijuana use disorders, and marijuana use was associated with an increase in nonmedical prescription opioid use and opioid use disorders. Guttmanova et al. (2016) found that increased marijuana use because of legalization led to the increased use of other drugs. College administrators should be concerned about the legalization of marijuana use for two reasons: the gateway aspect of

marijuana leading to use of opioids and the relaxation of social controls on a vulnerable population.

Prescription Opioid Use and Misuse

The misuse of prescription opioids continues to be a significant health concern in the U.S. (Azagba et al., 2019). There was growing concern about the misuse of prescription opioid drugs in the U.S. and its role in the development of opioid use disorders and other adverse health outcomes (Hoffman, Lewis, & Nixon, 2017). Knowing the adverse health outcomes associated with prescription opioid misuse, there was heightened public concern (Boscarino et al., 2010). The nation was experiencing a crisis of opioid-related morbidity, mortality, and misuse (Kroenke et al., 2019). Opioid prescriptions became a focus for the healthcare industry. Unfortunately, excess opioids flooded the market due to prescription counts being larger than needed (Makary, Overton, & Wang, 2017). This surplus created a market for non-medical opioid use (Vashishtha, Mittal, & Werb, 2017). According to Lokala et al. (2019), the U.S. was in the midst of the worst opioid epidemic in its history. With so many prescriptions being written, the market was flooded with prescription opioids. The demand for opioids increased in the late 1990s when patients wanted better treatment for pain, which led to requests for development of pain management standards (Rose, 2018). The use of prescription opioids as medication has significantly increased over the last 20 years (Dart et al., 2015). In the U.S., opioids were prescribed more than any other painkillers (Skolnick, 2018). Opioids were an effective treatment for various painful conditions (Manjiani, Paul, Kunnumpurath, Kaye, & Vadivelu, 2014). Following the demand for opioids to help with pain management, there was an increase in the use of illegal opioids. Even though there was substantial documentation of risks associated with long-term opioid use and limited evidence showing long-term opioid therapy was effective for chronic pain management,

opioids were still one of the most commonly prescribed drugs in the U.S. (Chou et al., 2014). In 2010, the number of opioid prescriptions started declining, but the number was approximately three times higher than the number in 1999 (Guy et al., 2017).

The overall use of non-medical prescription opioids increased significantly in the last decade (Saha et al., 2016). The widespread availability of prescription opioids, which have strong addictive potential, for the treatment of pain led to increases in the nonmedical use of opioids (Volkow & McLellan, 2016). Between 1997 and 2005, there was an increase of more than 500% in opioid prescription use (Mars, Bourgois, Karandinos, Montero, & Ciccarone, 2013). The number of opioid prescriptions dispensed over the last 10 years has increased 48% in the U.S. (Ruan, Luo, Kaye, & Kaye, 2017). Vast numbers of prescriptions leading to excess of opioids made it easier for individuals to use and misuse the drug. According to Cicero et al. (2020), illicit drug use increased from 2011 to 2018. According to Cheng et al. (2018), individuals who used opioids were two-thirds more likely to have used other illicit drugs before opioids. Of the 89 million U.S. adults who used prescription opioids every year, nearly 3.9 million (4.4%) reported misuse of their prescription drugs (Mojtabai, Amin-Esmaili, Nejat, & Olfson, 2019). In 2013, approximately 207 million opioid prescriptions were written, which represented an increase of 76 million prescriptions since 1991 (Stoicea et al., 2019). In 2016, there were 66.5 opioid prescriptions dispensed for every 100 individuals in the U.S. (Centers for Disease Control and Prevention, 2020). In 2017, nearly 18 million people in the world misused prescription drugs, with opioid being the most widely used and having the highest prevalence in adolescents and young adults (Siste, Nugraheni, Christian, Suryani, & Firdaus, 2019).

Non-medical prescription drug use was one of the U.S.'s biggest public health concerns because of its addictive nature and the number of overdose deaths (Compton et al., 2016).

Increasing rates of opioid prescriptions and overdoses in the past 15 years have led epidemiologists and lawmakers to refer to the current situation as an opioid epidemic (Sanger-Katz, 2018). According to Shiflet (2017), the overdose deaths from this drug crisis killed more people than a combination of car crashes, gun violence, or AIDS in a given year. From 2000-2014, non-medical prescription opioid use was a catalyst for overdose-related mortality (Calcaterra, Glanz, & Binswanger, 2013). Overdoses and opioid-related deaths were dramatically increasing (Suzuki & El-Haddad, 2017).

Opioid overdose deaths among males and females, individuals age 25 and older, non-Hispanic Whites, non-Hispanic Blacks, and Hispanics increased from 2016 to 2017 (Mattson et al., 2018). Almost 200 people died each day in the U.S. from drug overdoses (Sanger-Katz, 2018). Furthermore, according to Shiflet (2017), the human costs and economic costs attributed to opioid misuse, overdose, and death were extensive. Use of non-medical prescription drugs has led to increases in the number of fatal and non-fatal overdoses while the U.S. has seen a significant increase in drug-related mortalities and morbidities (Silva, Schragar, Kecojevic, & Lankenau, 2012). From 2000 to 2014, opioid-related overdose deaths increased by 200% (Rudd, Aleshire, Zibbell, & Gladden, 2016). There was an 80% increase of death rates involving synthetic opioids from 2013 to 2014 while 61% of all drug overdose deaths involved some type of opioid (Rudd, Aleshire, Zibbell, & Gladden, 2016). In 2017, more than 25% of drug overdose deaths involved the use of prescription opioids, and deaths related to prescription opioid overdoses increased by more than 400% from 2000 to 2017 (Hedegaard, Miniño, & Warner, 2018). Data from the Centers for Disease Control and Prevention revealed that opioid overdose related deaths nearly quadrupled between 1999 to 2011 (Volkow et al., 2014). According to

Evoy et al. (2020), over 630,000 drug overdose deaths occurred in the U.S. over the last 20 years. The majority of these deaths involved prescription or illegal opioids.

Other medical concerns arose because of opioid misuse. Emergency room visits involving misuse or abuse of prescription opioids increased 153% between 2004 and 2011, and admissions to substance-abuse treatment programs because of prescription opioids use more than quadrupled between 2002 and 2012 (Compton et al., 2016). According to Rudd, Aleshire, Zibbell, and Gladden (2016), there were over 33,000 overdose deaths and over 750,000 emergency department visits linked to opioid misuse in 2016.

Misuse Among Young Adults and College Population

With college students normally falling into the young adult or 18 to 25 year-old age group, it was important that studies were done to learn more about the impact opioid use and misuse is having on this population. Second to marijuana, prescription opioid use was the most commonly used illicit substance among teens (NIDA, 2012). While the opioid epidemic affected individuals with less education, college students were not immune to the opioid epidemic (Ho, 2017). Lifetime misuse of prescription opioids among samples of college students varied greatly across studies, with some having estimates as high as 32% (Benotsch, Martin, Koester, Cejka, & Luckman, 2011). There was increasing concern over the increase in illicit drug use among college students (Kerley, Copes, & Griffin, 2015). Brandt, Taverna, and Hallock (2014) found that the use of non-medical prescription drugs was widespread among college students. Kenne et al. (2017) found that the rate of non-medical use of prescription opioids among college students was almost 10%. The highest rates of nonmedical use of prescription drugs by age group were among college students and other young adults ages 18 to 24 (McCabe, Teter, & Boyd, 2006). When compared to young adults attending college, young adults with a high school degree and

less had higher rates of nonmedical prescription opioid use (Martins et al., 2015). While this contradicts findings in other studies, some of these young adults could have planned to attend college in the near future.

According to Collins, Abadi, Johnson, Shamblen, and Thompson (2011), individuals who were committed to excelling in school or who earned a 4-year degree were less likely to misuse prescription opioids. Brandt et al. (2014) found that almost 37% of students surveyed at a small college in the Northeast used prescription drugs for non-medical purposes while 48% of this population used pain relievers for non-medical use. During the continued opioid epidemic growth, there were limited studies that identified risk factors for nonmedical prescription opioid misuse in college students (Meshesha, Pickover, Teeters, & Murphy, 2017). This left college administrators with limited information to utilize in an effort to prevent or treat opioid use or misuse, as well as prepare for other challenges related to opioids.

Non-medical opioid use has been researched thoroughly over the last five to 10 years. According to Saha et al. (2016), the rate of use of non-medical prescription opioid use was greater in 18 to 64 year-old Caucasians and Native Americans. While this was a wide range, one study showed that young adults (18 to 25) were most at-risk for the non-medical use of prescription drugs (Drazdowski, 2016). Over the past 20 years, the nonmedical use and misuse of prescription drugs among children, adolescents, and young adults in the U.S. has increased substantially (McCabe & West, 2013). The misuse of prescription drugs by college students was widespread at a large university in the southeastern part of the U.S. as approximately one-fourth of a sample of college students used prescription drugs without a physician's prescription, and 30% of the sample had at least one close friend who misused prescription drugs (Meisel & Goodie, 2015). Hughes et al. (2019) found national data from the U.S. that revealed a

significantly higher percentage of individuals 18 to 25 years of age misusing prescription medications compared to younger and older age groups. Studies indicated an increase in opioid use, but suggested underreporting of use and deaths among college students (Hill & Claxton, 2018). Harries, Lust, Christenson, Redden, and Grant (2018) concluded that college students who misused prescription opioids were more likely to live off campus and exhibit increased impulsivity leading to an earlier age of increased unprotected sex.

Between 1999 and 2006, the number of 12 to 17 year-olds who reported non-medical use of prescription medications, including opioids, nearly doubled from 1,653,000 to 2,952,000 (Privette, Souder, Elliott, & Richardson, 2008). Dodrill, Helmer, and Kosten (2011) found that overall illicit drug use decreased in the U.S., but there was a significant increase in non-medical use of opioids in young adults. There has been an increase in the abuse of prescription opioids among young adults age 18 to 25 (Fiellin, Tetrault, Becker, Fiellin, & Hoff, 2013). In the U.S., prescription drug misuse has become common among adolescents and young adults, with 12% of 12 to 17 year-olds using drugs at least once in their lifetime (Siste et al., 2019). Young adults, 18 to 25 year-olds, have significantly higher rates of prescription opioid misuse than 12 to 17 year-old adolescents or adults over 26. (Le et al., 2018). Also, among the 18 to 25 year-old age group, prescription opioids were the most frequently misused class of prescription drugs (Schragger et al., 2014).

Undergraduates at four-year colleges and universities were often young adults. Nearly 15% of undergraduates aged 18 to 25 years old reported using drugs within the past year (Silvestri, Knight, Britt, & Correia, 2015). Researchers included undergraduates from one particular college and found that freshman were more vulnerable to misusing prescription drugs (Woicik, Stewart, Pihl, & Conrod, 2009). Holloway et al. (2014) found that the vulnerability to

misusing prescription drugs was based on the student's relocation from home, loss of important social networks, and the increased intense academic strain of the university curriculum.

According to Arria et al. (2008), the use of opioids quadrupled from the time a student was in high school and his or her second year of college. Yang et al. (2019) conducted a five-year study that included 338 college students and found that 35% of the students used non-medical prescription drugs, with the majority of the students using before their third year in college.

However, Lanier and Farley (2011) found that upperclassmen were less likely to have used non-medical prescription drugs in the past year.

Prescription opioid use was more likely to be a problem in colleges in the U.S. because of fewer restrictions on prescription practices, lower patient expectations and the fact that the healthcare system in the U.S. used substantially more prescription opioids than other high-income countries (Fischer, Keates, Buhninger, Reimer, & Rehm, 2014). Harries et al. (2018) found 2.2% of college students reported misusing prescription opioids in the last 12 months and another 5.3% reported misusing prescription opioids prior to the 12-month period. According to Kenne et al. (2017), college students at a small Midwestern university had a lifetime opioid use of 9.5%. Brandt et al. (2014) found that 36.8% of 303 college students reported using non-medical prescription drugs over their lifetime. These prescription drugs included the pain relievers Vicodin (hydrocodone/acetaminophen), OxyContin (oxycodone), codeine, morphine, Percodan (aspirin/oxycodone) and Demerol (meperidine). According to Abbasi-Ghahramanloo, Fotouhi, Zeraati, and Rahimi-Movaghar (2015), nearly 5% of all students at one of the largest universities in Iran misused prescription drugs at least three times a week and most of those students were 25 years of age or younger. Students from the same age group in China misused prescription drugs at twice the rate of illicit drug abuse (Jia, Jin, Zhang, Wang, & Lu, 2018).

The challenges with opioid misuse on university campuses were a fairly recent occurrence. NSDUH found that over 7% (2.5 million) of young adults aged 18 to 25 misused pain relievers in 2016 (Lipari, Ahrnsbrak, Pemberton, & Porter, 2017). Opioid prescriptions increased from 2002 to 2010 in the U.S. and started to decline in 2011; however, reported non-medical use did not change among college students (Dart et al., 2015). Non-medical use, or use without a prescription, was the most common use of opioids in college students and young adults in general (McCabe, Teter, Boyd, Wilens, & Schepis, 2018). According to Rozenbroek and Rothstein (2014), more individuals used prescription drugs non-medically than they used cocaine, heroin, hallucinogens, inhalants, and Ecstasy combined. Between 1993 and 2005, the use of certain prescription opioids, including Oxycontin, Percocet, and Vicodin, increased among college students by 350% (Malone, 2017). With the use of nonmedical prescription drugs, the dynamic of drug misuse has changed. The problem of drug misuse had new types of users, new types of drugs, new ways of obtaining drugs, new ways to use drugs, and new problems of abuse, dependence, and treatment (Barrett et al., 2008).

Abuse of prescription and non-prescription opiates, such as heroin, had become a serious public health issue among university populations in the U.S., and the issue required immediate attention (Daniels-Witt et al., 2017). The misuse of prescription opioids can lead to heroin use as heroin is less costly and more potent (Skolnick, 2018). Muhuri, Gfroerer, and Davies (2013) found that 79.5% of new heroin users had previously misused prescription opioids. As society has worked on ways to decrease prescription opioid availability within the drug market, the majority of those using prescription opioids started out using other opioids, such as heroin (Cicero & Ellis, 2015). Dart et al. (2015) found that nearly 80% of new heroin users reported their initial drug was a prescribed opioid.

According to Rudd, Seth, Scholl, & David (2016), there has been an increase in non-medical pharmaceutical opioid use and an increase in heroin addiction. Initiation of non-medical prescription opioid use at an early age has led to adverse consequences, including a transition to heroin use in young adults (Cerdá et al., 2013). In a group of 18 to 29 year-old New York City residents, their initiation into non-medical prescription opioid use under the age of 17 (on average), and 83% transitioned to heroin use within four years of their first prescription opioid use (Guarino, Mateu-Gelabert, Teubl, & Goodbody, 2018). In the last 10 years, 18 to 25 year-olds had the highest rate of heroin use (Hedegaard et al., 2015). The rate of heroin use had increased throughout the 10-year span.

According to Lankenau et al. (2011), many young adults who misused prescription opioids for a period of years eventually transitioned to heroin injection drug users. In two major cities in the U.S., most young heroin users started their drug use with opioid pills (Mars et al., 2013). In the college-aged population, the lifetime prevalence of heroin use was estimated to be between 0.3% and 0.8%, with over two-thirds of these individuals also misusing prescription opioids (Schulenberg et al., 2018). According to Schulenberg et al. (2018), 2 to 3% of colleges students with a prescription opioid use disorder reported transitioning to heroin. Data collected from 2010 to 2014 showed that heroin-related overdose deaths increased threefold during those years (Compton et al., 2016). Since 2014, fentanyl has emerged as a significant threat to public health, leading to substantial increases in unintentional drug overdoses in the U.S. (Somerville et al., 2017). Heroin is sometimes cut with fentanyl, and this has led to an increase in overdose deaths (Suzuki & El-Haddad, 2017).

College students in the U.S. had elevated prescription opioid misuse rates with higher alcohol use and a greater likelihood of experiencing alcohol-related consequences (Schepis et al.,

2019). According to Vallance, Roth, Thompson, Chow, & Martin (2016), recreational drug use was on the rise and students were mixing drugs and alcohol more. Within the college student population, research showed that nonmedical prescription opioid use was combined with alcohol, marijuana, or other drugs more than 75% of the time (Brandt et al., 2014). Non-medical use of opioids led to a greater likelihood of alcohol problems, other illegal drug use, and increased mortality (Lord, Brevard, & Budman, 2011). College students reported high levels of alcohol and drug use, with 61% of U.S. college students reporting past-year marijuana use, 21% reporting past-year illicit drug use other than marijuana, and 13% reporting past-year non-medical use of prescription drugs (Miech et al., 2019). College students who used a drug are more likely to use other drugs and marijuana use was often used combined with tobacco, binge drinking, and prescription drug misuse (Evans-Polce, Lanza, & Maggs, 2016). According to Rabiner et al. (2009a), several studies linked prescription opioid medical misuse with binge use of alcohol. College students who misused opioids for 14 days had higher odds of 14-day alcohol use and higher levels of alcohol use than students who were not misusing opioids (Schepis et al., 2019).

Rates of non-medical prescription opioid drug use among young adults increased over the past 20 years (Miech et al., 2019). That increase has led to increased alcohol and other drug use as well as sickness and death in this population. The increase in use of opioids among college students was a concern among college administrators. In an effort to decrease drug use in and around college campuses, college administrators employed prevention specialists to inform their students about the life-altering consequences of prescription drug misuse among them and their friends. College administrators should be concerned about the number of college students who are using drugs and have an interest to learn more about how they may respond to opioid misuse challenges on their university campuses

Public Health Relevance

Coronavirus disease (COVID-19) entered the U.S. in 2019 (Omer, Malani, & del Rio, 2020). The disease arrived in the U.S. during a time when the country continued to respond to the opioid crisis. The COVID-19 response took precedent over other health related issues, such as opioids (Bao, Williams, & Schackman, 2020). The U.S. continued to battle the high numbers of mortality and morbidity associated with opioid overdose (Hedegaard, Minino, & Warner, 2020). The life-span of many Americans became shorter because of the misuse of drugs, especially narcotics (Katz, 2017). COVID-19 caused challenges to health care and social structures and vulnerable populations of people who smoked, vaped, used opioids, or had a substance use disorder (Volkow, 2020). Social distancing and shelter in place orders created another challenge and it impacted mental health.

People who used drugs had a higher prevalence of respiratory disease, a chronic condition that was associated with prolonged drug use and increased risk for a severe COVID-19 infection (Abadie, Gelpi-Acosta, Aquino-Ruiz, & Aponte-Melendez, 2020). Chronic respiratory disease increased the risk of fatal overdose in opioid users (Leece et al., 2015). In regard to respiratory health, individuals that had a substance use disorder was more susceptible to infection by the coronavirus and its complications (Volkow, 2020). Leece et al. (2015) found that compromised lung function from COVID-19 could have put those using opioids at risk. Opioid use at high doses for a duration of several months could have broken down the immune's system function, which could have worsened the course of COVID-19 disease (Ataei, Shirazi, Lamarine, Nakhaee, & Mehrpour, 2020). Shah, Kuo, Baillargeon, and Raji (2020) found that long-term users of prescription and illicit opioids made up a growing population of Americans with

compromised immune function and respiratory depression. These individuals may have been at higher risk of infection with COVID-19 related hospitalizations, prolonged ICU stays, and death.

States, counties, and cities throughout the U.S. enacted travel restrictions and promoted social distancing to combat the spread of COVID-19 (Rodda, West, & LeSaint, 2020). The overall COVID-19 response required social distancing, and this made it difficult for those misusing opioids to find the care they needed or created challenges during their recovery (Volkow, 2020). Social distancing was important to help control the spread of COVID-19; however, it could have impacted individuals living with opioid use disorder, including impacting mental health that lead to greater substance use, and treatment seeking behavior (Linan et al., 2020). Continual social distancing led to feelings of anxiety, fear, and loss of control, all of which can predispose use and relapse of opioids (Pineo & Schwartz, 2020). People who used opioids were among vulnerable populations with an increased risk of drug-related harms and death during times of social distancing (Heimer, McNeill, & Vlahov, 2020).

Motives and Perceptions for Use and Misuse

Why college students used opioids and why others thought they use opioids were important to understanding opioid use in this population. The college years were a time when some students were entering into adulthood. There were many challenges with this transition. The amount of research completed on motives for prescription drug misuse among college students was increasing (Bennett & Holloway, 2017). This was good news; however, the studies were very diverse, which made it difficult to compare results. Bennett (2014) found that between the ages of 20 to 22 years, drug use in the student population was the same or higher than those who were not students. Some young adults perceived the recreational use of prescription drugs as

a safe and legal alternative to harsher illegal drugs, leading to a false sense of safety (Sanders, Stogner, Seibert, & Miller, 2014).

College students misused prescription drugs for various reasons. Quintero, Peterson, and Young (2006) discovered three reasons college students misused prescription drugs: self-medication, recreation, and fulfilling demands. The first motive of self-medication was for mental and physical conditions. These conditions included such areas as stress, pain, and being overweight. The second motive was recreational, including having fun or getting high. The third motive was to help students fulfill any demands they may have. Demands included help with academics, improve focus, or improve concentration. For the most part, college students misused prescription drugs for personal enhancement (Bennett & Holloway, 2017). Some examples of personal enhancement included helping with sports, assisting with sleeping, improving academic results, reducing anxiety, helping with a current illness, or getting high. Desantis and Hane (2010) found the motives for misusing prescription drugs included recreational (partying, experimenting, getting high) and academic (increasing personal capacity to achieve higher academic results). Brandt et al. (2014) found that there were several reasons college students used pain relievers such as Vicodin and Oxycontin. The main reasons were for socializing and partying. Some students reported misusing opioids to ease their emotional pain, but the motivation for use was largely recreational (Lord et al., 2011). Adolescent drug use often began with social experimentation of a single drug and evolved to include more dangerous drugs (Olthuis, Darredeau, & Barrett, 2013). According to Rozenbroek and Rothstein (2014), most of the non-medical use of prescription drugs by college students was for social activity with friends. College students had large and diverse social networks, which may have contributed to opioid misuse (McCabe et al., 2018). College students who participated in Greek organizations were

more likely to misuse prescription drugs (Gallucci, Martin, Beaujean, & Usdan, 2015). The environment and social surroundings had a big impact on the lives of adolescents and young adults. According to Collins et al. (2011), social surroundings also had a relationship with prescription drugs misused in the lives of adolescents and young adults. Risk factors for prescription drugs misused in adolescents included peers favoring substance abuse, peers misusing drugs more, and peers abusing substances (Rhoades, Winetrobe, & Rice, 2014). Over half of the male students got their prescription opioids from someone at their school, generally their classmates (Osborne, Striley, Nixon, Winterstein, & Cottler, 2019).

Recreational opioid misuse was another form of substance abuse among college students. College students who used opioids recreationally were at a higher risk for depression and substance use behavior (Davis, Bass, Wade, & Nahar, 2020). Once individuals using their prescription drugs gave or sold their drug to their peers, they created nonmedical users (McCabe, West, Teter, & Boyd, 2014). College students who had increased exposure to other college students using drugs had a higher likelihood of initiation and use, as well as greater durations and frequency of use (Russell, Trudeau, & Leland, 2015). While recreation and social outlets as reasons for college students to use opioids were prevalent in the research, research found that regular use of opioids could be motivated by desires to create a greater high and to decrease the symptoms of opiate withdrawal (Stein, Anderson, Kenney, & Bailey, 2017).

College students may have used substances to help them improve academically. The misuse of drugs for academic purposes was more commonly found among college students. According to Rabiner et al. (2009b), 60% of college students misused drugs to help them concentrate when studying or to support their academic performance. According to Schelle et al. (2015), college students took certain drugs to help change the cellular process in their brains

while hoping that this enhancement would boost their performance. According to McCabe et al. (2018), pressure from the collegiate academic environment could have lead college students to misuse opioids. Pustovrh and Mali (2014) studied one university and found that a little over 5% of the students had used prescription drugs to help with cognitive enhancement.

The transition college students experienced during their first part of college was a sensitive time that could have led to substance abuse (Stone, Becker, Huber, & Catalano, 2012). Many college students relied on social media to help them through the transition. Social media was showing up in the research as a motive for using opioids. Social media became more and more popular among college students. Some research showed that social media could have an impact on drug use among college students. With the social cognitive theory being applied, Fogel and Shlivko (2015) utilized 576 completed surveys with college students. The data was gathered from students as they waited to attend class. Results from the logistic regression analyses showed that a college student following a television actor on Twitter had a significantly greater chance of using drugs illegally. According to Littlefield and Sher (2014), specific personality traits also appeared to increase the likelihood of substance misuse. College students may also have looked to receive peer approval and this may have contributed to opioid misuse (McCabe et al., 2018).

Researchers found an association between previous involvement in high school sports and prescription opioid use and misuse (Veliz, Epstein-Ngo, Austic, Boyd, & McCabe, 2015). College administrators should be aware of this association and alert staff that these high school students could be more vulnerable to substance abuse when they arrive to college. According to the National Collegiate Athletic Association (2017), there were 500,000 college students involved in intercollegiate athletics. Researchers say that college athletes were in a unique

position as a student athlete and that placed them at increased risk for drug use (Buckman, Yusko, Farris, White, & Pandina, 2011). For years, researchers studied the reasons college students used and misused substances, and the results pointed to a combination of factors. Athletes felt like they were constantly being evaluated and tested, which resulted in them turning to drugs to help them cope with their feelings (Reardon & Creado, 2014). They may also have turned to drugs to manage pain from injuries, self-medicate for mental health issues, or gain a competitive advantage (Reardon & Creado, 2014). According to Veliz, Boyd, and McCabe (2015), policymakers such as college administrators, need to consider that participation in intercollegiate athletics may lead to risky behaviors like substance abuse.

College students used opioids to help cope with negative mood states they experienced, leading to greater non-medical opioid use (Merlo, Singhakant, Cummings, & Cottler, 2013). Newly gained freedom from parents, high levels of academic stress, and new social groups all contributed to a person's likelihood of drinking or using illicit substances. Myers, Aarons, Tomlinson, and Stein (2003) found that increased substance use was associated with having lower grade-point averages and having higher levels of negative affectivity. Edwards et al. (2016) also found that negative affectivity was related to non-medical opioid misuse.

Because of the increasing rates of drug use among college students, scholarly attention was devoted to understanding motives and prevalence of drug use (Kerley et al., 2015). If college administrators understood the motives for misusing prescription drugs, they could assist in explaining why college students on campus start or continue to misuse prescription drugs (Bennett & Holloway, 2017). One study found that there was a need to have prevention and intervention programs beyond college campuses to help curb nonmedical prescription drug use (Martins et al., 2015). Given the various adverse consequences related to non-prescription opioid

use, prevention was a high priority, and it required a better understanding of the factors leading to use (Morioka, Howard, Caldeira, Wang, & Arria, 2018). College administrators who admitted only women had less of a challenge than other colleges, due to women being less likely to use illegal drugs (Fogel & Shlivko, 2015).

Impact on Academic Performance

College administrators had concern over how opioid use and misuse impacted the academic performance of college students. University students who misused substances did not do as well academically as those who have not misused substances (Malone, 2017). In the U.S., college students had an increased risk of misusing prescription drugs, and those students experienced a wide range of problems, including psychological, social, and physiological (Holloway et al., 2014). According to Brandt et al. (2014), misusing opioids led to changes in social behavior, such as antisocial behavior, family problems, interpersonal issues, and academic issues. Even though there was a high prevalence of drug misuse of prescription opioids among young adults, there was limited research related to opioid misuse and academic performance (Harries et al., 2018). However, college students using opioids had an overall lower grade point average than those that did not use opioids (Harries et al., 2018). With adolescents, prescription drug misuse had a relationship with a decline in academic performance (Siste et al., 2019). Prescription opioid non-medical misuse was linked to poor outcomes in college students, including higher rates of illegal drug use, diminished academic achievement, and mental disorders (Kelly, Rendina, Vuolo, Wells, & Parsons, 2015). According to Malone (2017), the use of opioid drugs was associated with lower school performance and increased risky behavior. College students who used drugs heavily may have been less likely to engage in behaviors that contributed to better health, improved academic scores, and a good career outcome (Bickel,

Johnson, Koffarnus, MacKillop, & Murphy, 2014). Some college students felt it was acceptable to use drugs for the right reasons. College students expressed that their drug use was different from serious drug users because their motivation to use drugs was for academic reasons rather than the urge to get high or stay awake (Kerley et al., 2015). This created challenges for college administrators because they may have not known the true motive for drug use, making it difficult to prevent or address the drug use. Nonetheless, college administrators were continually developing ways to address problems related to opioid use among the college student population.

The opioid epidemic was, and continues to be, very costly for society. According to Birnbaum et al. (2006), the non-medical prescription opioid use was \$53 to \$72 billion annually. If communities spent so much of their resources on battling the opioid epidemic, colleges may have lost funding they needed to keep their colleges in business. This may have impacted their ability to provide students what they needed to be successful academically. In today's world, attending college was considered more of an overall experience than an education. College administrators were focused on the importance of the college experience and what they did to make it the best. Students and parents considered many factors when choosing a school to attend. Opioid use and misuse on a college campus was a negative factor and could certainly be a deterrent when it came to making a decision on which college or university to attend.

Services and Programs for Opioid Use and Abuse

College administrators continued to conduct efforts to impact opioid misuse in and around their campuses. Society was also making an effort to curb opioid use. Once the epidemic reached a certain level, steps were taken to deter abuse and diversion, such as prescription drug monitoring programs, abuse-deterrent opioid methods and legislation, new prescribing guidelines, and increased physician awareness related to the appropriate use of opioids

(Kennedy-Hendricks et al., 2016). According to Compton et al. (2016), efforts were being made to educate health professionals and the public about proper use, implement prescription drug monitoring, and enforce prescription writing abuse. Primary care providers primarily attributed opioid misuse to individual behavior but recognized that physicians and the health system were contributing to the problem (Kennedy-Hendricks et al., 2016).

College and university administrators worked with leaders across many areas, including government, law enforcement, and healthcare to fight the complex opioid crisis (Shiflet, 2019). It was important that college administrators worked closely with government, clinicians, and patients to formulate ways to combat prescription drug misuse (Siste et al., 2019). Public health authorities, medical examiners/coroners, and law enforcement agencies, as well as other community partners worked together to improve detection of outbreaks of drug overdose deaths involving illicit opioids (including heroin and illicit fentanyl) through improved investigation and testing, reporting and monitoring of specific drugs, and facilitating a rapid and effective response that could address this emerging threat to public health and safety (Peterson et al., 2016).

Successful prevention programs consisted of an initial assessment and monitoring of the patient (Siste et al., 2019). According to Onigu-Otite and Shorter (2018), schools were using specific curriculum to screen and monitor drug use. Superintendents in a Pennsylvania district worked with their local school boards and communities to develop district programming to address local opioid misuse and addiction (Burfoot-Rochford, 2020). Duke University regarded the misuse of drugs as an issue of academic integrity, similar to cheating (Higher Achievers, 2015). Universities in South Africa adhered to the Drugs and Trafficking Act of 2014, which criminalized the selling and use of illicit drugs such as heroin on university campuses (Muswede

& Roelofse, 2018). The University of Limpopo responded to opioid abuse through a multifaceted approach focused on holistically promoting, developing, and creating a conducive learning environment for its students through provision of student-focused programs, such as educational sessions (Muswede & Roelofse, 2018). Some universities used trained peer counselors as part of their student counseling services (Andraka-Christou et al., 2020). Greenfield Community College worked with various partners, including law enforcement and public health, to address the opioid epidemic in rural western Massachusetts (Salomon-Fernández, 2019).

Colleges across the U.S. were making efforts to provide opioid overdose prevention efforts, such as educating students and collaborating with campus police (Steiker, 2016). The University of Texas at Austin required mandatory training of all on- and off-campus resident advisors (Steiker, 2016). Research found several messaging strategies to be effective in increasing public support for expanding naloxone distribution (Bachhuber, McGinty, Kennedy-Hendricks, Niederdeppe, & Barry, 2015). The University of Washington placed naloxone kits next to fire extinguishers, while other universities were distributing information through GetNaloxoneNow.Org and other internet sites (Steiker, 2016). Washington State University implemented a naloxone safety net project to increase awareness of opioid overdose, increase availability of naloxone, and understand perception of university students (Panther, Bray, & White, 2017). Prescription drug monitoring programs helped medical providers communicate with patients and identify inappropriate prescription drug use, which was helpful with prevention and better management of drug misuse (Siste et al., 2019). The implementation of a prescription monitoring program showed a reduction of 30 percent in the rate of prescribing opioids (Bao et al., 2016).

Physiological and psychological effects of opioid misuse included: increased risk of negative drug interactions, withdrawal, physical dependence, injury related to intranasal use, organ damage, cardiovascular risk, accidental overdose, death, psychological dependence, distress, depression, and anxiety (Holloway et al., 2014). The college environment was high stress, and research found a relationship between opioid misuse and depression in college students (Martins et al., 2012). According to Muhuri et al. (2013), individuals who misused prescribed opioids also had a distinct mental health and substance use profile. Eisenberg, Hunt, and Speer (2013) found characteristics of college students placed them at risk for substance abuse, as well as mental health complications like depression. Researchers found a connection between emotion dysregulation and non-medical use of opioids in college students (Morioka et al., 2018). According to Martel, Dolman, Edwards, Jamison, and Wasan (2014), severe non-medical use of opioids led to negative mood states. The use of non-medical opioids also resulted in anxiety and symptoms of depression (Martins et al., 2012). Scherrer et al. (2016) found that prescription opioid misuse was linked to initiation of depression and suicidality. Furthermore, prescription drug misuse was related to several mental disorders and opioid use was closely related to depression (Siste et al., 2019). It was recommended that targeted programs and investigations were implemented among college students to assist with assessing depression in students (Davis et al., 2020). College and universities needed to develop and implement comprehensive and effective policies related to opioid overdose prevention to assist in the reduction of the number of overdose deaths (Shiflet, 2019).

Due to the dramatic increase of non-medical prescription opioid over the last decade, it was critical for university wellness centers to screen for substance abuse and provide students information about their potential risks (Saha et al., 2016). Screening tools, in the form of

questionnaires, were used successfully in 502 students that presented to a student health center (McNeely et al., 2019). Chen, Chang, and Lee (2020) used screening tools, with excellent validity and reliability, to screen 1,214 college students. Student health centers that identified risk factors associated with opioid misuse during a student's college years created more helpful services. According to Osborne et al. (2019), screening for substance abuse may be an effective strategy in combating opioid misuse problems. Research determined that risk factors included students living off-campus and students having lower grade point averages (Harries et al., 2018). College students misusing prescription opioids had a number of risk factors that could have been used to develop prescription opioid screening tools (Harries et al., 2018). Research showed that screening tools could have helped identify a number of behaviors that could be addressed when prescription opioid users are identified (Harries et al., 2018).

Unfortunately, students may have not been interested in utilizing university health centers to help with their substance abuse. According to Cooper and Nielsen (2017), clients utilizing centers to get help with their opioid use complained of excessive rules, restrictive dispensing schedules for drugs such as methadone, lack of privacy, and unfriendly staff. According to Wu, Blazer, Li, and Woody (2011), there were barriers to adolescents utilizing and finding treatment. First, many students felt like they did not need treatment, mainly due to opioids being a prescription drug, and they felt it was safer to use versus other illicit drugs that were obtained without a prescription. Second, students may have not received treatment if they did not want others to know they were doing opioids. Third, students may have been unaware of the opioid treatment services that were available. Finally, students may have been unaware that they had a substance use disorder. A popular treatment for opioid misuse was substance abuse programs. Substance abuse programs may have been an option for treatment of college students. The use of

substance abuse programs had become more prevalent. The number of admissions to publicly funded substance abuse programs increased from 91,000 to 259,000 for non-heroin opioid abusers during the timeframe from 2002 to 2010 (SAMHSA, 2014). Twenty-eight percent of those admissions were aged 18 to 24.

Some college students entered college with no prior treatment experience for their substance use disorder (Moberg, Finch, & Lindsley, 2014). College students may become addicted to opioids. Methadone has been used for years as a therapy for opioid addiction. Methadone maintenance therapy was a popular treatment for opioid addiction and can lead to decreased heroin and illicit drug use, as well as reduced mortality risk (Chou et al., 2015). However, despite methadone being listed as an essential medication for opioid use disorder, fewer than 12% of Americans and 25% of Canadians with an opioid disorder received treatment (Pearlman, 2016). College administrators and university health centers should know that clients using methadone have mentioned that stigma was a common feature of maintenance therapy (Earnshaw, Smith, & Copenhaver, 2013).

While harm reduction and prevention programs are important for college students, some students may have needed help recovering from opioid misuse disorders. Collegiate recovery programs were a critical resource that could have helped college students with recovery. From 2000 to 2017, the number of collegiate recovery programs on college campuses increased from four programs to 80 programs across the nation (Laudet et al., 2014). When students were part of a recovery community on campus, they avoided relapse and stayed committed to reaching their goals. According to the Association of Recovery in Higher Education, nearly 95% of the students who participated in collegiate recovery programs on college campuses maintained their recovery (Ashford, Brown, & Curtis, 2018). Furthermore, college students enrolled in collegiate recovery

programs reported a higher overall grade point average and graduation rates, and lower relapse rates than students who did not participate (Laudet et al., 2014).

Summary

Bronfenbrenner's theory addressed human development by focusing on three areas: an individuals' perspective of the environment, the environment surrounding that individual, and the interaction between the individual and the environment (Reifsnider et al., 2005). The examination of the college administrators' experiences related to college students using opioids on college campuses was completed utilizing this theory.

The number of college students using and misusing medical and nonmedical prescription opioids has been on the rise the last 20 years (Brady et al., 2016). The increased usage in the general population has carried over into the college population. The research showed the opioid use epidemic as a serious public health issue in college students. According to Malone (2017), the use of prescription opioids increased among college students by 350% between 1993 and 2005 (Malone, 2017). College students were very vulnerable and were currently within the age group that was impacted the most by opioid use and misuse.

College administrators were concerned with students' opioid use and misuse due to the impact on academic performance and health, as well as the economic burden it was having on the college campuses and surrounding communities. The students use and misuse of opioids led to negative health effects and possibly death. Opioid-related mortality was higher than all other forms of drug-related deaths combined (Han et al., 2015). The academic performance of students also suffered, as well as their inability to participate in collegiate activities. Performing in collegiate activities may have helped their academic performance. Brandt et al. (2014) found that misusing opioids led to academic issues, as well as changes in social behavior.

The research showed many motivating factors for college students to use and misuse opioids. Quintero et al. (2006) discovered three motives for misusing prescription drugs: self-medication, recreation, and fulfilling demands. Other motives from the research included assistance with studying, enhancing the college experience, helping to deal with being in a new environment, succumbing to peer pressure, getting high, or just wanting to experience the drug for the first time. Some college students may have used opioids due to social media or because a friend was using. Others may have used opioids to help with athletics. Sometimes students developed relationships with someone to get the drugs they needed.

College students may have needed help in preventing or treating opioid use and misuse. Some colleges offered programs and services to their students. There was research related to the different options when it came to assisting students with getting the help they needed. Colleges and universities across the U.S. were working with community partners to put programs in place (Shiflet, 2019). Prevention was on the forefront of the minds of college administrators, in an effort to decrease the number of students using. This may help end the opioid epidemic within the college student population.

The objective of this review was to collect information related to the increase use and misuse of opioids in the college student population, as well as the impact this was having on the students. It was evident that the impact includes health and academic performance. Research was continual on the motivating factors for college students to use opioids and what colleges and universities were doing to combat this epidemic.

CHAPTER THREE: METHODS

Overview

The purpose of the qualitative intrinsic case study was to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. This chapter described the design that was used and how it was applied. The research question was restated and details were shared regarding the setting and the participants. The data collection and analysis procedures were covered. The final section of the chapter included an explanation of trustworthiness and ethical considerations. The opioid public health crisis was impacting college campuses in a negative manner. Because research was conducted with college administrators at one university, a comparative case method was used. According to Agranoff and Radin (1991), comparative case methods developed cases through use of multiple sources of evidence, investigate phenomena within their contexts, and analyze information by comparison.

Design

Qualitative research design was used to conduct this study. The research question in this case study is addressing the experience of college administrators on a college campus while the interview questions dug deeper to learn how administrators and their staff were helping students who use and misuse opioids. Qualitative was the most appropriate design because research needed to be conducted on the experiences administrators were having related to opioid use and misuse on college campuses. Qualitative research begins with assumptions and the use of interpretive frameworks. These frameworks inform the study of research problems that address the meaning of individuals attributing to a human or social problem (Creswell & Poth, 2018).

Case study research can be used in different fields of study. Since the 1920's, case study research has been used within the natural sciences, social sciences, and humanities (Mills,

Durepos, & Wiebe, 2010). Over time, the interest in using case studies across multiple disciplines has grown because of the desire to study phenomena in context (Crowe et al., 2011). According to Yin (2018), researchers used case study research when the main research questions were “how” and “why”, there was little control over behavioral events, and the focus of the research is contemporary. Creswell (2012) preferred to select cases that showed different perspectives on the problem. This sampling method was called purposeful sampling. Because there are many types of case studies, it was important to avoid confusion between non-research case studies such as popular case studies or teaching-practice case studies (Yin, 2018). I used an intrinsic case study design. According to Yin (2018), a case study design was appropriate when researchers focused on contemporary events. An intrinsic case study was the study of a case (specific group) wherein the case itself was of primary interest in the exploration (Mills et al., 2010). An intrinsic case study design focused on a specific group (college administrators) and their experiences. This case study explored the experiences of college administrators regarding opioid use and misuse on their college campus. The exploratory nature allows for further research to be conducted on the topic. Future exploration of experiences of use and misuse of opioids on college campuses will add to existing data.

Once I identified the type of case study, I completed the following tasks: obtained Institutional Review Board (IRB) approval to protect human rights and screened candidates that may be part of the case study (Yin, 2018). After a detailed description of the case, researchers should focus on a few key issues to help understand the complexity of the case, as well as understand common themes (Yin, 2018). The experiences of the college administrators may help with understanding why students were using and misusing opioids. A theory driven approach to defining the case may help generate knowledge that is potentially transferable to others in the

field (Eccles, 2006). Data collection, according to Creswell and Poth (2018), can be quite extensive, including many different methods of collecting data. Yin (2018) recommended six ways to collect information: documents, archives, interviews, direct and participant observations, and physical artifacts. The document review consisted of collecting information from policies, procedures, and guidelines on how the college is addressing the opioid challenges. When the data analysis is complete, some researchers arrive at generalized conclusions and lessons learned.

Research Questions

Central Research Question: What experiences do college administrators have with college students' using and misusing opioids on college campuses?

Sub-Questions:

1. What is the training and background of administrators that gives them the ability to address challenges with opioid use and misuse on college campuses?
2. Do the administrators know the policy and procedures in place that address opioid use and misuse on these campuses?
3. From the administrators' viewpoint, what are staff attitudes toward opioid use by college students?

Setting

The setting for this study was a university campus in South Carolina. The university was large enough that 10 administrators participated in this setting. The setting was chosen because of known cases of opioid use and misuse on this particular college campus. Another reason for this setting was the geographic location of the university. The focus was the exploration of experiences of college administrators with opioid use and misuse that occurs on their campus. While working with the university, the president was the first point of contact and guidance was

provided to the researcher on which administrators participated. From an organizational structure standpoint, the president of the university worked under the guidance and oversight of a board of trustees. The board had a chair that provided guidance and leadership for the board. The president had a cabinet under his direction. The cabinet consisted of a provost, dean, athletic director, and vice-presidents from different areas such as finance, campus life, enrollment, marketing, curriculum, athletics, and security. The staff and faculty of a university that existed under the cabinet members made up the university's organizational structure. Administrators from the student health clinic often fall under the guidance of the vice president of campus life. These administrators were considered as participants. All of the participants were assigned a pseudonym to protect their confidentiality. Each participant had a chance to choose their pseudonym.

Participants

A purposive sample was used. Purposive sampling was appropriate when a researcher had something in mind and certain participants were better suited for the study (Etikan, 2016). Due to working with intact groups, convenience sampling was used. Convenience sampling was a type of data collection that relied on population members who were conveniently available to participate (Sedgwick, 2013). The sample consisted of administrators from a South Carolina university campus. Joe, Sanjay, Lorenzo, Betty, Natasha, Gray, Will, Emily, Zach, and Buford participated in the interviews. All, except for Joe, Betty, and Gray, participated in the focus group. For the most part, samples for qualitative studies were much smaller than those in quantitative studies (Ruhl, 2004). Sample sizes must be large enough to assure most or all of important perceptions were uncovered while making sure the sample is not so large that it created repetitiveness (Mason, 2010). Mason (2010) found that the most common sample sizes

were 10, 20, 25, 30, and 40. According to Boddy (2016), the determination of a sample size for qualitative research was contextual and somewhat dependent upon the scientific paradigm under which the investigation was taking place. The sample consisted of 10 administrators.

Administrators included the president and many of his cabinet members or leadership team. These cabinet members were several vice-presidents, the provost, and the athletic director. Other administrators that participated were the manager of the school health clinic and one board of trustees. The participants were selected with guidance and recommendations from the president of the university, based on the amount of experience they had with opioid use and misuse on college campuses. As these individual administrators participated in data collection methods, they were referred to using pseudonyms to keep their confidentiality. The demographic information for all of these individuals was noted. Research on policies and procedures was coordinated with the president's office at the university.

The Researcher's Role

According to Denzin and Lincoln (2003), the researcher was considered an instrument of data collection. As the sole researcher, I served as the human instrument and data passed through me. My assumption was that some administrators had more to share than others related to experiences with opioid use and misuse on college campuses. I have worked on task forces and committees directly related to opioid use and misuse and understand specific terminology in the opioid arena. My role was to find the truth by immersing myself into the research. I was an outsider when it came to the university, but I worked for a state agency in South Carolina. My role started out as neutral and stayed that way when working with the university in South Carolina. I asked probing questions, listened well, documented well, and dug deeper when needed. I used sharp observer skills to learn additional information through interviews and

document reviews. My observer skills were enhanced by making sure I recorded information timely and accurately, differentiating between items related to topic or question, controlling emotions, and being physically and mentally fit and alert.

Procedures

Participants were selected with guidance from the university president. Application for the use of human research participants was submitted to request IRB approval through Liberty University. Once the IRB approval was received, data was obtained by conducting interviews, a focus group and reviewing the university's policies and procedures. Contact was made with the office of the president to explain the project and accept guidance from the presidents' office on who may participate in the interviews. The pool of participants was 10 individuals. Interviews were scheduled with participants via tele-conference. Interview questions were provided ahead of time and were asked in the same order when participant and interviewer met via tele-conference. Transcription of each interview was completed carefully to make sure all information was recorded accurately. Once all interviews were completed, a moderated focus group was facilitated on the college campus. The focus group included participants who completed the interviews. Document review was accomplished by working with the president's office to set up time with staff on the university campus to review policies, procedures, and guidelines. The researcher searched for documents to review with assistance from the president's office, as well as other interview participants. The results from these three data collection methods were compared to determine if the responses from the interviews and questionnaires coincide with the policies and procedures in place at the university. The researcher followed all of the steps in the data collection and analysis to make sure data were kept pure.

Data Collection and Analysis

Before collecting any data, IRB approval was obtained. Case study evidence came from one of six sources: documents, archival records, interviews, direct observations, participant observation, and physical artifacts (Yin, 2018). Yin (2018) saw the case study design as having a unique strength because it had the ability to deal with a variety of evidence from these sources. When collecting evidence, researchers asked good questions, listened well, adapted to the situation, understood the issues being studied, and followed high ethical standards (Yin, 2018).

There were three methods of data collection: interviews, a focus group, and documentation review. First, semi-structured interviews were conducted with selected participants. Due to the flexibility of semi-structured interviews, they were appropriate for small-scale research (Drever, 2006). According to Johnson (2017), semi-structured interviews allowed participants the freedom to express their views in their own terms. Using the interview as a method of data collection allowed for questions to be asked to help answer the research question. I expanded on the interview questions to learn more about the experiences of college administrators related to opioid use and misuse on college campuses. The interview questions addressed the sub-question about training and background that administrators had related to the topic. Next, a focus group was facilitated with invitations offered to all administrators on the participant list. This allowed for additional data accumulation to add to what was collected from the interviews. Focus groups helped to collect a wide variety of information due to the range of opinions and views of the participants (Doody, Slevin, & Taggart, 2013). The last method of data collection was a review of documents such as policies, procedures, and guidelines related to opioid use and misuse. A comparison of the data showed congruency and incongruences among

the experiences of the college administrators. This data collection method addressed the sub-question about policies and procedures in place related to opioid use and misuse.

Interviews

Interviews were the gold standard used in qualitative research (Oltmann, 2016). According to Yin (2018), the interview was one of the most important sources of case study evidence. McTier, Briscoe, and Davis (2020) used semi-structured, face-to-face interviews to solicit participant's perceptions and beliefs. The interview was called the primary method used in qualitative research (Doody & Noonan, 2013). There was a consistent line of inquiry with a fluid stream of questions (Rubin & Rubin, 2011). Weiss (1995) referred to this type of interviewing as an in-depth interview. Semi-structured interviews were conducted via tele-conference. The following were the questions for each university administrator, or designee:

1. What are the major factors contributing to the problem of opioid use and misuse on college campuses in South Carolina?
2. Please describe your education and training related to challenges with opioid use and misuse in students on your campus.
3. How does the knowledge, training, and background of the school staff help the students on your campus, as it relates to opioid use and misuse?
4. Please describe policies, procedures, and guidelines that are in place to help with challenges related to opioid use and misuse in the students on your campus.
5. What experiences have been most helpful to university administrators when dealing with opioid use and misuse among the student population?
6. What experiences have been most helpful to staff when dealing with opioid use and misuse among the student population?

7. What are the attitudes and dispositions of the staff related to opioid use on campus?
8. What are university administrators doing to improve the work being accomplished to help with opioid use and misuse?
9. What are health staff doing to help university students with challenges related to opioid use and misuse?
10. What resources would South Carolina colleges and universities need to address opioid use and misuse in schools?
11. What resources are available in the community to help students address opioid challenges?

Questions one through four were knowledge questions. It is good to start with questions that everyone can answer (Yeong, Ismail, Ismail, & Hamzah, 2018). The first question allowed for collection of basic information to determine the level of knowledge the participant has on the subject matter. As a follow-up to each question, probing occurred to make sure all information was ascertained. According to Kamasak, Fuson, and Bulutlar (2010), knowledge sharing led to innovation. Palombi, LaRue, and Fierke (2018) worked on an initiative that resulted in statistically significant increases in faculty within the college of pharmacy that understood and appreciated community engagement related to reducing opioid use.

Questions five and six allowed the interview participants to share experiences related to the subject matter. Experiences covered a broad range of areas. It was important that researchers ask questions properly to get the most productive answers. According to Wolgemuth et al. (2015), participants' experiences differed based on the opportunity to reflect on their interview experiences and the sensitivity of the topic explored. Researchers must demonstrate the quality of their work in ways that correspond with their assumptions about their use of interviews (Roulston,

2010). Within the interview, research engagement required those being interviewed to explore their own thoughts and feelings along with the interviewer (Clark, 2010). This helped them to share complete experiences.

Questions seven through 11 gave the participants a chance to share what was being done at the universities and in the community to be helpful to the college students that were having challenges with opioid use and misuse, as well as a reflection of the attitudes. According to Staton, Melekis, and McCarthy (2018), CRCs have been used by colleges and universities since 1977, but there were only four universities using them from 1977 to 1997. As of 2018, there were 101 CRCs available on university campuses (Staton, Melekis, & McCarthy, 2018). Most of these were in larger universities. The questions gave university administrators a chance to share what products and resources they used. There may also be an accumulation of helpful hints from the universities that were having success with the CRCs. Question 10 brought to light the resources that colleges and universities in South Carolina needed to battle opioid challenges on their campus. Even when campuses have resources that help students stop using opioids, the students may still relapse. Laudet et al. (2014) cited five studies that showed relapse rates ranging from 60 to 79% in the first year after treatment; these rates rise to 90% when the period is extended to 5 years.

Focus Group

Breen, Lindsay, Jenkins, and Smith (2001) performed case studies that used focus groups. They found that focus groups used detailed scheduling and recordings for thematic analysis. One focus group was conducted on the university campus. The focus group was facilitated with a group of seven participants. The data collected was used as additional information to add to information collected from the interviews. Questions were asked to initiate and facilitate

discussion. Follow-up questions were asked to drive discussion among the participants. The questions included open, introductory, transition, key, and ending (exit) questions. The questions were:

1. Please discuss your previous and current experiences as an administrator related to opioid use and misuse among college students?
2. Please share a specific example of an interaction or experience you have had with opioid misuse in college students?
3. What thoughts, feelings, and associations first come to mind when you think about opioid misuse in college students?
4. If you could change one thing about the way your college handles opioid misuse in your students, what would it be?
5. How do you prefer your college to address issues related to opioid misuse in college students? Some examples are policies, procedures, guidelines, or other. Please explain why you prefer one over the other.
6. What are the three most challenging items that impact the work your college does related to opioid misuse in college students?
7. Please share any other points or comments you would like to make about opioid misuse in college students?
8. Please share related information or topics that we should have covered, but did not?
9. Follow-up questions to be used after questions are asked:
 - a. Please expand on your thoughts related to this?
 - b. Please give us a few examples?
 - c. How did you respond when that happened?

- d. Why do you think it made you feel that way?
- e. Please expand on your comment?
- f. Who has had a similar or different experience?

Questions one and two were experience questions. Participants had an opportunity to share any experiences they have had, as well as specific examples. The background, or experiences, of a participant provided a good foundation for qualitative research (Horsburgh, 2003). Experiences of each participant in the group elicited and challenged other participants' thoughts and perspectives (Patton, 1999).

Question three allowed participants to express their feelings. Emotions played an integral part in decision making (Fenton-O'Creevy, Soane, Nicholson, & Willman, 2011). To understand a human's experiences, we needed to understand their emotional experience (Stanghellini & Rosfort, 2013). Questions four and five allowed for participants to comment on processes that administrators know universities have used to address opioid use and misuse. A comprehensive approach incorporating various levels of prevention was critical to provide prevention and treatment when combating opioid use and misuse (Daniels-Witt et al., 2017).

Question 6 allowed the administrators to be specific about challenges the administrator or university encountered while addressing opioid use and misuse in the student population. Evidence-based harm reduction intervention could have been controversial and a small percentage of opioid users sought treatment (Rieder, 2020). Questions 7 through 9 helped gather additional information. Once the focus group was warmed up, additional questions helped to generate additional ideas within the social setting (Breen, 2006).

Once IRB approval was received, a focus group was conducted with the administrators on the college campus in South Carolina. In this research, all administrators identified as

participants received invitations to participate in a focus group. The participants included administrators who participated in the interview data collection. According to Brod, Tesler, and Christensen (2009), it is important to establish content validity based on the scientific methodological literature and the researcher's experience. In this research, the face validity was an assessment of whether the questions used during the focus groups appeared to be a valid measure of the construct. Member checking was used for clarification. Data and information collected through a focus group and interviews was shared with participants for them to verify. There were 10 participants on a university campus in SC. The technique allowed for exploring the credibility of the results (Birt, Scott, Cavers, Campbell, & Walter, 2016).

Review of Documents

In a case study conducted by Singh, Mathiassen, Stachura, and Astapova (2010), several data collection methods were used, including the review of written materials. Sing et al. conducted site visits to collect data. They reviewed secondary data sources such as annual reports, published papers, and other written materials. This case study with college administrators was conducted similarly with the written materials review as part of the document data, as well as the focus group of the participants. Barzun and Graff (2004) were strong supporters of documentary narrative. Policies, procedures, and guidelines related to opioid use and misuse was collected from the university. Leaders from the president's office, student affairs, school health centers, the board of trustees, athletics and other areas helped gather these documents. Each document was reviewed to do a comparison between policies, procedures, and guidelines in place versus the responses that were received from the interviewees. Information from the documents was incorporated within the themes of the results section.

Document analysis was performed on policies, procedures, guidelines, and other

documents that the university was using to respond to opioid use and misuse on their campus. Documents reviewed were the student code of conduct, the drug-free schools act, policies from a specific athletic conference, National Collegiate Athletic Association (NCAA) policies, and the university website. Each document was identified within the results section. All documents were directly related to substance abuse, especially opioid use or misuse.

Data Analysis

Thematic analysis was used within this qualitative research. According to Braun and Clarke (2006), thematic analysis was an accessible and theoretically flexible approach to analyzing qualitative data. The analysis searched for commonalities and differences across the data set. This analysis was applied to the interviews conducted. Rubin and Rubin (2011) claimed that this analysis is exciting because there was an opportunity to learn about themes and concepts embedded throughout the interviews. A narrative from the interviews was included, along with quotes from those that were interviewed.

The focus group was administered on the college campus. Questions were asked by a facilitator during the focus group. The focus group consisted of predetermined semi-structured interviews utilizing broad questions pertaining to a certain topic (Doody et al., 2013). The use of focus groups helped researchers generate transcripts of discussion and opinions (Doody et al., 2013). The focus group analyses process included conducting a focus group where a group of individuals were first approached for interviews on a certain topic, then transcription of data, and comparative analyses of text and words (Schmidt, 2015).

The third analysis was completed on public records at the university. Document analysis was a form of qualitative research in which documents were interpreted by the researcher to help define the topic (Bowen, 2009). Document analysis was a capable way of gathering data because

documents are manageable and practical resources (O’Leary, 2014). Document analysis was an important research tool used for social research. It is an invaluable part of most schemes of triangulation (Bowen, 2009).

The first step in the analysis of the data was to manipulate or play with the data (Yin, 2018). The best way to play with the data was to place the data in categories based on different themes and subthemes. The data will be closely examined and coded utilizing an outline. The coding was used to gather data from the triangulation. Saldaña (2016) encouraged researchers to develop new or hybrid coding methods to fit a particular study. Structural and causation coding was used. The structural coding incorporated data from interview transcripts and document reviews. Causation coding flushed out factors that were influencing behavior. The college administrators responded to the interview questions and other methods of data collection, as well as the information in the documents, resulting in different areas of concentration, thereby making it easy to formulate themes and subthemes. Thematic analysis developed a pattern across a qualitative data set (Clarke & Braun, 2017). The participants and their demographic information was identified using a table. Each participant was assigned a pseudonym. The responses of the participants were coded by placing into different sections of the outline. Each section of the outline was tagged with a particular theme and framework. Personal knowledge and experiences were used to help interpret the data for coding.

Analysis of data required application of one of five analytic techniques, including pattern matching, explanation building, time-series analysis, logic models, or cross-case synthesis (Yin, 2018). The best technique for this particular case study was pattern matching logic. Yin (2018) found it to be one of the most desirable techniques to use for case study analysis. When comparing results of data collection from each individual case, this study looked at how the

patterns align for each of the college administrators' experiences.

Trustworthiness

There are many definitions and criteria for trustworthiness, but the best-known criteria were credibility, transferability, dependability, and confirmability as defined by Lincoln and Guba (2006). There were some limitations, such as interviewing via tele-conference versus in-person and the possibility that participants did not give accurate information.

Credibility

Credibility was based on the how true the research findings were. Credibility established whether the research findings represented legitimate information drawn from the participants' original data and was a correct interpretation of the participants' original views (Korstjens & Moser, 2018). Credibility was assured in this research by utilizing triangulation of interviews, questionnaires, and document review. It is important that the research was as credible as possible.

Dependability and Confirmability

Dependability in qualitative research referred to how stable data was over time, considering the conditions. It was an evaluation of the quality of the data collection, data, and theory generation used (Guetterman et al., 2018). To assure dependability, the interpretation should not be based on the researcher's particular preferences and viewpoints but needs to be grounded in the data (Korstjens & Moser, 2018). All information was considered that may have led to the results. Confirmation that data was objectively collected was confirmed by an outside researcher.

Confirmability was related to neutrality (Lincoln & Guba, 2006). To maintain confirmability, the best qualitative studies maintained an audit trail of how data was collected.

This audit trail was presented to some extent in the write up of the research, including original quotes and other data which informed the researcher's interpretations (Carnevale, 2002). An audit trail was conducted throughout the activities of the research to address dependability and confirmability. Field notes described thoughts and decisions during the observation and action of the research. Examples of the coding process and working from individual codes to themes was shared.

Transferability

Transferability relates to the aspect of applicability (Lincoln & Guba, 2006). To assure transferability, behavior, and experiences should be meaningful to the outsiders by utilizing a thick description (Korstjens & Moser, 2018).

Ethical Considerations

The researcher made sure ethics were a top priority throughout the project. Each of the methods of data collection was conducted correctly to ensure validity and reliability. The researcher recognized that positions or privilege and values may influence the interpretation of data. Data storage was executed in a way to protect the information; however, access continues to be available to the participants, should they want to see their personal data. This allowed for feedback and dialogue of the data (Mottier, 2005). Data was secured by passwords for electronic data and paper forms of data were stored in a locked filing cabinet. All data will be stored for a minimum of three years following the completion of the study (Princeton Research, 2019).

The IRB provided approval of the research. Permission from the site university was provided in the form of a letter or similar documentation. Conflicts of interest that existed due to pre-existing relationship was mitigated. The researcher assured informed consent from each

participant by having clear and specific communication with each participant informing them about all aspects of the research. Informed consent was an ethical and legal requirement for research involving human participants (Nijhawan et al., 2013). Pseudonyms were used to protect the confidentiality of the participants. Participants had the right to withdraw at any time and were not compensated.

Summary

The goal of this chapter was to give an overview of the purpose, research questions, and methods for this qualitative, intrinsic case study that focused on the experiences of different administrators at a university in the state of South Carolina related to student opioid use and misuse. The qualitative case study results were experiences of administrators at this university. Data collection methods included semi-structured interviews, guided by a 10-question interview guide, a focus group, and a review of documents. A thematic analysis approach, utilizing coding and pattern matching logic, was used to analyze data collected from the three methods. This detailed approach provided a stronger understanding of experiences of administrators on this college campus, related to opioid use and misuse.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this qualitative case study was to investigate the experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. This chapter includes a table of all participants and four themes organized by constructs of Bronfenbrenner's theoretical framework (macrosystem, exosystem, mesosystem, and microsystem). Each section includes data from individual interviews, a focus group, and review of documents.

Participants

The sample consisted of 10 administrators. Administrators included the president and many of his cabinet members or leadership team. Table 1 is an overview of the participants.

Table 1

Participant Overview

Administrator	Years in Field	Specialty	Highest Degree
Betty	40	Nursing	B.S.
Buford	25	Safety/Security	B.S.
Emily	20	Curriculum	M.S.
Gray	26	Enrollment	M.S.
Joe	35	Leadership	Ph.D.
Lorenzo	30	Athletics	M.A.
Natasha	32	Academic Affairs	Ph.D.
Sanjay	35	Medicine	M.D.
Will	20	Finance	M.B.A.
Zach	30	Comm/Marketing	B.S.

Pseudonyms were used to protect the privacy of the participants and offer a layer of confidentiality. The participants were administrators representing 10 different areas, including one from the board of trustees. The sample size met the goal of the study. With the help of two high-level administrators and the university president's support, the participants' recruitment was very successful.

Results

Thematic analysis revealed four emergent themes, organized by theoretical framework constructs: macrosystem, exosystem, mesosystem, and microsystem. Participant quotes are used to illustrate experiences; all names are pseudonyms to protect confidentiality.

Theme 1: Services and Resources

Macrosystem. The macrosystem is the influence on services and resources from administrators (Bronfenbrenner, 2005). The beliefs of the administrators at the university are part of the macrosystem and have impacted decisions that were made. The university has been working on improving its facilities within the macrosystem framework. Emily, a female administrator on the curriculum team, stated, “We are working to create spaces and messages for the students.” Administrators believe more space would be beneficial to helping the students, so they created additional space at the student health center.

Resource Availability. While the university may not have a comprehensive list of resources to help with opioid challenges, there are some available. Lorenzo, a male and the vice president of athletics, said, “We do have resources,” but most participants reported that there was a need for more resources on campus, as well as additional community resources. Zach, a male and vice president of marketing and communications, mentioned that the community is economically challenged, and some students do not have insurance. He also shared that there are

legal resources available for students. Sanjay, a physician and male board of trustee member, shared that the university needs to be proactive as it relates to opioids and create a “culture of self-care.”

Exosystem. The exosystem is policies, guidelines, and other influences that the administrators and board can have (Bronfenbrenner, 2005). All participants mentioned at least one item that was available in their area in the form of a resource or service. There was a general consensus that the university’s administrators were influential, but most participants reported that more services and resources could be provided by the administrators.

Providing Information. The university continues to make improvements on the information provided and looks for resources outside the university to assist. Zach said it was important to provide resources related to opioids. He went on to say that the X Program was a “community resource” and provided “regular training for students.” The X Program was also mentioned by Sanjay, Joe, and during the focus group. Joe, a male and president of the university, described the X Program as a “telemedicine program.” Sanjay also said there is a “lack of access to providers,” but the South Carolina Department of Alcohol and Other Drug Abuse Services (SCDAODAS), is a resource for students. There are not many medical providers on the campus, but Natasha, a female and provost of the university, said that the university has an affiliation with a local physician. Courses and programs are additional resources provided by the university. Natasha said they developed a first-year course to “demonstrate we are talking about it (opioids) with our students.” She said it is important to “consider safety parameters.” Upon review of the safety and security website, it was determined that drug use is not included; however, the university writes that they make safety and protection of property a top priority. Emily mentioned that the university is now developing an AOD (Alcohol and Other Drug abuse)

education program to embed within the first-year experience courses. Similarly, Lorenzo spoke of resources for athletes. He said the university had “random drug testing,” but they were for “performance-enhancing drugs.” Will, a male and vice president of finance, also mentioned that athletes were tested.

Mesosystem. The mesosystem is the students’ interaction with administrators, faculty, and staff. Services and resources within the mesosystem framework are limited, according to some participants, while some reported feeling that the university is doing a good job providing resources. Buford, a male and chief of security, said, “There seems to be limited information available to students.” Joe continued by sharing, “We always need more resources.”

Availability of Resources. Zach mentioned that the university does a “pretty good job providing some resources to help those kids if they need it.” Joe shared that in the past additional resources improved the university’s ability to address the full spectrum of student life. He noted that students’ “knowledge of where right resources are” is important. Similarly, Lorenzo expressed that students utilizing resources are important, saying that the university should “work closely with drug education groups.” Joe mentioned that the university was creating opportunities for students to do more community engagement. This engagement will help develop stronger partnerships. Gray, a male and vice president of enrollment, agreed that there was a need to partner with the community.

Types of Resources Needed. During the focus group, all agreed that the university needs more resources, and some of those resources need to be dedicated to training. Will stated there was a need for training students, as well. He expressed that there was no training on campus and that the university needed training “directly for opioid usage.” He also said the university needed to have more discussions with students and staff. Zach claimed there was a need for more

resources such as “guest speakers, demonstrations, and impactful information.” He added that the university needed grants to fund various resources. According to Buford, some of the current resources are dedicated to the use of “fliers and programs” to disseminate information to staff and students.” However, he was unsure if these methods were effective. He recommended the university use interactive videos versus “something for the students to read.” He claimed the videos would have more success. If the university could provide incentives for students to participate in training, he stated that would be helpful. He suggested two incentives: free “stuff” and for the students to be included in a drawing. Betty, a female and director of the student health center, also recommended incentives for good behavior and suggested “free t-shirts.” Moreover, Emily suggested that the university provide education and treatment as a resource instead of punishment. She added that resources were needed for athletes, including more education.

Staff as a Resource. Throughout the interviews and during the focus group, it was determined that staff are a valuable resource. Several staff mentioned that they had extended experience with opioid-related issues. Lorenzo specifically mentioned that his previous experience was helpful. Zach also mentioned that his experiences in his current job have helped him relate to the students and their challenges. Zach went on to say that vast communication is needed from staff to students. He added that awareness and sharing are important. Emily said that they do share information with students. She also shared that some staff have “social work backgrounds.” Natasha recommended that the university “hire somebody to oversee student misconduct,” while Emily mentioned hiring a “community values supervisor” to work in the “student conduct area.” Natasha referred to this person as the “community values person.”

Value in Networking. Participants shared how networking opportunities with other staff were a valuable resource. Lorenzo mentioned this opportunity with other athletic directors. Joe had similar opportunities networking with other presidents. Furthermore, Buford mentioned that he appreciated the chance to have discussions with other administrators. Emily shared that continuing education and professional development opportunities such as “conferences we attend” were beneficial.

Health Resources. Having a variety of health resources helps when universities are experiencing challenges related to students using opioids. Mental health, counseling, the student health center, and substance abuse were all mentioned when participants were asked to think about opioids and students. During the document review, it was determined from the website that the university has a confidential counseling center. Lorenzo shared that students need to ask for help, and Natasha added that it is important for the university to provide help. Betty, Sanjay, Buford, and Joe stated that the university should provide referrals for the services offered related to mental health. Betty said, “We send them to the counselor.” Sanjay shared that if the staff “observe a student with those challenges and make appropriate referrals,” it would be helpful. Emily mentioned the importance of counseling, while Buford expressed the need for referrals for medical and counseling services. Joe mentioned that students have “access to a variety of counseling services.” Sanjay’s team “provides psychiatric service” to the students. Similarly, Gray mentioned that the psychiatric services were available to the students “non-stop 24/7.” Joe said that “confidential counseling” was important. In comparison, Gray preferred that the university focus more on counseling and less on punishment for opioid-related issues. Zach mentioned that the health center has “exam rooms and counseling rooms” to meet both needs of the students. Considering health resources and the needs of students, Natasha and Gray shared

that the student health center is a valuable resource available to assist the students. Will stated that the health center staff are “keeping track of students as they come in to be seen.” Joe recommended that the university utilize community clinic services and community support agencies and Lorenzo mentioned partnering with public health to help with opioid challenges.

Faculty and staff work to connect students to appropriate resources. For example, Buford shared that “students are seeking help” related to substance abuse, and Zach added, “Some are going through addiction problems.” Sanjay mentioned community substance abuse programs to help students. The university's alcohol and drug policy has a substance abuse section. The policy encourages students to use services available at the university and supports using preventative measures. This policy matches the statements of Zach, who mentioned that prevention is key. Betty stated that there is a distribution of Narcan on campus, but they “don’t have enough to hand out to every student.” Emily added that some staff with AOD (Alcohol and Other Drug) certifications exist. During the focus group, Sanjay stressed the importance of peer support to help overcome substance abuse.

Funding. Joe talked about the importance of funding, discussing that unrestricted funding would be helpful when navigating all of the financial challenges a university encounters. He said it would be great if the university could get expanded funding such as the “Pell Grant.” Joe shared that the university was “initiating a Bachelor of Science nursing program.” According to Joe, this program will open up opportunities for students to learn about clinic services available in the community.

Microsystem. Within the microsystem framework, there was very little in the services and resources theme. The microsystem is the setting of the college students. In the research, there

was nothing direct about the university students, their peer relationships, or their interaction with their parents.

Theme 2: Knowledge and Perception

Macrosystem. According to Bronfenbrenner (1977), the macrosystem is what exists in a culture that influences behavior. There are many policies, laws, and rules that impact behaviors within this system. Within the macrosystem framework, opioid use in college students is known to be prevalent on a large geographic scale. All participants agreed that opioid use in college students is a challenge. For example, Will said, “Opioid use is a major problem.”

Opioids and Other Drugs. Buford stated that there is an overall drug problem, while Zach shared that drug use is a huge problem. Will went on to say that opioid use is considered serious among the university, and Gray and Lorenzo expressed that opioid use is a nationwide crisis. Joe shared that drug use is a reflection of society. Natasha expressed, “We all understand the seriousness of this and how it impacts.” Will and Gray explained how many individuals get their information from the media or hear about it through celebrity drug use. Related to opioid use on campus, Lorenzo said, “I don’t think for a long time people realized there was a misuse of it on campus.” In contrast, Natasha said, “I would have to say that we don’t have much of a problem with opioid use on our campus.” She postulated that there was a low incidence of events related to opioids, but administrators and staff have general drug discussions. When considering campus perceptions on drug use, Gary shared that staff does not condone drug use, and Will explained there were some occurrences of opioid use on campus. However, Will said there had been general discussions on campus. He explained, “When you have 18 to 20 somethings on campus, you know, is probably more of a risk.”

Knowledge and understanding of opioid use and misuse on college campuses are essential to addressing concerns. For example, Sanjay shared there are multiple reasons why a student could be using: “there’s stress, there’s anxiety, there’s sadness, there’s grief, there’s loss, there’s parents’ divorce, there’s physical injury, there’s girlfriend break-up, there’s physical illness.” Will expressed that some students have a fear factor when it comes to using opioids.

Opioid use and misuse influence the learning community, as noted by Gray, who shared that substance abuse impacts the college community. In contrast, Natasha discussed how opioid use is more of an issue in the community than on campus. She went on to say that COVID has been a distraction. She stated, “I don’t recall anything rising to the level of needing my attention, but maybe that is an anomaly because we were in a COVID year.” However, Sanjay explained that there was community substance abuse that impacted the college campus. During the focus group, the participants agreed that it is hard for administrators to address community issues.

Overdose in Students. Several participants mentioned overdose as a concern within the student population. Sanjay stated that students believe overdose “is not going to happen to my own family.” Will shared during the focus group that, “Opioid usage among students is so hard to pinpoint unless something big happens, like a fatality.”

Fentanyl was mentioned by many participants as a danger to the college community. According to Zach, “Drugs are laced with fentanyl.” Will and Gray agreed and mentioned that drugs are laced with fentanyl. Zach also shared, “Marijuana and pot are laced with fentanyl.” The focus group agreed that drugs are laced with fentanyl, and students do not understand what they are getting in their drugs. Zach expressed that “counterfeiting” is an issue where students do not know what drugs they are using. He added that students “don’t think drugs will kill them.” He knew of an overdose situation where the “kid had no idea that smoking that pot could kill him.”

He went on to say that physicians are treating pain with opioids and “The treatment might kill you and these kids have no idea.” In agreement, Betty expressed that students “don’t understand the dangers, and they’re bored.” Lorenzo said that drugs are highly addictive, and students have a lack of knowledge. He said the students that overdosed “didn’t understand the power of what they were dealing with.” Gray said opioids are devastating and “It destroys a family or destroys life in a heartbeat.”

Staff. There is definitely some familiarity related to opioids among the staff. Joe shared that staff are familiar with the opioid problem. He stated, “People on campus are very knowledgeable.” Will and Sanjay agreed that staff are knowledgeable. Sanjay expressed that staff are “very aware of the challenges that exist.” Sanjay continued by sharing that staff are “psychologically minded.” He said sometimes staff have personal experiences that help with interacting with students. Gray postulated staff are understanding. Lorenzo also shared that staff have empathy and understanding and the athletic staff often allow for a “30-day grace period” when drug testing athletes. They are giving the athletes a chance to pass the test.

In contrast, Buford shared that opioids are serious, but there was a lack of awareness among some staff. Similarly, Betty shared that there was denial among staff. She said, “I don’t think they know how prevalent it is.” In agreement, Sanjay claimed that among staff there is a “general denial in a sense that this could never happen to us.” Will said, “Some staff think that (opioid use) doesn’t happen on my campus.” Buford postulated, “Bigger institutions tend to have obviously a higher percentage of abuse or issues.” Will shared, “The person you least expect is using opioids.” Similarly, Gray mentioned that you are “totally surprised when you see something like this happen to the people it happens to.”

Access. Access to opioids is an issue within the macrosystem framework. Lorenzo stated that access to opioids is way too easy. He said there was an “easiness to getting the stuff,” and it was “readily available.” The focus group agreed that every college campus is geographically unique. This particular university has a large access area near the campus. The participants agreed that opioid access is less about doctor prescriptions and more about access in surrounding areas. Although the focus group recognized that there is easy access for students, at the same time, they admit there needs to be a better understanding among the administrators as to how the students are getting the drugs. For example, Joe shared, “Prevalence is very different on college campus, and there are not necessarily unique drivers on a college campus.” Lorenzo stated, “There’s a really good chance we don’t have a drug dealer on campus because we don’t need one.” He explained that there are enough drugs in the area outside the campus to keep the students supplied. He went on to say he “didn’t realize how easy it was to access for student athletes” and at one point in the past, athletes were “going to different emergency rooms” to get prescriptions. Buford stated, “90% of the opioids being used were prescription.” He also said he did not realize “how easily this was being prescribed.” Lorenzo emphasized how opioids were being “over prescribed” in some instances. Furthermore, he added, “Having access to something so powerful helped contribute to the problem of the rising use.”

Exosystem. Related to the exosystem framework, many participants rely on previous experience to help students with their opioid challenges. Buford said he uses his “institutional” knowledge to help influence opioid challenges.

Addressing the Correct Issue. The university has many issues to address; the participants were in agreement that more focus needs to be on opioids. Buford shared that the university's focus seems to be more on alcohol versus opioids. Problems with addressing concerns was also

voiced by Sanjay, stating, “I think we have discovered that we don’t quite, um, we don’t address this on our campus.” Lorenzo expressed that fixing the opioid problem is not a quick fix. He said they “could not solve with one meeting or one person.” Will shared that the university needs to take action. He stated, “I can’t say that we’re doing anything particularly directly for opioid use. I think we should, though.”

During the focus group, there was a discussion about trying to change the culture on campus. It was stated that there had been some culture change due to a death, but more change would take a while. The group also mentioned that the staff try to offer help versus punishment in an effort to be a positive influence on the students. Natasha stated they focus on the community values first and then address the conduct. As far as athletes go, Lorenzo shared that staff are not looking for opioids, but “We do stumble into it and try to use for an educational opportunity.”

Impact of Opioid Use within the Mesosystem Framework. Knowledge and perception of opioids play a role within the mesosystem framework. Zach expressed that opioid use has “rocked our campus.” Gray stated that drug use has a negative impact on mentors, faculty, and staff. He added that staff understand that one of the consequences of using opioids can be an overdose, and they need to be prepared when interacting with students. Lorenzo said that staff were fearful when events occurred related to opioid overuse, noting, “It scared us a lot.” He added that staff were focused on emergency crisis versus prevention. Once an event occurred, staff were no longer in denial. He said, “We got very involved.” He added that staff were very reactionary. Gray commented that overall, staff are a close-knit community, are helpful, and want to interact with students when an issue arises, but they need to be aware of the warning signs.

Interaction with Students. Interaction with students is a critical component when addressing opioid use in college students. Administrators need to prioritize and normalize conversations with students, according to Sanjay. Joe shared a need to respond, stating, “Let us respond to emerging needs where they may be.” Will commented that, as administrators, they are more reactive versus proactive. He said, “We don’t really think about it until something happens.” He added that it is hard to catch students using opioids “unless you have someone that just admits that they are doing this, or you find someone trying to sell.” Otherwise, Will shared that opioid use felt like it was non-existent.

Buford mentioned that multiple staff roles on campus have contact with students. Many of these are police or security positions. Buford shared that the knowledge of staff varies, and there is clearly a lack of knowledge among some staff. He added that there is an awareness among security staff, but discussions have been limited, other than some general discussion related to the criminal side of opioid use. However, Natasha claimed that security has a larger impact when interacting with the students, but other staff should also be monitoring students’ behavior.

Lorenzo shared that staff are becoming more understanding and supportive. This support helps students want to approach staff. Zach stated that it is important that staff understand the challenges of students. In contrast, Betty said some staff have a lack of concern, and students will not confide in them. When asked about discussions with students, Lorenzo stated, “I am not sure we are having those discussions on a regular basis.” Emily said, “It’s really not a conversation that’s had on a very frequent basis on campus.” She added that it has not really been one of those things that the university has identified as a prominent issue on campus. Along the same lines, Will stated, “We don’t hear about it a lot on college campuses.”

Lorenzo commented that there is a disconnect between the student and the health staff. This reflects the ideas of Betty, who shared that the medical staff are very frustrated when trying to help students. She said, “It is like beating your head against the wall.” Emily shared that students and administrators have limited discussions about opioid use. Buford added, “It’s more boots on the ground folks that are interacting with those kids every day.” Participants shared the importance of support from the university staff. For example, Zach stated that relationships between staff and students are important. He also expressed that when interacting with students about opioid use, staff seem to be compassionate. Joe agrees that staff have empathy and understanding. Similarly, Natasha shared that administrators must be vigilant yet careful when interacting with students. Sanjay said the emotional well-being of the students is important and we need to be “talking to them about their emotional well-being.” He added, “Staff are keenly aware of the problem.”

Staff Experiences and Knowledge. Zach shared that staff were worried and recognized the need to do something about the opioid problem. Participants shared how being able to relate to students is essential in establishing communication and trusting relationships. For example, according to Buford, personal experiences may be all that staff have related to opioids. Joe believes that some staff have had personal and job-related experiences. Will was not aware of any staff experiences interacting with students. Zach shared two personal stories that impacted his life and the life of his two daughters. Both daughters are students at the university. Lorenzo explained that staff, overall, are younger with more energy but less experience.

Drugs and alcohol are a bigger challenge now and get more attention from a medical perspective (Betty). Betty said medical staff were also concerned with COVID. Unfortunately, the pandemic has overshadowed other issues on campus. For example, Natasha said, “Our

department hasn't had discussions about alcohol problems or drug problems." She added that they have mostly discussed COVID. Lorenzo stated that even with all the staff knowledge, there is still some uncertainty and overall, they have limited knowledge. He said, "It is hard for me to speak to it." However, Joe explained how many of the staff have empathy. Similarly, Sanjay shared that staff are concerned and empathetic when interacting with students. He added that the athletic staff are vigilant and aware but expressed a lack of education and awareness among other staff. In contrast to what Lorenzo and Sanjay shared, Joe said, "People on campus are fairly knowledgeable."

Microsystem. On the micro-level, college students are impacted by their families and other college students. For example, when discussing how students may get opioids, Buford said, "Maybe their family gets a prescription for it."

Family and Parents. According to Will, family experiences play a role when dealing with opioid use. Gray said that parental influence also impacts the student. He stated, "It helps if they were raised properly and they understand the difference between right and wrong." Unfortunately, as mentioned previously, the family may allow the college student access to prescriptions.

College Students. College students impact each other in many ways. First, they may provide access to opioids. Buford stated that a student may have been "prescribed medication due to an injury." He added that "A student has it, and they're getting it out to roommates and friends." He explained how this method of supply could lead to addiction. Sometimes students are prescribed a painkiller due to surgery but keep using it beyond the prescribed time frame. During the focus group, participants mentioned the abuse of prescription drugs. According to Buford, students may also provide peer pressure by offering other students opioids. During the

focus group, participants mentioned that peers influence students and how students may “borrow” prescription opioids. Sanjay re-emphasized this by sharing that students do have access.

Reasons for Use. There are a vast number of reasons that students may use opioids. Zach mentioned recreational use. He also said students might use them due to the demands of school or to help them study. He told a story about a young lady that took a drug, thinking it would help her study, and it was laced with fentanyl and killed her.

Another reason for use is experimental. Buford said, “When they come to campus, they’re all about experimentation.” The transition into college life leads them to experimentation. Lorenzo also said he thinks students use opioids to experiment. Will mentioned that he is “hearing students talk about taking pills.” Buford said he knows that students will participate in opioid use voluntarily and that being “alone away from family” may impact their choice to use opioids. The independence and freedom they have is definitely a factor. Betty said they would also use opioids to escape reality. Sanjay expressed that students experience stress and anxiety. He said via the X Program, “Student athletes are calling in, and they are complaining of either depression, anxiety, or other concerns, that frequently there is a co-morbid substance abuse of street drugs.”

Impact of Use. Overdose can be an impact of opioid use. There have been three incidents of opioid overdose on campus in the last five years. Gray and Betty were aware of one of these. Buford mentioned, “We had a couple of incidents on campus that were related to opiate overdose.” Zach spoke of the same and was aware of incidents at nearby schools. Zach’s daughters, who are students at the university, had a best friend who died of an overdose, which was very life-changing for them. During the focus group, there was also a discussion about a

student that died from an alcohol overdose on campus. Moreover, another participant mentioned a student that lost a friend from an overdose. It was described as “traumatic.” These events can impact a college student's life in many ways. The impact could be minor or, according to Zach, can be “devastating.” It can impact the student’s life and the life of their families. Betty said, “They don’t think it is ever going to happen to them.” She went on to say the students have no fear and “They’re so not afraid of dying.” The students visiting the health center do not even inform the medical staff if they are using opioids. Betty said that sometimes the medical staff will notice if the student is “losing weight, or you know, start having personality changes.” During the focus group, they agreed that gateway drugs were an issue because they lead to opioid use. Zach shared that he felt like opioid affects performance in school. The focus group even spoke of commuter students doing drugs, so it is impacting all students.

Participants shared the extent of the student population impacted by opioid use. Buford said athletes were impacted by opioid use. Lorenzo shared, “The majority of our own campus students are student athletes.” Lorenzo knows that athletes are using opioids. He told a story, during the interview and focus group, of an athlete who understood the symptoms well enough that he was “directly using symptoms that he knew would get prescribed these drugs.” Athletes work the system to get drugs. Unfortunately, an injury gives a student legal reason to get a prescription, allowing them an easy way to obtain opioids. Buford said that sometimes these athletes become a source of the opioid supply. As they become a supplier, it impacts their lives negatively. The focus group reiterated a few times that athletes are getting prescription opioids due to injury.

Theme 3: Education and Training for Students and Staff

Macrosystem. The larger educational system impacts the opioid challenges among college students. For example, Sanjay stated during the focus group that “Non-medical professionals don’t understand how opioids work.”

Methods of Education. Education for staff is important. Sanjay said it was very important that administrators are able to recognize abuse symptoms. One method staff can be trained in is through community education. Zach stated, “We have groups that come speak to us and talk to us about it (opioid use).” Another way of staff being educated is through experiences versus formal training or education. Joe explained that staff sometimes have “more personal experiences than institutional training.” In addition, staff can also be educated through policy. Sanjay stated, “It’s a public policy thing.” He went on to say, “In terms of overall policy, it is really about education of every stakeholder, if we are looking at colleges and universities in the system of care.”

Lack of Education. There was an overarching theme that more education for staff is needed. Within the focus group, the group agreed that opioid use was not talked about on campus. When asked about anything they would change at the university, Natasha responded, “I wouldn’t say change, but I think it did shed some light on the fact that we need more education.” She went on to say during the focus group that guest speakers are not enough and education is more than posters and billboards. Also, during the focus group, all agreed that they needed more education, especially as it relates to fentanyl. Lorenzo said, “We have to formalize education and be more preemptive.” During the focus group, Will stated, “I think I would love to see our students more educated here about opioid abuse, but at the same time, faculty and staff, I mean, it’s not just the student.” Sanjay added that “Education is from the top down.” From the security

perspective, Buford shared, “Education’s key, but I think, you know, more resources, you know.” Overall, participants shared that access to more resources would provide the much-needed education.

Exosystem. While policies and guidelines are important when it comes to training and education, there was limited information for this section.

Education. Policies and procedures related specifically to opioid use need to be developed. Sanjay shared that the university needs to create a good messaging system for students. Natasha recommended that policies be related to educating students versus punishing them. Finally, Betty mentioned it would be good to get something in place to “educate residence halls.”

Mesosystem. As the mesosystem relates to administrators interacting with students, there continued to be an agreement that more education and training were needed. Buford mentioned that the university needs “more of a generalized training” for opioids.

Education Needed. Participants shared a common lack of education and preparedness in understanding the opioid crisis. For example, Buford stated, “I don’t think I really had any specific training that dealt with college students.” Lorenzo said there were limited trainings, but he did self-education to learn how to respond to opioid use. He added that he felt like the administrators needed more educational materials. Sanjay also noted there was limited training and said the university needed ongoing education to “raise awareness and education.” Similarly, Joe recommended that outreach be provided on the campus. Some participants recommended that the university provide specific types of training. When asked about training, Buford said, “I don’t think there is enough of it.” He added that he did not have any training related to college-

age students. He recommended individualized training or some quick training like “training popped out via email.”

Other educational considerations were mentioned concerning opioid use. Gray specifically mentioned needing training for security, safety, and admissions staff for when they are interacting with the students. Sanjay said they needed training related to psychiatry and “prevention, mental health, and substance abuse through education.” Furthermore, as mentioned previously, resources are key to education. Natasha said training was needed and recommended that the university “dedicate resources for training.” Related to athletes, Lorenzo said they need more education. He stated, “I can only speak for the athletic department, but it ends up more check the box than a passion.” Lorenzo was unsure about overall campus education; however, he did share that the university needs improved education and discussions. Moreover, he liked the idea of team training. The training he had in the past was “mediocre.” Finally, he mentioned a need for nationwide education. Emily agreed that athletes need education related to opioids, and Betty spoke in general terms and said we need to “Get information out there so people can be more educated about it (opioid use).”

Participants expressed concerns that limited education was a barrier to helping students. For example, Buford shared that administrators need to understand opioid use better and that limited information was available to staff and students on campus. Will said the university needed to educate more on prescription drugs. Overall, the participants mentioned several ways of gaining knowledge. A couple shared that they received knowledge via group settings. For example, Buford learned from networking with the “chiefs’ association,” and Lorenzo called it opportunistic training when he learned from “work committee involvement.” Buford also had brief or combined training about opioids with other topic areas that were not opioid-related, as

well as some video training. Betty mentioned that some alcohol and drug training was connected to the student health center, but these seem to be more for the students. Furthermore, as mentioned several times throughout this chapter, participants emphasized how experience was important. Some staff have previous experiences interacting with students using opioids.

Microsystem. The microsystem is the setting of the college students. Within the microsystem, the education of the students is something that falls within this framework. Emily expressed, “Definitely an area that we know as a gap is education of our students.”

Lack of Education. Similar to other areas needing more, the participants shared a need for more education among the students. Zach noted that the university should work to inform students early upon their arrival on campus. He said, “It needs to be talked about upfront.” Sanjay shared that the university needed to be providing ongoing education to the students. He added that college faculty and staff need to “observe a student with those challenges” and “make appropriate referrals.” During the focus group, education of students was discussed. The main point made was that there needs to be messaging to the students to let me know the university is there to help them.

Theme 4: Policies, Laws, and Guidelines

Macrosystem. The macrosystem represents organizational patterns that affect students (Beck-Cross & Cooper, 2015). Often decisions that are made or need to be made are done at a macro level. Gray shared that decisions “happen at upper level, not even as a cabinet.”

High Level Decisions. Participants discussed a need for high-level decisions concerning opioid use. Zach agreed that there is some board influence on policies and guidelines for the university. The board may or may not take into account what the president or cabinet members

offer. Gray, however, said that there is a fair amount of presidential responsibility with decisions related to policies.

Legal. The law plays a part in opioid-related challenges. The participants made it clear that alcohol was illegal on their campus, regardless of age. Will said, “Perfect example, I mean, alcohol is illegal. If you’re 21 years old, it’s not legal on our campus.” Even though it is not allowed on campus, it is still consumed.

An alcohol and drug policy was part of the document review. The policy is part of the student handbook. According to the policy, alcohol is prohibited in residence halls or other campus facilities. Considering campus policies, Zach shared that he would like students to better understand the legal consequences of using opioids on and off-campus. During the focus group, he also mentioned that he believed the university could prevent overdose deaths if marijuana were legal. He said, “I sure wish the pot that he was smoking was from the state of South Carolina, you know, instead of a drug dealer.” He was referring to an overdose death of a young man that was friends with his daughter. Buford reiterated that the students need help versus punishment. He shared, “The first thing we are not going to do is search your room and take you to jail; we want to get you some help.” However, Buford shared that students do not know they will not get punished if they ask for help.

Exosystem. When it comes to policies, there were no policies specifically related to opioid use, but there were some related to drug use. Buford said related to policies in the student handbook, “But it’s a very brief; it’s a broad overview of just drug use in general.”

Policies/Rules. The documents reviewed show up the most in this section. The one mentioned most often was the student handbook. Buford mentioned there is limited policy information; however, there is information in a student handbook. The handbook includes some

self-help guidelines. Natasha also referred to the student handbook. She shared that there are “sections in our student handbook, one specifically for alcohol and one specifically for drugs.” Several of the participants also mentioned the student conduct policy. It can be found on the website as the Student Code of Conduct. The Student Code of Conduct was one of the documents reviewed in the data collection. This document requires that all students comply to certain standards. Sanjay and Emily shared that there is a student conduct policy. Betty mentioned that there were some preventative policies in place. Buford stated, “Even our policies in law enforcement are not specific to a particular drug.” He added that the policies that they do have in law enforcement are separate from the university. He also shared that they break down different drug schedules and try to have an understanding of those. He said it would be good if training related to opioids were mandated.

Will expressed that he knew of a drug use policy but was unaware of policies directly related to opioid use. He said, “I think it becomes a problem, you know, then that probably will birth policies specific to opioid use.” Natasha said she “always falls back to just what our policies state ... in terms of how we treat or address.” She said she would have to check to see if standards and protocols were used. According to Natasha, discussions at a higher level could lead to policy-making changes. She did not want to focus on punitive but on how the university could be supportive when making policies. Lorenzo said how helpful staff could be is definitely a resource, but the policies put in place could determine the balance between support and punishment in a current situation. He shared, “Most of the college's policies and procedures are probably mirrored around distribution more than use.” He said distribution needs punishment, whereas use needs help. During the focus group, it was mentioned a couple of times that there was no policy for testing for opioids on campus. Emily expressed that providers need guidelines

to prevent overprescribing. As far as athletes go, they have rules for participation that are policies created by the NCAA. Interestingly, upon reviewing documents from the university conference, there is no ban on alcohol use at sporting events. There is, however, a ban on tobacco. There is a zero-tolerance policy required for tobacco use. The NCAA has a ban on several substances, and opioids are among those. The athletic director has to share the list of all banned substances with all student-athletes. The NCAA also requires that all student-athletes receive drug education.

Legal. There were a couple of items mentioned related to laws that participants felt should be created. First, Zach noted that the legislature should get involved and “pot” should be legalized. During the focus group, it was mentioned that there is no legal dosage for fentanyl, and there is not even a recommendation for fentanyl dosage. Furthermore, the focus group discussed collegiate recovery programs and the need for those on college campuses. Sanjay shared that the program is a formalized way for students who are recovering to receive “peer support” and have “peer-related activities.”

Mesosystem. Within this framework, staff are most definitely interacting with students. One of the ways staff are interacting is through punishment that is issued to the students. Betty said, “Various punishments could take place if students are caught with drugs.”

Staff Interaction with Students. As it relates to policies or guidelines, staff interact with students as needed. Buford commented that if there were policy violations, the student could get punished. However, the policy is not specific to opioids; the primary focus is alcohol. Natasha referenced punishment by mentioning “what may happen if a student is caught.” She added, “I’m sure that there are protocols in place of how to handle students who may be under the influence.” The Alcohol and Drug Policy addresses that violating policies or laws could lead to punishment.

The focus group agreed that the university doctor needs to monitor what prescriptions other doctors are giving the students, and Buford shared that the safety of the students was a concern.

Legal. Buford and Zach both commented that law enforcement plays a role in the opioid experiences on campus. Buford knows that students are getting drugs via street prescription, both legally and illegally. During the focus group, he said, “In the past 3 years, they have had only five students that were prescribed narcotics.”

Microsystem. There was no data collected directly related to this framework.

Research Questions Responses

Central Research Question

What experiences do college administrators have with college students using and misusing opioids on college campuses? Every participant had experiences with opioid use by college students. Several participants mentioned training as a resource for them and their staff. Gray was specific that the security and student support staff have some training resources that help them deal with opioid challenges. Personal experiences were also a resource for some of the participants. Zach shared two different heartbreaking stories where lives were lost. Both were from an overdose of a drug being laced with fentanyl.

All participants agreed that the university could use more resources. Buford shared, “There seems to be limited information available to students.” Joe said, “We always need more resources.” If there were more resources, the university could address more of the needs of the students, including those related to opioid challenges. Resources dedicated to training were also recommended. Will suggested more training for students and training “directly for opioid usage.”

The knowledge and perception of the participants were varied, some of which were a by-product of their experiences. Several participants mentioned challenges they experienced that

contributed to them learning more about opioids. For example, Lorenzo shared challenges with athletes struggling with opioid use and how it helped administrators learn more about the drug. They were not aware of how addictive, available, and powerful it was. Lorenzo shared, “I had no idea how accessible this was to the students.” Most participants know or perceive that there is opioid use among the students. Joe explained that it is used more in the community versus the college campus. He stated, “I could be wrong, it could be the prevalence is very different on college campuses than in the community.”

The perception of the lack of knowledge within the college population was shared by participants. They shared how the college students were unaware of the dangers of opioids. In the story Zach shared, he said, “The kid had no idea that smoking that pot could kill him.” Similarly, Betty mentioned that students “Don’t understand the dangers, and they are bored.”

Sub-Question One

What training and background have administrators had that helped address opioid use and misuse on college campuses? Some administrators had more training than others. Buford was asked to do more training since his job was safety and security. Others received training here and there, but nothing very specific to opioid use. Joe shared that he thought that staff sometimes have “more personal experiences than institutional training.” Buford recommended that staff have “more generalized trainings.” Resources are readily available for training and, related to backgrounds, all participants have been working for 20 or more years. The president of the university, Joe, stated, “The knowledge of the school staff is hopefully knowledge of where the right resources are.”

The education of participants varied, but most admitted to not having education directly related to opioid use. Moreover, many felt that there was a lack of education among the staff. Bill

shared that he did have various trainings directly related to opioid use, but no formal education. Lorenzo was specific in saying, “We have to formalize education and be more preemptive.” Sanjay is a board-certified child, adolescent, and adult psychiatrist and is the only one with formal education related to opioid use. According to Betty, she and the others on the health center staff learn as they go through experiences. Emily shared that the “conferences we attend” were helpful to be more educated about opioid use.

Sub-Question Two

What policy and procedures do administrators have in place that address opioid use and misuse on the campus where they work? All participants agreed that there is not a wealth of policies and procedures related to opioid use. Several participants mentioned the student handbook. Natasha said there was a section specifically related to drugs. Others referred to the student conduct policy. In reference to the student conduct policy, Emily said, “That’s really all we have at the moment.” Will shared, “We really don’t have any policies specifically for opioid use.” Two of the participants mentioned state and federal laws but did not expand on how those have been applied.

Several participants suggested that the policies and procedures be related to educating students versus punishment. From the security perspective, Buford said, “We want you to get help.” Lorenzo shared how the distribution of opioids deserves punishment, but students that use opioids need help. In contrast to this, the university's Alcohol and Drug Policy states that if a student violates policies or laws related to drug use, it can lead to punishment.

Sub-Question Three

From the administrators’ viewpoint, what are the attitudes of direct reports related to opioid use by college students? Participants responded differently to the attitudes of the direct

reports based on where they worked. For example, Buford shared there was a “mix” among his security staff. Some staff noted that opioid use was an issue, while others were shocked to hear it was happening on campus. Gary expressed that staff does not condone drug use. Joe shared, “People on campus are very knowledgeable.” Zach mentioned that he had spoken with all of his staff and every cabinet member about his experiences and felt like all staff were “keenly aware” of opioid use on campus. On the flip side, Sandy explained that staff are more concerned with COVID and not paying attention to opioid use. Similarly, Betty said, “I don’t think they know how prevalent it is.” Some of the health staff were trained to do referrals and have AOD certifications. In this case, their attitude is more directly related to getting medical help for the student.

Summary

Experiences related to opioid use were plentiful among the participants. Some had more than others, but many shared the need for more education and training. Resources and services were available for both staff and students. Most participants shared that the resources and services needed to be utilized at a higher rate. Most participants had knowledge related to opioid use on campus and expressed that the university should do more to respond to the use. The participants were aware of a limited number of policies and procedures to assist with opioid use. Some felt like opioid-related events would lead to the creation of more policies and procedures.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this case study was to investigate the experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. This chapter provides a summary of the findings from semi-structured interviews, a focus group, and a review of documents, as well as an interpretation of findings, implications for policy and practice, theoretical and methodological implications, limitations and delimitations, and recommendations for future research.

Discussion

I found it pleasurable interviewing and conducting the focus group for the participants. While the literature review did not produce much information related to experiences of college administrators, there was a fair amount of information about challenges for colleges and students related to opioid use. I can see a commonality between the literature review and the data collected.

Interpretation of Findings

From the data, there were four themes that emerged: resources and services; knowledge and perceptions; education for staff and students; and policies, laws, and guidelines. The initial sub-themes are Bronfenbrenner's bioecological theory of human development. Sub-themes for services and resources are each of the four constructs (macrosystem, exosystem, mesosystem, and microsystem), resource availability, providing information, types of resources needed, staff as a resource, value in networking, health resources, and funding. Within the theme of knowledge and perception, all four constructs are used as a sub-theme, as well as opioids and other drugs, overdose in students, staff, access, addressing the correct issue, impact of opioid use,

interaction with students, staff experiences and knowledge, family and parents, college students, reasons for use, and impact of use. For the theme of education and training for students and staff, all constructs are used as sub-themes. Other sub-themes include methods of education, lack of education, and education needed. The last theme is policies, laws, and guidelines. The sub-themes are the four constructs, high-level decisions, legal, policies/rules, and staff interaction with students.

Summary of Thematic Findings

Utilizing the four themes and various subthemes, I present an interpretation of the data collected from the administrators. Four interpretations are included in this section.

Availability of Services and Resources. Through the literature review, I garnered that many colleges offered opioid-related services to their students, as does the university in this research. The key is offering the right services, and according to one administrator, it is important for the students to know where the resources are located. I asked several questions allowing administrators to comment on resources they had and what resources they believed they needed. There was a clear indication that more resources were needed to help with opioid challenges. I have experienced situations in the past where universities were willing to add more resources to combat challenges.

Related to the treatment of opioids, it became evident that it is important for students to know what services are available. According to Wu, Blazer, Li, and Woody (2011), a barrier to adolescents utilizing and finding treatment is that they may be unaware of the opioid treatment services that are available. During the interview and the focus group, Sanjay mentioned the importance of CRC. From 2000 to 2017, the number of collegiate recovery programs on college

campuses has increased from four programs to 80 programs across the nation (Laudet et al., 2014).

Overdose was a definite concern among the administrators. I was heartbroken by many of the stories they shared. Saving lives is beyond important. This reflects the findings of other studies. For example, the emergency response medical services team at Georgetown University implemented a medical protocol that allowed staff to use naloxone to save the lives of students suspected of opioid toxicity (Jeffery, Dickinson, Ng, DeGeorge, & Nable, 2017). Naloxone is something I knew was being used in communities, and the student health center director (Betty) mentioned during our interview that they have some on the university campus. It has become more plentiful through the years, but the university could always use a more abundance of naloxone on campus and throughout communities.

Knowledge and Perceptions of Administrators and Students. McTier, Briscoe, and Davis (2020) used semi-structured, face-to-face interviews to solicit participants' perceptions. Similarly, I asked several questions during the interviews and focus group to help determine the level of knowledge of the administrators related to opioid use among college students. Learning more about what the administrators know may help us understand why students are using opioids. A theory-driven approach to defining the case may help generate knowledge that is potentially transferable to others in the field (Eccles, 2006). Most of the administrators shared that they and other staff were pretty knowledgeable about opioids and the challenges. However, there were some participants who shared some staff were in the dark about opioids. As far as students go, the administrators explained they had a lack of knowledge. Participants shared what they were currently doing and planning to do to increase students' knowledge. It seemed like the administrators were in favor of doing all they could to help students. Opioids can be sensitive,

but I felt like the administrators were comfortable discussing it and willing to share. Some shared more than others, allowing for the expansion of their responses to the questions. Overall, I felt like all those interviewed were willing to participate in increasing their knowledge of opioids.

Increasing Education of Staff and Students. During my research, several administrators mentioned the importance of educating staff and students. Some universities use trained peer counselors as part of their student counseling services (Andraka-Christou et al., 2020). The University of Limpopo implemented a multi-faceted approach focused on holistically promoting, developing, and creating a conducive learning environment for its students through the provision of student-focused programs, such as educational sessions (Muswede & Roelofse, 2018). Along the lines of educational sessions, Natasha mentioned that the university had developed a course specifically for students that would help students learn more about opioids. Emily said the university was developing an AOD education program for first-year students. Education, it relates to students, seemed to be high on the list of needs for administrators to address. I got the overall impression that administrators wanted to focus more on education for students rather than punishment for using opioids.

Some administrators shared that most staff had a lack of education and awareness. There was not much in the literature review related to educating staff; however, there was an overwhelming response from administrators that more education is needed for staff. One participant even mentioned that there should be formalized education. The administrators spoke of current educational opportunities, such as professional development opportunities, groups that visit campus to speak to them, and different experiences that provide education. I believe that all administrators participating in this study would be willing to participate in education efforts on any level. Furthermore, my belief is that every stakeholder needs additional education.

Limited Policies. If the university is expecting policies to help, they are going to need to increase policies specific to opioid use. The university has an alcohol and drug policy, but it focuses mostly on alcohol. The policy encourages prevention and utilizing university services, as well as mentioning punishment when there is a policy violation. I am not sure if policies will have much of an impact, as they currently have a policy in the student handbook that forbids anyone of any age to use alcohol on campus, and that still occurs. A few administrators expressed that all they had for policy related to opioids was the student conduct policy. It only refers to the punishment aspect of opioid use. Will said they really do not have any policies specific to opioid use. The findings reflect the work of other researchers, such as Daniels-Witt et al. (2017), who spoke of universities having student-led groups to advocate for policy change regarding drug use. Georgetown University utilized an emergency response medical service unit to implement naloxone protocol to help save students' lives (Jeffrey, Dickinson, Ng, DeGeorge, & Nable, 2017). Because there was no mention of a student-led advocacy group or an emergency medical service unit on the university campus, I think creating these entities may be a good option for the university in this research, as well as other universities.

Implications for Policy or Practice

The opioid crisis continues to be a challenge for college campuses. The findings from this study indicate that this small university in South Carolina has had its share of unfortunate circumstances related to opioid use. Administrators and other policymakers may be able to use the findings in this study to help curb opioid use on their college campuses.

Implications for Policy

Universities should consider implementing objectives that mirror the U.S. Department of Health and Human Services (DHHS). According to Volkow, Frieden, Hyde, and Cha (2014),

four main objectives could help with opioid challenges: (a) provide prescribers with the knowledge to improve their prescribing decisions and the ability to identify patients' problems related to opioid abuse, (b) reduce inappropriate access to opioids, (c) increase access to effective overdose treatment, and (d) provide substance-abuse treatment to persons addicted to opioids. College administrators could work with the Department of Health and Human Services to reduce access and increase treatment options on and around college campuses.

Implications for Practice

Administrators play an active role in battling opioid use on college campuses. Considering the themes of this study, there are a few practice recommendations that may help this university and may also be helpful to other universities with opioid challenges. First, resources for the university and using them to address opioids. Most administrators interviewed mentioned the need for additional resources. Many administrators are constantly searching for ways to bring resources into their departments. However, is opioid use prevention a priority with the resources that are accumulated? An important resource to consider is the prevention and treatment of opioid use. As a local public health director, I believe following the lead of national public health recommendations would be beneficial. College administrators should model their efforts after the work being accomplished by public health authorities (Kolodny et al., 2015). As the university is creating new resources and services, including a review of community services, while ensuring all are being utilized by the students and staff at the university, would be beneficial. Secondly, as it relates to knowledge, it is very important for administrators to understand the students' motives for opioid use. The more administrators understand, the more they can do to help. According to Bennett and Holloway (2017), a more thorough understanding of the motives for prescription opioid drug misuse, especially in relation to their influence on a

student's behavior, should help administrators create university-based treatment and prevention programs.

The amount of research on motives for student opioid use is increasing. I recommend that this university implement programs for staff to help them learn to identify students' motives for opioid use and understand what programs can help students. Whether the motive for opioid use is recreational, academic enhancement, or self-medication, administrators need to be prepared to offer recommendations to assist students. Thirdly, administrators should focus on improving communication with students. As an example, Betty mentioned it was very challenging to get students to receive messages about opioid use. One recommendation is to implement methods to better communicate with students. I recommend empowering the students by offering them an opportunity to help develop creative ways to communicate with fellow students. Perhaps it would be good to have them join a committee of administrators working on communication options.

Another recommendation is to constantly communicate with the student throughout their time at the university. Based on research by Yang et al. (2019), college administrators should start their prevention related to opioid use early in the students' college careers. From orientation to graduation, I would have regular messaging, in various forms, directed toward the students. Prevention of opioid misuse in students may eliminate other challenges they may face during their college tenure, such as academic struggles or dropping out. Lastly, while policies may not always be perfect and 100% effective, I believe they can help, but only as part of combined efforts to counteract opioid use. Policies for this university need to be more specific to opioid use. As part of the systems-thinking approach, I would allow students to take part in the policy-making process. The systems thinking approach's overall strength is dependent on the variety of

stakeholders (Macmillan et al., 2016). I also recommend that the university work with partners when considering policies. According to Shiflet (2019), it is critically important that colleges and universities play a role in the collaborative effort by implementing comprehensive and effective policies on opioid misuse.

Theoretical and Empirical Implications

The majority of research on opioid misuse and abuse among college students has focused on patterns of opioid use (Kenne et al., 2017), the overall opioid epidemic (Lokala et al., 2019), and the prescription epidemic and how it impacted opioid use (Ford, Pomykacz, Veliz, McCabe, & Boyd, 2018). Other studies have underscored the limited information on the experiences of college administrators (Ashrafioun & Carels, 2014; Gould & Berke, 2019; Kenne et al., 2017). This theory-guided research adds to very limited literature related to actual experiences of administrators with opioid use and misuse in college students and may be the only study utilizing a socio-ecological approach.

Bronfenbrenner's ecological systems theory suggests that the individual is affected by multilevel interactional experiences in three areas: the individual's perspective of the environment, the environment surrounding that individual, and the interaction between the individual and the environment (Reifsnider et al., 2005). Four theoretical constructs (i.e., micro-, meso-, macro-, exo-level) relevant to study research questions guided intentional exploration of the often complex issues associated with college students and opioids. One limitation is that the data for the microsystem construct were limited within some emergent themes, as this construct refers to the direct interaction of students with other students, an area with which administrators had little experience. The administrators that participated in the study were not forthcoming with information related to student-to-student interaction. There was an expectation that the

macrosystem was prevalent in the study, which was found to be true. Within the macrosystem, the beliefs of administrators impacted the plans and actions of the university. The exosystem surfaced within the study showing that the university needed more policies and educational efforts to help with the opioid challenges. Policies and procedures are important to establish written work, related to opioid use and misuse, that has been developed (Cremeens et al., 2011). The student and administrator interactions within the mesosystem were widespread among several subthemes. The administrators were used as a valuable resource by the students based on experiences they had on the job or via networking.

The results of this study showed specific experiences of various administrators and offered an opportunity to potentially learn how some were handled. College administrators need to create policies, guidelines, and procedures related to opioid use by college students. While doing so, they need to consider that some students have a legitimate medical use for opioids. The college administrators also need to consider that some students may have started using opioids in high school and continued the habit on the college campus. When developing policies, college administrators should consider treatment and prevention related to the availability of opioids, as well as other substances that may lead to opioid misuse. Learning the experiences of other college administrators will certainly help them provide the information they need to put prevention and treatment measures in place. As more and more research is released related to the challenges colleges are having, universities will hopefully get the opioid epidemic on college campuses under control.

The interpretivist paradigm and qualitative method were appropriate when researchers used the experiences, understandings, and perceptions of individuals as data (Thanh & Thanh, 2015). The qualitative method produced relevant data, as the college administrators had many

experiences and a good understanding of opioid use and misuse in college students. When using this method in the future, using a different group of participants in the focus group than those used in the interviews may decrease redundancy in the data.

Limitations and Delimitations

The participants were experienced administrators with over 20 years in the workforce. There were several limitations. The first limitation was that there were no experiences and perspectives from the younger workforce. The second limitation was that all administrators work at the same university, which limits many of the experiences to that one university. The third limitation was, due to COVID-19, all interviews were conducted via teleconference. The original intent was to meet the participants on campus and interview them in person. The interviews may have been less robust without the one-on-one in-person interaction. Fortunately, the focus group was in-person. The fourth limitation was that the study was conducted by a first-time researcher who formulated the research questions, conducted interviews and the focus group, and analyzed the data. A more experienced researcher may have produced higher-quality data. For example, using better follow-up questions and knowing when to ask follow-up questions to help expand the data. The last limitation was the assumption that all experiences shared by the participants were the truth.

The first delimitation was the decision to conduct this research with administrators at only one small South Carolina university to keep the research performed within a certain time frame. Due to this delimitation, this study may not be helpful to larger universities or universities located in a different geographic region. Using only administrators was the second delimitation, as the staff and other employees at the university were not included in the participant sample. The goal was to get experiences from a higher level at the university.

Recommendations for Future Research

This case study was conducted to narrow the gap in the research. While new data was collected that may be helpful to college administrators, the findings are specific to this one setting and sample. A repeat of this qualitative study, using multiple settings (e.g., public/private, larger/small student bodies) and a larger sample size would be appropriate to explore additional perspectives and unique, multi-level influences. Additionally, as the information at the micro-level was limited, adding student participants, other administrators, and staff at all levels would be appropriate to increase the rigor of findings. An additional approach would be an exploratory sequential mixed methods study (Creswell & Poth, 2018), in which a quantitative survey could be built on the qualitative findings and disseminated more broadly to increase the power of the findings. The resulting integrated findings would be more generalizable and could be used to inform multi-level interventions to mitigate the effects of opioids on U.S. college campuses. New research could review local data for opioid use and make a comparison with the experiences of the college administrators.

Comparison of this study with other studies may help strengthen some of the data collected. An additional study could be conducted at a university in a higher or lower opioid use area to see how that impacts the experiences of administrators with opioid use in college students on the individual campuses. The researcher may also consider interviewing students versus administrators with similar questions to retrieve their experiences to find different data. Isolation of one department may create some different data. For example, the study could be replicated using only the athletic department to learn more experiences with athletes, specifically.

Conclusion

The purpose of this qualitative study was to investigate the experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. The study was completed by spending time with the president and some of the administrators at the university. I conducted 10 interviews, one focus group, and performed a review of documents related to opioids. The results were various experiences of the administrators related to four themes: (a) resources and services, (b) knowledge and perceptions, (c) education for staff and students, and (d) policies, laws, and guidelines. The experiences of the administrators shed light on the challenges with opioid use and misuse on their college campus. Each administrator shared different experiences based on their role at the university. Some had personal experiences that were shared, and there were mixed findings between administrators. Some expressed major concern about the use of opioids on campus, while others did not see it as a problem. There were two implications that stood out: the university needs to have more policies and guidelines related specifically to opioid use, and the university needs to provide resources and services, such as varied education to staff and students and treatment for students that are struggling with opioid addiction.

As a beginner in the world of research, I built a great rapport with the participants and perceived that they were comfortable sharing experiences. The information in this study may benefit other administrators as they are challenged with opioid use and misuse on campus. Future research could allow for a replication of the same study with a more seasoned researcher and a larger sample size or conducting the research at a larger university. As the participants suggested, educated communities can inform and support their student population.

REFERENCES

- Abadie, R., Gelpi-Acosta, C., Aquino-Ruiz, F., & Aponte-Melendez, Y. (2020). COVID-19 risks among people who inject drugs in Puerto Rico. *The International Journal of Drug Policy*, *17*(85), 1-11. doi:10.1016/j.drugpo.2020.102903
- Abbasi-Ghahramanloo, A., Fotouhi, A., Zeraati, H., & Rahimi-Movaghar, A. (2015). Prescription drugs, alcohol, and illicit substance use and their correlations among medical sciences students in Iran. *International Journal of High Risk Behaviors & Addiction*, *4*(1), e21945. doi:10.5812/ijhrba.21945
- Agranoff, R., & Radin, B. A. (1991). The comparative case study approach in public administration. *Research in public administration*, *1*(1), 203-231.
- Alley, Z. M., Kerr, D. C. R., & Bae, H. (2020). Trends in college students' alcohol, nicotine, prescription opioid and other drug use after recreational marijuana legalization: 2008–2018. *Addictive Behaviors*, *102*, 106212. doi:10.1016/j.addbeh.2019.106212
- Andraka-Christou, B., Nguyen, T., Harris, S., Madeira, J., Totaram, R., Randall-Kosich, O., . . . Ford, J. (2020). College students' perceived knowledge of and perceived helpfulness of treatments for opioid use disorder at two American universities. *The American Journal of Drug and Alcohol Abuse*, *46*(5), 589-603. doi:10.1080/00952990.2020.1757686
- Arnold, J. F., Arshonsky, J. H., Bloch, K. A., Holzman, E., & Sade, R. M. (2019). Opioid abuse prevention and treatment: Lessons from South Carolina. *Journal of Public Health Management and Practice*, *25*(3), 221-228. doi:10.1097/PHH.0000000000000894
- Arria, A. M., Caldeira, K. M., O'Grady, K. E., Vincent, K. B., Fitzelle, D. B., Johnson, E. P., & Wish, E. D. (2008). Drug exposure opportunities and use patterns among college

- students: Results of a longitudinal prospective cohort study. *Substance Abuse*, 29(4), 19-38. doi:10.1080/08897070802418451
- Ashford, R. D., Brown, A. M., & Curtis, B. (2018). Collegiate recovery programs: The integrated behavioral health model. *Alcoholism Treatment Quarterly*, 36(2), 274-285. doi:10.1080/07347324.2017.1415176
- Ashrafioun, L., & Carels, R. A. (2014). Prescription opioid use among university students: Assessment of post-cue exposure craving. *Addictive Behaviors*, 39(3), 586-592. doi:10.1016/j.addbeh.2013.11.012
- Ataei, M., Shirazi, F. M., Lamarine, R. J., Nakhaee, S., & Mehrpour, O. (2020). A double-edged sword of using opioids and COVID-19: A toxicological view. *Substance Abuse Treatment, Prevention and Policy*, 15(1), 91. doi:10.1186/s13011-020-00333-y
- Azagba, S., Shan, L., Manzione, L., Qeadan, F., & Wolfson, M. (2019). Trends in opioid misuse among marijuana users and non-users in the U.S. from 2007-2017. *International Journal of Environmental Research and Public Health*, 16(22), 4585. doi:10.3390/ijerph16224585
- Bachhuber, M. A., McGinty, E. E., Kennedy-Hendricks, A., Niederdeppe, J., & Barry, C. L. (2015). Messaging to increase public support for naloxone distribution policies in the United States: Results from a randomized survey experiment. *PloS One*, 10(7), e0130050. doi:10.1371/journal.pone.0130050
- Ballantyne, J. C. (2015). Assessing the prevalence of opioid misuse, abuse, and addiction in chronic pain. *Pain (Amsterdam)*, 156(4), 567-568. doi:10.1097/j.pain.0000000000000105
- Balon, R. (2018). Illegal or legal, marijuana remains a gateway drug. *Focus*, 16(4), 2s-3s. doi:10.1176/appi.focus.164S01

- Bao, Y., Pan, Y., Taylor, A., Radakrishnan, S., Luo, F., Pincus, H. A., & Schackman, B. R. (2016). Prescription drug monitoring programs are associated with sustained reductions in opioid prescribing by physicians. *Health Affairs (Project Hope)*, *35*(6), 1045-1051. doi:10.1377/hlthaff.2015.1673
- Bao, Y., Williams, A. R., & Schackman, B. R. (2020). COVID-19 could change the way we respond to the opioid crisis—for the better. *Psychiatric Services (Washington, D.C.)*, *71*(12), 1214-1215. doi:10.1176/appi.ps.202000226
- Barrett, S., Meisner, J., & Stewart, S. (2008). What constitutes prescription drug misuse? Problems and pitfalls of current conceptualizations. *Current Drug Abuse Reviews*, *1*(3), 255-262. doi:10.2174/1874473710801030255
- Barzun, J., & Graff, H. F. (2004). *The modern researcher*. Belmont, CA: Thomson/Wadsworth.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *Qualitative Report*, *13*(4), 544.
- Beck-Cross, C., & Cooper, R. (2015). Micro- and macrosystem predictors of high school male suicidal behaviors. *Children & Schools*, *37*(4), 231-239. doi:10.1093/cs/cdv028
- Bennett, T., & Holloway, K. (2017). Motives for illicit prescription drug use among university students: A systematic review and meta-analysis. *The International Journal of Drug Policy*, *44*, 12-22. doi:10.1016/j.drugpo.2017.02.012
- Benotsch, E. G., Martin, A. M., Koester, S., Cejka, A., & Luckman, D. (2011). Nonmedical use of prescription drugs and HIV risk behavior in gay and bisexual men. *Sexually Transmitted Diseases*, *38*(2), 105-110. doi:10.1097/OLQ.0b013e3181f0bc4b
- Bickel, W. K., Johnson, M. W., Koffarnus, M. N., MacKillop, J., & Murphy, J. G. (2014). The behavioral economics of substance use disorders: Reinforcement pathologies and their

- repair. *Annual Review of Clinical Psychology*, 10(1), 641-677. doi:10.1146/annurev-clinpsy-032813-153724
- Billings, M. S., & Terkla, D. G. (2014). The impact of the campus culture on students' civic activities, values, and beliefs. *New Directions for Institutional Research*, 2014(162), 43-53. doi:10.1002/ir.20076
- Birnbaum, H., White, A., Reynolds, J., Greenberg, P., Zhang, M., Vallow, S., ... Katz, N. (2006). Estimated costs of prescription opioid analgesic abuse in the United States in 2001: A societal perspective. *The Clinical Journal of Pain*, 22(8), 667-676. doi:10.1097/01.ajp.0000210915.80417.cf
- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking. *Qualitative Health Research*, 26(13), 1802-1811. doi:10.1177/1049732316654870reen
- Blanco, C., Han, B., Jones, C. M., Johnson, K., & Compton, W. M. (2018). Prevalence and correlates of benzodiazepine use, misuse, and use disorders among adults in the United States. *The Journal of Clinical Psychiatry*, 79(6) doi:10.4088/JCP.18m12174
- Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*, 19(4), 426-432. doi:10.1108/QMR-06-2016-0053
- Bok, D. (2014). The questionable priorities of university presidents. *Change*, 46(1), 53. Retrieved from <https://search.proquest.com/docview/1679228061>
- Boscarino, J. A., Rukstalis, M., Hoffman, S. N., Han, J. J., Erlich, P. M., Gerhard, G. S., & Stewart, W. F. (2010). Risk factors for drug dependence among out-patients on opioid therapy in a large U.S. health-care system. *Addiction*, 105(10), 1776-1782. doi:10.1111/j.1360-0443.2010.03052.x

- Bostwick, J. M. (2012). Blurred boundaries: The therapeutics and politics of medical marijuana. *Mayo Clinic Proceedings*, 87(2), 172-186. doi:10.1016/j.mayocp.2011.10.003
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40. doi:10.3316/QRJ0902027
- Butler, D. C., & Batalis, N. I. (2017). Opioid-associated deaths in South Sarolina, 2013-2016: A retrospective review. *Academic Forensic Pathology*, 7(4), 640-648. doi:10.23907/2017.054
- Brady, K. T., McCauley, J. L., & Back, S. E. (2016). Prescription opioid misuse, abuse, and treatment in the United States: An update. *American Journal of Psychiatry*, 173(1), 18-26. doi:10.1176/appi.ajp.2015.15020262
- Brandt, S. A., Taverna, E. C., & Hallock, R. M. (2014). A survey of nonmedical use of tranquilizers, stimulants, and pain relievers among college students: Patterns of use among users and factors related to abstinence in non-users. *Drug and Alcohol Dependence*, 143, 272-276. doi:10.1016/j.drugalcdep.2014.07.034
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Breen, R. L. (2006). A practical guide to focus-group research. *Journal of Geography in Higher Education*, 30(3), 463-475. doi:10.1080/03098260600927575
- Breen, R., Lindsay, R., Jenkins, A., & Smith, P. (2001). The role of information and communication technologies in a university learning environment. *Studies in Higher Education (Dorchester-on-Thames)*, 26(1), 95-114. doi:10.1080/03075070123233
- Briscoe, K. L., & Freeman, S. (2019). The role of mentorship in the preparation and success of university presidents. *Mentoring & Tutoring: Partnership in Learning*, 27(4), 416-438. doi:10.1080/13611267.2019.1649920

- Brod, M., Tesler, L., & Christensen, T. (2009). Qualitative research and content validity: Developing best practices based on science and experience. *Quality of Life Research, 18*(9), 1263-1278. doi:10.1007/s11136-009-9540-9
- Bronfenbrenner, U. (1974). Developmental research, public policy, and the ecology of childhood. *Child Development, 45*, 1-5.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513-531.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development. *Developmental Psychology, 22*(6), 723-742. doi:10.1037/0012-1649.22.6.723
- Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3-28). Washington, DC: American Psychological Association. <https://doi.org/10.1037/10317-001>
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives of human development*. Thousand Oaks, CA: Sage
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review, 101*, 568-586.
- Brownstein, M. J. (1993). A brief history of opiates, opioid peptides, and opioid receptors. *Proceedings of the National Academy of Sciences of the United States of America, 90*(12), 5391-5393. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/8390660>

- Buckman, J. F., Yusko, D. A., Farris, S. G., White, H. R., & Pandina, R. J. (2011). Risk of marijuana use in male and female college student athletes and non-athletes. *Journal of Studies on Alcohol and Drugs*, 72(4), 586-591. doi:10.15288/jsad.2011.72.586
- Burfoot-Rochford, I. (2020). Heroin, prescription opioids, and rural superintendents: Understanding rural district and superintendent responses to the opioid epidemic in Western Pennsylvania. *Journal of Research in Rural Education*, 36(1), 1-13. doi:10.26209/jrre3601
- Calcaterra, S., Glanz, J., & Binswanger, I. A. (2013). National trends in pharmaceutical opioid related overdose deaths compared to other substance related overdose deaths: 1999–2009. *Drug and Alcohol Dependence*, 131(3), 263-270. doi:10.1016/j.drugalcdep.2012.11.018
- Carnevale, F. A. (2002). Authentic qualitative research and the quest for methodological rigour. *The Canadian Journal of Nursing Research = Revue Canadienne De Recherche En Sciences Infirmieres*, 34(2), 121-128. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/12425004>
- Centers for Disease Control and Prevention. (2020). *U.S. opioid prescribing rate maps*. Retrieved from <https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html>
- Cerdá, M., Ransome, Y., Keyes, K. M., Koenen, K. C., Tardiff, K., Vlahov, D., & Galea, S. (2013). Revisiting the role of the urban environment in substance use: The case of analgesic overdose fatalities. *American Journal of Public Health*, 103(12), 2252–2260. doi: 10.2105/ajph.2013.301347

- Chan, K., & Trant, J. (2018). The relationship of psychological distress and living with children and adolescents for adult non-medical prescription opioid users. *Child and Adolescent Social Work Journal*, 35(4), 391-405. doi:10.1007/s10560-018-0534-8
- Chang, H., Murimi, I. B., Jones, C. M., & Alexander, G. C. (2018). Relationship between high-risk patients receiving prescription opioids and high-volume opioid prescribers. *Addiction (Abingdon, England)*, 113(4), 677-686. doi:10.1111/add.14068
- Chen, Y., Chang, J., & Lee, C. (2020). Screening illicit substance use in college students: The Chinese version of the drug abuse screening test. *Drug and Alcohol Dependence*, 215, 108184. doi:10.1016/j.drugalcdep.2020.108184
- Cheng, T., Small, W., Nosova, E., Hogg, B., Hayashi, K., Kerr, T., & DeBeck, K. (2018). Nonmedical prescription opioid use and illegal drug use: Initiation trajectory and related risks among people who use illegal drugs in Vancouver, Canada. *BMC Research Notes*, 11(1), 35. doi:10.1186/s13104-018-3152-9
- Chinneck, A., Thompson, K., Mahu, I. T., Davis-MacNevin, P., Dobson, K., & Stewart, S. H. (2018). Personality and prescription drug use/misuse among first year undergraduates. *Addictive Behaviors*, 87, 122-130. doi:10.1016/j.addbeh.2018.07.001
- Chou, R., Cruciani, R. A., Fiellin, D. A., Compton, P., Farrar, J. T., Haigney, M. C., . . . American Pain Society; Hearth Rhythm Society (2014). Methadone safety: A clinical practice guideline from the American pain society and college on problems of drug dependence, in collaboration with the heart rhythm society. *The Journal of Pain*, 15(4), 321-337. doi:10.1016/j.jpain.2014.01.494
- Chou, R., Turner, J. A., Devine, E. B., Hansen, R. N., Sullivan, S. D., Blazina, I., . . . Deyo, R. A. (2015). The effectiveness and risks of long-term opioid therapy for chronic pain: A

- systematic review for a national institutes of health pathways to prevention workshop. *Annals of Internal Medicine*, *162*(4), 276-286. doi:10.7326/m14-2559
- Cicero, T. J., & Ellis, M. S. (2015). Abuse-deterrent formulations and the prescription opioid abuse epidemic in the united states: Lessons learned from OxyContin. *JAMA Psychiatry*, *72*(5), 424-430. doi:10.1001/jamapsychiatry.2014.3043
- Cicero, T. J., Ellis, M. S., & Kasper, Z. A. (2020). Polysubstance use: A broader understanding of substance use during the opioid crisis. *American Journal of Public Health*, *110*(2), 244-250. doi:10.2105/AJPH.2019.305412
- Clark, T. (2010). On 'being researched': Why do people engage with qualitative research? *Qualitative Research*, *10*(4), 399-419. doi:10.1177/1468794110366796
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, *12*(3), 297-298. doi:10.1080/17439760.2016.1262613
- Collins, D., Abadi, M. H., Johnson, K., Shamblen, S., & Thompson, K. (2011). Non-Medical use of prescription drugs among youth in an Appalachian population: Prevalence, predictors, and implications for prevention. *Journal of Drug Education*, *41*(3), 309–326. doi: 10.2190/de.41.3.e
- Compton, W. M., Jones, C. M., & Baldwin, G. T. (2016). Relationship between nonmedical prescription-opioid use and heroin use. *The New England Journal of Medicine*, *374*(2), 154-163. doi:10.1056/NEJMra1508490
- Cooper, S., & Nielsen, S. (2017). Stigma and social support in pharmaceutical opioid treatment populations: A scoping review. *International Journal of Mental Health and Addiction*, *15*(2), 452-469. doi:10.1007/s11469-016-9719-6

- Creameens, J. L., Usdan, S. L., Umstattd, M. R., Talbott, L. L., Turner, L., & Perko, M. (2011). Challenges and recommendations to enforcement of alcohol policies on college campuses: An administrator's perspective. *Journal of American College Health, 59*(5), 427-430. doi:10.1080/07448481.2010.502201
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluation quantitative and qualitative research*. Upper Saddle, NJ: Pearson Education International.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Los Angeles, CA: Sage.
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A. J., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology, 11*(1), 100. doi:10.1186/1471-2288-11-100
- Daniels-Witt, Q., Thompson, A., Glassman, T., Federman, S., & Bott, K. (2017). The case for implementing the levels of prevention model: Opiate abuse on American college campuses. *Journal of American College Health, 65*(7), 518-524. doi:10.1080/07448481.2017.1341900
- Darling, N. (2007). Ecological systems theory: The person in the center of the circles. *Research in Human Development, 4*(3-4), 203-217. doi:10.1080/15427600701663023
- Dart, R. C., Surratt, H. L., Cicero, T. J., Parrino, M. W., Severtson, S. G., Bucher-Bartelson, B., & Green, J. L. (2015). Trends in opioid analgesic abuse and mortality in the United States. *The New England Journal of Medicine, 372*(3), 241-248. doi:10.1056/NEJMsa1406143

- Dasgupta, N., Beletsky, L., & Ciccarone, D. (2018). Opioid crisis: No easy fix to its social and economic determinants. *American Journal of Public Health, 108*(2), 182-186.
doi:10.2105/AJPH.2017.304187
- Davis, R. E., Bass, M. A., Wade, M. A., & Nahar, V. K. (2020). Screening for depression among a sample of U.S. college students who engage in recreational prescription opioid misuse. *Health Promotion Perspectives, 10*(1), 59-65. doi:10.15171/hpp.2020.10
- Denzin, N. K., & Lincoln, Y. S. (2003). *The landscape of qualitative research* (2nd ed.). Thousand Oaks, Calif. [u.a.]: Sage Publishing.
- Desantis, A. D., & Hane, A. C. (2010). "Adderall is definitely not a drug": Justifications for the illegal use of ADHD stimulants. *Substance use & Misuse, 45*(1-2), 31-46.
doi:10.3109/10826080902858334
- Dodrill, C. L., Helmer, D. A., & Kosten, T. R. (2011). Prescription pain medication dependence. *American Journal of Psychiatry, 168*(5), 466-471.
doi:10.1176/appi.ajp.2010.10020260
- Doody, O., & Noonan, M. (2013). Preparing and conducting interviews to collect data. *Nurse Researcher, 20*(5), 28-32. doi:10.7748/nr2013.05.20.5.28.e327
- Doody, O., Slevin, E., & Taggart, L. (2013). Focus group interviews part 3: Analysis. *British Journal of Nursing, 22*(5), 266-269. doi:10.12968/bjon.2013.22.5.266
- Drazdowski, T. K. (2016). A systematic review of the motivations for the non-medical use of prescription drugs in young adults. *Drug and Alcohol Dependence, 162*, 3-25.
doi:10.1016/j.drugalcdep.2016.01.011
- Drever, E. (2006). *Using semi-structured interviews in small-scale research*. Glasgow: SCRE Centre, University of Glasgow.

- Earnshaw, V., Smith, L., & Copenhaver, M. (2013). Drug addiction stigma in the context of methadone maintenance therapy: An investigation into understudied sources of stigma. *International Journal of Mental Health and Addiction, 11*(1), 110-122. doi:10.1007/s11469-012-9402-5
- Eccles, M. (2006). Designing theoretically-informed implementation interventions. *Implementation Science: IS, 1*(1), 4. doi:10.1186/1748-5908-1-4
- Edwards, R. R., Dolman, A. J., Michna, E., Katz, J. N., Nedeljkovic, S. S., Janfaza, D., . . . Wasan, A. D. (2016). Changes in pain sensitivity and pain modulation during oral opioid treatment: The impact of negative affect. *Pain Medicine, 17*(10), 1882-1891. doi:10.1093/pm/pnw010
- Egbert, J. (2013). *Foundations of education research understanding theoretical components /*. Routledge,. <https://doi.org/10.4324/9781315880518>
- Eickenhorst, P., Vitzhum, K., Klapp, B. F., Groneberg, D., & Mache, S. (2012). Neuroenhancement among German university students: Motives, expectations, and relationship with psychoactive lifestyle drugs. *Journal of Psychoactive Drugs, 44*(5), 418-427. doi:10.1080/02791072.2012.736845
- Eisenberg, D., Hunt, J., & Speer, N. (2013). Mental health in American colleges and universities: Variation across student subgroups and across campuses. *The Journal of Nervous and Mental Disease, 201*(1), 60-67. doi:10.1097/NMD.0b013e31827ab077
- Etikan, I. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1. doi:10.11648/j.ajtas.20160501.11
- Evans, G. W. (2010). *Chaos and its influence on children's development* (1st ed.). Washington, DC: American Psychological Assoc. Retrieved from <http://bvbr.bib->

bvb.de:8991/F?func=service&doc_library=BVB01&local_base=BVB01&doc_number=02016618&sequence=000002&line_number=0001&func_code=DB_RECORDS&service_type=MEDIA

Evans-Polce, R., Lanza, S., & Maggs, J. (2016). Heterogeneity of alcohol, tobacco, and other substance use behaviors in U.S. college students: A latent class analysis. *Addictive Behaviors, 53*, 80-85. doi:10.1016/j.addbeh.2015.10.010

Evoy, K. E., Groff, L., Hill, L. G., Godinez, W., Gandhi, R., & Reveles, K. R. (2020). Impact of student pharmacist-led naloxone academic detailing at community pharmacies in Texas. *Journal of the American Pharmacists Association, 60*(1), 81-86. doi:10.1016/j.japh.2019.09.007

Fenton-O'Creevy, M., Soane, E., Nicholson, N., & Willman, P. (2011). Thinking, feeling and deciding: The influence of emotions on the decision making and performance of traders. *Journal of Organizational Behavior, 32*(8), 1044-1061. doi:10.1002/job.720

Fiellin, L. E., Tetrault, J. M., Becker, W. C., Fiellin, D. A., & Hoff, R. A. (2013). Previous use of alcohol, cigarettes, and marijuana and subsequent abuse of prescription opioids in young adults. *Journal of Adolescent Health, 52*(2), 158-163. doi:10.1016/j.jadohealth.2012.06.010

Fischer, B., Keates, A., Bühringer, G., Reimer, J., & Rehm, J. (2014). Non-medical use of prescription opioids and prescription opioid-related harms: Why so markedly higher in North America compared to the rest of the world? *Addiction (Abingdon, England), 109*(2), 177-181. doi:10.1111/add.12224

Floyd, C. N., & Warren, J. B. (2018). Opioids out of control. *British Journal of Clinical Pharmacology, 84*(5), 813-815. doi:10.1111/bcp.13346

- Fogel, J., & Shlivko, A. (2015). Reality television programs are associated with illegal drug use and prescription drug misuse among college students. *Substance Use & Misuse, 51*(1), 62-72. doi:10.3109/10826084.2015.1082593
- Ford, J. A., Pomykacz, C., Veliz, P., McCabe, S. E., & Boyd, C. J. (2018). Sports involvement, injury history, and non-medical use of prescription opioids among college students: An analysis with a national sample. *The American Journal on Addictions, 27*(1), 15-22. doi:10.1111/ajad.12657
- Fortuna, R. J., Robbins, B. W., Caiola, E., Joynt, M., & Halterman, J. S. (2010). Prescribing of controlled medications to adolescents and young adults in the United States. *Pediatrics (Evanston), 126*(6), 1108-1116. doi:10.1542/peds.2010-0791
- Fudala, P. J., Fields, L., Kreiter, N. A., & Lange, W. R. (1994). An examination of current and proposed drug-testing policies at U.S. colleges and universities. *Journal of American College Health, 42*(6), 267-270. doi:10.1080/07448481.1994.9936358
- Gallucci, A., Martin, R., Beaujean, A., & Usdan, S. (2015). An examination of the misuse of prescription stimulants among college students using the theory of planned behavior. *Psychology, Health & Medicine, 20*(2), 217-226. doi:10.1080/13548506.2014.913800
- Gould, S., & Berke, J. (2019, June 25). Illinois just became the first state to legalize marijuana sales through the legislature—here are all the states where marijuana is legal. Retrieved from <https://www.businessinsider.com/legal-marijuana-states-2018-1>.
- Guarino, H., Mateu-Gelabert, P., Teubl, J., & Goodbody, E. (2018). Young adults' opioid use trajectories: From nonmedical prescription opioid use to heroin, drug injection, drug

treatment and overdose. *Addictive Behaviors*, 86, 118-123.

doi:10.1016/j.addbeh.2018.04.017

Guetterman, T. C., Chang, T., DeJonckheere, M., Basu, T., Scruggs, E., & Vydiswaran, V. G. V.

(2018). Augmenting qualitative text analysis with natural language processing:

Methodological study. *Journal of Medical Internet Research*, 20(6), e231.

doi:10.2196/jmir.9702

Guttmanova, K., Lee, C. M., Kilmer, J. R., Fleming, C. B., Rhew, I. C., Kosterman, R., &

Larimer, M. E. (2016). Impacts of changing marijuana policies on alcohol use in the

United States. *Alcoholism: Clinical and Experimental Research*, 40(1), 33-46.

doi:10.1111/acer.12942

Guy, G. P., Zhang, K., Bohm, M. K., Losby, J., Lewis, B., Young, R., . . . Dowell, D. (2017).

Vital signs: Changes in opioid prescribing in the United States, 2006–2015. *MMWR*.

Morbidity and Mortality Weekly Report, 66(26), 697-704.

doi:10.15585/mmwr.mm6626a4

Han, B., Compton, W. M., Blanco, C., Crane, E., Lee, J., & Jones, C. M. (2017). Prescription

opioid use, misuse, and use disorders in U.S. adults: 2015 national survey on drug use

and health. *Annals of Internal Medicine*, 167(5), 293-301. doi:10.7326/M17-0865

Han, B., Compton, W. M., Jones, C. M., & Cai, R. (2015). Nonmedical prescription opioid use

and use disorders among adults aged 18 through 64 years in the United States, 2003-

2013. *JAMA*, 314(14), 1468-1478. doi:10.1001/jama.2015.11859

Harries, M. D., Lust, K., Christenson, G. A., Redden, S. A., & Grant, J. E. (2018). Prescription

opioid medication misuse among university students. *The American Journal on*

Addictions, 27(8), 618-624. doi:10.1111/ajad.12807

- Hedegaard, H., Miniño, A. M., & Warner, M. (2018). *Drug overdose deaths in the United States, 1999–2017*. Retrieved from <https://www.cdc.gov/nchs/products/databriefs/db329.htm>
- Hedegaard, H., Warner, M., & Chen, L. (2015). Drug-poisoning deaths involving heroin: United States, 2000–2013. Retrieved from <http://www.cdc.gov/nchs/data/databriefs/db190.htm>.
- Heimer, R., McNeil, R., & Vlahov, D. (2020). A community responds to the COVID-19 pandemic: A case study in protecting the health and human rights of people who use drugs. *Journal of Urban Health*, 97(4), 448-456. doi:10.1007/s11524-020-00465-3
- High achievers. (2015). *Times Higher Education*, (2198)
<http://ezproxy.liberty.edu/login?qurl=https%3A%2F%2Fwww.proquest.com%2Ftrade-journals%2Fhigh-achievers%2Fdocview%2F1672865375%2Fse-2%3Faccountid%3D12085>
- Hill, K. P., & Saxon, A. J. (2018). The role of cannabis legalization in the opioid crisis. *JAMA Internal Medicine*, 178(5), 679-680. doi:10.1001/jamainternmed.2018.0254
- Ho, J. (2017). The contribution of drug overdose to educational gradients in life expectancy in the United States, 1992–2011. *Demography*, 54(3), 1175-1202. doi:10.1007/s13524-017-0565-3
- Hoffman, L. A., Lewis, B., & Nixon, S. J. (2017). Opioid misuse trends in treatment seeking populations: Revised prescription opioid policy and temporally corresponding changes. *Substance use & Misuse*, 52(14), 1850-1858.
doi:10.1080/10826084.2017.1316291
- Holloway, K. R., Bennett, T. H., Parry, O., & Gorden, C. (2014). Characteristics and consequences of prescription drug misuse among university students in the United

- Kingdom. *Journal of Substance Use*, 19(1-2), 156-163.
doi:10.3109/14659891.2013.765513
- Horsburgh, D. (2003). Evaluation of qualitative research. *Journal of Clinical Nursing*, 12(2), 307-312. doi:10.1046/j.1365-2702.2003.00683.x
- Hughes, A., Williams, M., Lipari, R., Bose, J., Copello, E., & Kroutil, L. (2019, January 4). Prescription drug use and misuse in the United States: Results from the 2015 National Survey on Drug Use and Health. Retrieved from <https://www.samhsa.gov/data/sites/default/files/NSDUHFFR2-2015/NSDUH-FFR2-2015.htm>.
- Jeffery, R. M., Dickinson, L., Ng, N. D., DeGeorge, L. M., & Nable, J. V. (2017). Naloxone administration for suspected opioid overdose: An expanded scope of practice by a basic life support collegiate-based emergency medical services agency. *Journal of American College Health*, 65(3), 212-216. doi:10.1080/07448481.2016.1277730
- Jia, Z., Jin, Y., Zhang, L., Wang, Z., & Lu, Z. (2018). Prevalence of drug use among students in mainland China: A systematic review and meta-analysis for 2003–2013. *Drug and Alcohol Dependence*, 186, 201–206. doi: 10.1016/j.drugalcdep.2017.12.047
- Johnson, L. R. (2017). *Community-based qualitative research*. Thousand Oaks, California: Sage.
- Kamasak, R. F., & Bulutlar, F. (2010). The influence of knowledge sharing on innovation. *European Business Review*, 22(3), 306-317.
doi:10.1108/09555341011040994
- Kang, H., Nembhard, H. B., Curry, W., Ghahramani, N., & Hwang, W. (2017). A systems thinking approach to prospective planning of interventions for chronic kidney disease care. *Health Systems*, 6(2), 130-147. doi:10.1057/hs.2015.17

- Kanouse, A. B., & Compton, P. (2015). The epidemic of prescription opioid abuse, the subsequent rising prevalence of heroin use, and the federal response. *Journal of Pain & Palliative Care Pharmacotherapy*, 29(2), 102-114. doi:10.3109/15360288.2015.1037521
- Katz, J. (2017, June 5). Drug deaths in America are rising faster than ever. *The New York Times*. Retrieved from <https://www.nytimes.com/interactive/2017/06/05/upshot/opioid-epidemicdrug-overdose-deaths-are-rising-faster-than-ever.html>
- Keith, D. R., Hart, C. L., McNeil, M. P., Silver, R., & Goodwin, R. D. (2015). Frequent marijuana use, binge drinking and mental health problems among undergraduates. *The American Journal on Addictions*, 24(6), 499-506. doi:10.1111/ajad.12201
- Kelly, B. C., Rendina, H. J., Vuolo, M., Wells, B. E., & Parsons, J. T. (2015). A typology of prescription drug misuse: A latent class approach to differences and harms. *Drug and Alcohol Review*, 34(2), 211-220. doi:10.1111/dar.12192
- Kenedi, G., & Mountford-Zimdars, A. (2018). Does educational expertise matter for PVCs education? A UK study of PVCs' educational background and skills. *Journal of Higher Education Policy and Management*, 40(3), 193-207. doi:10.1080/1360080X.2018.1462440
- Kenne, D. R., Hamilton, K., Birmingham, L., Oglesby, W. H., Fischbein, R. L., & Delahanty, D. L. (2017). Perceptions of harm and reasons for misuse of prescription opioid drugs and reasons for not seeking treatment for physical or emotional pain among a sample of college students. *Substance Use & Misuse*, 52(1), 92-99. doi:10.1080/10826084.2016.1222619
- Kennedy-Hendricks, A., Busch, S. H., McGinty, E. E., Bachhuber, M. A., Niederdeppe, J., Gollust, S. E., . . . Barry, C. L. (2016). Primary care physicians' perspectives on the

- prescription opioid epidemic. *Drug and Alcohol Dependence*, 165, 61-70.
doi:10.1016/j.drugalcdep.2016.05.010
- Kerley, K. R., Copes, H., & Griffin, O. H. (2015). Middle-class motives for non-medical prescription stimulant use among college students. *Deviant Behavior*, 36(7), 589-603.
doi:10.1080/01639625.2014.951573
- Kerr, D. C. R., Bae, H., & Koval, A. L. (2018). Oregon recreational marijuana legalization: Changes in undergraduates' marijuana use rates from 2008 to 2016. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 32(6), 670-678. doi:10.1037/adb0000385
- Kertesz, S. G., & Gordon, A. J. (2019). A crisis of opioids and the limits of prescription control: United States. *Addiction*, 114(1), 169-180. doi:10.1111/add.14394
- Kolodny, A., Courtwright, D. T., Hwang, C. S., Kreiner, P., Eadie, J. L., Clark, T. W., & Alexander, G. C. (2015). The prescription opioid and heroin crisis: A public health approach to an epidemic of addiction. *Annual Review of Public Health*, 36(1), 559-574.
doi:10.1146/annurev-publhealth-031914-122957
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120-124.
doi:10.1080/13814788.2017.1375092
- Krebs, E., Urada, D., Evans, E., Huang, D., Hser, Y., & Nosyk, B. (2017). The costs of crime during and after publicly funded treatment for opioid use disorders: A population-level study for the state of California. *Addiction*, 112(5), 838-851. doi:10.1111/add.1372
- Kroenke, K., Alford, D. P., Argoff, C., Canlas, B., Covington, E., Frank, J. W., . . . Sullivan, M. (2019). Challenges with implementing the Centers for Disease Control and Prevention

opioid guideline: A consensus panel report. *Pain Medicine*, 20(4), 724-735.

doi:10.1093/pm/pny307

Lanier, C., & Farley, E. J. (2011). What matters most? Assessing the influence of demographic characteristics, college-specific risk factors, and poly-drug use on nonmedical prescription drug use. *Journal of American College Health*, 59(8), 721-727.

doi:10.1080/07448481.2010.546463

Lankenau, S. E., Teti, M., Silva, K., Bloom, J. J., Harocopos, A., & Treese, M. (2011). Initiation into prescription opioid misuse amongst young injection drug users. *International Journal of Drug Policy*, 23(1), 37-44. doi:10.1016/j.drugpo.2011.05.014

Laudet, A., Harris, K., Kimball, T., Winters, K. C., & Moberg, D. P. (2014). Collegiate recovery communities' programs: What do we know and what do we need to know? *Journal of Social Work Practice in the Addictions*, 14(1), 84-100.

doi:10.1080/1533256X.2014.872015

Lawler, A. (2018). Cannabis, opium use part of ancient near eastern cultures. *Science (New York, N.Y.)*, 360(6386), 249-250. doi:10.1126/science.360.6386.249

Le, V. T., Norris, A., McDaniel, A., Hale, K. M., Athas, C., & Kwiek, N. C. (2018). Nonmedical use of over-the-counter medications is significantly associated with nonmedical use of prescription drugs among university students. *Journal of American College Health*, 66(1), 1-8. doi:10.1080/07448481.2017.1356312

Lee, D., Lin, Y., Osgood, N., & Thomson, R. (2017). *Social, cultural, and behavioral modeling: 10th international conference, SBP-BRiMS 2017, Washington, D.C., July 5-8, 2017, proceedings*. Cham: Springer International Publishing AG.

- Leece, P., Cavacuiti, C., Macdonald, E., Gomes, T., Kahan, M., Srivastava, A., & Juurlink, D. (2015). Predictors of opioid-related death during methadone therapy. *Journal of Substance Abuse Treatment, 57*, 30-35. doi:10.1016/j.jsat.2015.04.008
- Lees, A. (2016). Roles of urban indigenous community members in collaborative field-based teacher preparation. *Journal of Teacher Education, 67*(5), 363-378. doi:10.1177/0022487116668018
- Leischow, S. J., Best, A., Trochim, W. M., Clark, P. I., Gallagher, R. S., Marcus, S. E., & Matthews, E. (2008). Systems thinking to improve the public's health. *American Journal of Preventive Medicine, 35*(2), S196-S203. doi:10.1016/j.amepre.2008.05.014
- Lin, T., Ger, L., Pergolizzi, J. V., Raffa, R. B., Wang, J., & Ho, S. (2016). Long-term use of opioids in 210 officially registered patients with chronic noncancer pain in taiwan: A cross-sectional study. *Journal of the Formosan Medical Association, 116*(4), 257-265. doi:10.1016/j.jfma.2016.10.015
- Linas, B. P., Savinkina, A., Barbosa, C., Mueller, P. P., Cerdá, M., Keyes, K., & Chhatwal, J. (2021). A clash of epidemics: Impact of the COVID-19 pandemic response on opioid overdose. *Journal of Substance Abuse Treatment, 120*, 1-2. doi:10.1016/j.jsat.2020.108158
- Lincoln, Y., & Guba, E. G. (2006). *Naturalistic inquiry* (Nachdr. ed.). Newbury Park [u.a.]: Sage Publishing.
- Linnan, L. A., Arandia, G., Naseer, C., Li, J., Pomerantz, M., & Diehl, S. J. (2017). Assessing opportunities to enhance comprehensive health promotion and wellness programming in a state community college system. *North Carolina Medical Journal, 78*(5), 296-303. doi:10.18043/ncm.78.5.296

- Lipari, R. N., Ahrensbrak, R. D., Pemberton, M. R., & Porter, J. D. (2017). Risk and protective factors and estimates of substance use initiation: Results from the 2016 National Survey on Drug Use and Health. In *CBHSQ data review*. Substance Abuse and Mental Health Services Administration (US).
- Littlefield, A. K., & Sher, K. J. (2014). Personality and substance use disorders. *Oxford Handbooks Online*. doi:10.1093/oxfordhb/9780199381678.013.006
- Litton, S. (2018). Economic toll of opioid crisis in U.S. exceeded \$1 trillion since 2001. *Targeted News Service* Retrieved from <https://search.proquest.com/docview/2001883872>
- Lokala, U., Lamy, F., Daniulaityte, R., Sheth, A., Nahhas, R., Roden, J., . . . Carlson, R. G. (2019). Global trends, local harms: Availability of fentanyl-type drugs on the dark web and accidental overdoses in Ohio. *Computational and Mathematical Organization Theory*, 25(1), 48-59. doi:10.1007/s10588-018-09283-0
- Lord, S., Brevard, J., & Budman, S. (2011). Connecting to young adults: An online social network survey of beliefs and attitudes associated with prescription opioid misuse among college students. *Substance use & Misuse*, 46(1), 66-76.
doi:10.3109/10826084.2011.521371
- Lucas, W. C., Titus, S., & Young, M. E. M. (2016). *An investigation into the social factors that influence sport participation: A case of gymnastics in the western cape*. Zenodo.
doi:10.5281/zenodo.1127596
- Macmillan, A., Davies, M., Shrubsole, C., Luxford, N., May, N., Chiu, L. F., . . . Chalabi, Z. (2016). Integrated decision-making about housing, energy and wellbeing: A qualitative system dynamics model. *Environmental Health: A Global Access Science Source*, 15 Suppl 1(S1), 37. doi:10.1186/s12940-016-0098-z

- Madsen, K., Garber, A., Martin, M., Gonzaga, M., & Linchey, J. (2014). The feasibility of a physical activity referral network for pediatric obesity. *Childhood Obesity, 10*(2), 169-174. doi:10.1089/chi.2013.0118
- Maisto, S., Galizio, M., & Connors, J. (2018). *Drug use and abuse* (8th ed.). GB: Cengage Learning. Retrieved from <http://www.vlebooks.com/vleweb/product/openreader?id=none&isbn=9781337670616&uid>
- Makary, M. A., Overton, H. N., & Wang, P. (2017). Overprescribing is major contributor to opioid crisis. *BMJ, 359*, j4792. doi:10.1136/bmj.j4792
- Malone, P. (2017). Dealing with the opioid epidemic in college students. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*(10), S78-S79. doi:10.1016/j.jaac.2017.07.306
- Manjiani, D., Paul, D. B., Kunnumpurath, S., Kaye, A. D., & Vadivelu, N. (2014). Availability and utilization of opioids for pain management: Global issues. *The Ochsner Journal, 14*(2), 208-215. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/24940131>
- Mars, S. G., Bourgois, P., Karandinos, G., Montero, F., & Ciccarone, D. (2013). “Every ‘Never’ I ever said came true”: Transitions from opioid pills to heroin injecting. *The International Journal of Drug Policy, 25*(2), 257-266. doi:10.1016/j.drugpo.2013.10.004
- Martel, M. O., Dolman, A. J., Edwards, R. R., Jamison, R. N., & Wasan, A. D. (2014). The association between negative affect and prescription opioid misuse in patients with chronic pain: The mediating role of opioid craving. *Journal of Pain, 15*(1), 90-100. doi:10.1016/j.jpain.2013.09.014

- Martins, S. S., Fenton, M. C., Keyes, K. M., Blanco, C., Zhu, H., & Storr, C. L. (2012). Mood and anxiety disorders and their association with non-medical prescription opioid use and prescription opioid-use disorder: Longitudinal evidence from the national epidemiologic study on alcohol and related conditions. *Psychological Medicine, 42*(6), 1261-1272. doi:10.1017/S0033291711002145
- Martins, S., Kim, J., Chen, L., Levin, D., Keyes, K., Cerdá, M., & Storr, C. (2015). Nonmedical prescription drug use among U.S. young adults by educational attainment. *Social Psychiatry and Psychiatric Epidemiology, 50*(5), 713-724. doi:10.1007/s00127-014-0980-3
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum, Qualitative Social Research, 11*(3), 19-11:3<19. doi:10.17169/fqs-11.3.1428
- Mason, M., Benotsch, E., Way, T., Kim, H., & Snipes, D. (2014). Text messaging to increase readiness to change alcohol use in college students. *The Journal of Primary Prevention, 35*(1), 47-52. doi:10.1007/s10935-013-0329-9
- Mattson, C. L., O'Donnell, J., Kariisa, M., Seth, P., Scholl, L., & Gladden, R. M. (2018). Opportunities to prevent overdose deaths involving prescription and illicit opioids, 11 states, July 2016–June 2017. *MMWR. Morbidity and Mortality Weekly Report, 67*(34), 945-951. doi:10.15585/mmwr.mm6734a2
- McCabe, S. E., Teter, C. J., & Boyd, C. J. (2006). Medical use, illicit use, and diversion of abusable prescription drugs. *Journal of American College Health, 54*(5), 269-278. doi:10.3200/JACH.54.5.269-278
- McCabe, S. E., West, B. T., Teter, C. J., & Boyd, C. J. (2014). Trends in medical use, diversion, and nonmedical use of prescription medications among college students from 2003 to

- 2013: Connecting the dots. *Addictive Behaviors*, 39(7), 1176-1182.
doi:10.1016/j.addbeh.2014.03.008
- McCabe, S. E., Teter, C. J., Boyd, C. J., Wilens, T. E., & Schepis, T. S. (2018). Sources of prescription medication misuse among young adults in the United States: The role of educational status. *The Journal of Clinical Psychiatry*, 79(2), 33-40.
doi:10.4088/JCP.17m11958
- McCabe, S. E., & West, B. T. (2013). Medical and nonmedical use of prescription stimulants: Results from a national multicohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(12), 1272-1280. doi:10.1016/j.jaac.2013.09.005
- McCarthy, M. (2015). Drug overdose has become leading cause of death from injury in US. *BMJ: British Medical Journal*, 350(jun22 3), h3328. doi:10.1136/bmj.h3328
- McHugh, R. K., Nielsen, S., & Weiss, R. (2014). Prescription drug abuse: From epidemiology to public policy. *Journal of Substance Abuse Treatment*, 48(1), 1-7.
doi:10.1016/j.jsat.2014.08.004
- McNeely, J., Haley, S. J., Smith, A. J., Leonard, N. R., Cleland, C. M., Ferdschneider, M., . . . Adam, A. (2019). Computer self-administered screening for substance use in university student health centers. *Journal of American College Health*, 67(6), 541-550.
doi:10.1080/07448481.2018.1498852
- McTier, T. S., Briscoe, K. L., & Davis, T. J. (2020). College administrators' beliefs and perceptions of college students with criminal records. *Journal of Student Affairs Research and Practice*, 57(3), 296-308. doi:10.1080/19496591.2019.1648273
- Meisel, M. K., & Goodie, A. S. (2015). Predicting prescription drug misuse in college students' social networks. *Addictive Behaviors*, 45, 110-112. doi:10.1016/j.addbeh.2015.01.025

- Merlo, L., Singhakant, S., Cummings, S., & Cottler, L. (2013). Reasons for misuse of prescription medication among physicians undergoing monitoring by a physician health program. *Journal of Addiction Medicine, 7*(5), 349-353.
doi:10.1097/ADM.0b013e31829da074
- Meshesha, L. Z., Pickover, A. M., Teeters, J. B., & Murphy, J. G. (2017). A longitudinal behavioral economic analysis of non-medical prescription opioid use among college students. *The Psychological Record, 67*(2), 241-251. doi:10.1007/s40732-017-0235-2
- Miech, R., Johnston, L., O'Malley, P., Bachman, J., Schulenberg, J., & Patrick, M. (2019). *Monitoring the future national survey results on drug use, 1975-2018: Volume I, secondary school students* Retrieved from <http://hdl.handle.net/2027.42/150622>
- Mills, A. J., Durepos, G., & Wiebe, E. (2010). *Encyclopedia of case study research*. Los Angeles: Sage.
- Minyard, K. J., Ferencik, R., Phillips, M. A., & Soderquist, C. (2014). Using systems thinking in state health policymaking: An educational initiative. *Health Systems, 3*(2), 117-123.
doi:10.1057/hs.2013.17
- Moallem, S. A., Balali-Mood, K., & Balali-Mood, M. (2004). *Handbook of drug interactions*. Totowa, NJ: Humana Press.
- Moberg, D. P., Finch, A. J., & Lindsley, S. M. (2014). Recovery high schools: Students and responsive academic and therapeutic services. *Peabody Journal of Education, 89*(2), 165-182. doi:10.1080/0161956X.2014.895645
- Mojtabai, R., Amin-Esmaeili, M., Nejat, E., & Olfson, M. (2019). Misuse of prescribed opioids in the United States. *Pharmacoepidemiology and Drug Safety, 28*(3), 345-353.
doi:10.1002/pds.4743

- Monwell, B., & Gerdner, A. (2017). Opiates versus other opioids—are these relevant as diagnostic categorizations? *Heroin Addiction and Related Clinical Problems*, 19(6), 39. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-37848>
- Morioka, C. K., Howard, D. E., Caldeira, K. M., Wang, M. Q., & Arria, A. M. (2018). Affective dysregulation predicts incident nonmedical prescription analgesic use among college students. *Addictive Behaviors*, 76, 328-334. doi:10.1016/j.addbeh.2017.08.034
- Mottier, V. (2005). The interpretive turn: History, memory, and storage in qualitative research. *Forum: Qualitative Social Research*, 6(2), 1-10. Retrieved from <https://search.proquest.com/docview/869228666>
- Muhuri, P., Gfroerer, J., & Davies, C. (2013, August). Associations of non-medical pain reliever use and initiation of heroin use in the United States. *CBHSQ Data Review*, 1–17.
- Muswede, T., & Roelofse, C. J. (2018). Drug use and postgraduate students' career prospects: Implications for career counselling intervention strategies. *The Journal for Transdisciplinary Research in Southern Africa*, 14(1), e1-e8. doi:10.4102/td.v14i1.523
- Myers, M. G., Aarons, G. A., Tomlinson, K., & Stein, M. B. (2003). Social anxiety, negative affectivity, and substance use among high school students. *Psychology of Addictive Behaviors*, 17(4), 277-283. doi:10.1037/0893-164X.17.4.277
- National Collegiate Athletic Association. (2017). NCAA recruiting facts. Retrieved from www.ncaa.org.
- National Institute on Drug Abuse (2012). *Drug facts: Nationwide trends*. Retrieved from <http://www.drugabuse.gov/publications/drugfacts/nationwide-trends>
- National Institute on Drug Abuse. (2016). *National survey of drug use and health*. Retrieved from <https://www.drugabuse.gov/national-survey-drug-use-health>

National Institute on Drug Abuse. (2019). *Prescription opioid use is a risk factor for heroin use*.

Retrieved from <https://www.drugabuse.gov/publications/research-reports/relationship-between-prescription-drug-heroin-abuse/prescription-opioid-use-risk-factor-heroin-use>

Nijhawan, L. P., Janodia, M. D., Muddukrishna, B. S., Bhat, K. M., Bairy, K. L., Udupa, N., &

Musmade, P. B. (2013). Informed consent: Issues and challenges. *Journal of Advanced Pharmaceutical Technology & Research*, 4(3), 134-140. doi:10.4103/2231-4040.116779

O'Leary, Z. (2014). *The essential guide to doing your research project* (2nd ed.). Los Angeles, Calif. [u.a.]: Sage.

Olfson, M., Wall, M. M., Liu, S., & Blanco, C. (2018). Cannabis use and risk of prescription opioid use disorder in the United States. *American Journal of Psychiatry*, 175(1), 47-53. doi:10.1176/appi.ajp.2017.17040413

Olthuis, J. V., Darredeau, C., & Barrett, S. P. (2013). Substance use initiation: The role of simultaneous polysubstance use. *Drug and Alcohol Review*, 32(1), 67-71. doi:10.1111/j.1465-3362.2012.00470.x

Oltmann, S. (2016). Qualitative interviews: A methodological discussion of the interviewer and respondent contexts. *Forum: Qualitative Social Research*, 17(2), 1-16. doi:10.17169/fqs-17.2.2551

Omer, S. B., Malani, P., & del Rio, C. (2020). The COVID-19 pandemic in the US: A clinical update. *JAMA: The Journal of the American Medical Association*, 323(18), 1767-1768. doi:10.1001/jama.2020.5788

Onigu-Otite, E., & Shorter, D. (2018). Adolescent addiction curriculum: Impact on knowledge self-assessment in pediatric learners. *MedEdPORTAL*, 14(1), 10716. doi:10.15766/mep_2374-8265.10716

- Opioid Task Force of Franklin County and the North Quabbin Region. (2019). Opioid task force. Retrieved from <https://www.opioidtaskforce.org/>
- Osborne, V., Striley, C. W., Nixon, S. J., Winterstein, A. G., & Cottler, L. B. (2019). Sex differences in patterns of prescription opioid non-medical use among 10–18 year olds in the U.S. *Addictive Behaviors*, *89*, 163-171. doi:10.1016/j.addbeh.2018.10.009
- Palombi, L. C., LaRue, A., & Fierke, K. K. (2018). Facilitating community partnerships to reduce opioid overdose: An engaged department initiative. *Research in Social and Administrative Pharmacy*, doi:10.1016/j.sapharm.2018.07.002
- Palombi, L. C., St Hill, C. A., Lipsky, M. S., Swanoski, M. T., & Lutfiyya, M. N. (2018). A scoping review of opioid misuse in the rural United States. *Annals of Epidemiology*, *28*(9), 641-652. doi:10.1016/j.annepidem.2018.05.008
- Panther, S. G., Bray, B. S., & White, J. R. (2017). The implementation of a naloxone rescue program in university students. *Journal of the American Pharmacists Association*, *57*(2), S107-S112.e2. doi:10.1016/j.japh.2016.11.002
- Passik, S. D., & Kirsh, K. L. (2008). The interface between pain and drug abuse and the evolution of strategies to optimize pain management while minimizing drug abuse. *Experimental and Clinical Psychopharmacology*, *16*(5), 400-404. doi:10.1037/a0013634
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5 Pt 2), 1189. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/10591279>
- Pearlman, J. (2016). Combatting Massachusetts's opioid epidemic. *American Journal of Law & Medicine*, *42*(4), 835-857. doi:10.1177/0098858817701962

- Pergolizzi Jr., J. V., van de Laar, Mart A F J, Langford, R., Mellinghoff, H., Merchante, I. M., Nalamachu, S., . . . Raffa, R. B. (2012). Tramadol/paracetamol fixed-dose combination in the treatment of moderate to severe pain. *Journal of Pain Research*, *5*, 327-346. doi:10.2147/JPR.S33112
- Peterson, A. B., Gladden, R. M., Delcher, C., Spies, E., Garcia-Williams, A., Wang, Y., . . . Goldberger, B. A. (2016). Increases in fentanyl-related overdose death —Florida and Ohio, 2013–2015. *MMWR. Morbidity and Mortality Weekly Report*, *65*(33), 844–849. doi: 10.15585/mmwr.mm6533a3
- Pineo, M., & Schwartz, R. M. (2020). Commentary on the coronavirus pandemic: Anticipating a fourth wave in the opioid epidemic. *Psychological Trauma*, *12*(S1), S108-S110. doi:10.1037/tra0000622
- Princeton Research. (2019). *Best practices for data analysis of confidential data—research integrity and assurance*. Retrieved from <https://ria.princeton.edu/human-research-protection/data/best-practices-for-data-a>.
- Privette, T., Souder, C. A., Elliott, E. T., & Richardson, W. H. (2008). Teen prescription drug abuse: A national epidemic. *Clinician Reviews*, *18*(11), 18.
- Pustovrh, T., & Mali, F. (2014). Exploring some challenges of the pharmaceutical cognitive enhancement discourse: Users and policy recommendations. *Neuroethics*, *7*(2), 137-158. doi:10.1007/s12152-013-9192-x
- Quintero, G., Peterson, J., & Young, B. (2006). An exploratory study of socio-cultural factors contributing to prescription drug misuse among college students. *Journal of Drug Issues*, *36*(4), 903-931. doi:10.1177/002204260603600407

- Rabiner, D. L., Anastopoulos, A. D., Costello, E. J., Hoyle, R. H., McCabe, S. E., & Swartzwelder, H. S. (2009a). The misuse and diversion of prescribed ADHD medications by college students. *Journal of Attention Disorders, 13*(2), 144-153.
doi:10.1177/1087054708320414
- Rabiner, D. L., Anastopoulos, A. D., Costello, E. J., Hoyle, R. H., McCabe, S. E., & Swartzwelder, H. S. (2009b). Motives and perceived consequences of nonmedical ADHD medication use by college students. *Journal of Attention Disorders, 13*(3), 259-270.
doi:10.1177/1087054708320399
- Reardon, C. L., & Creado, S. (2014). Drug abuse in athletes. *Substance Abuse and Rehabilitation, 5*, 95-105. doi:10.2147/SAR.S53784
- Reifsnider, E., Gallagher, M., & Forgione, B. (2005). Using ecological models in research on health disparities. *Journal of Professional Nursing, 21*(4), 216-222.
doi:10.1016/j.profnurs.2005.05.006
- Rhoades, H., Winetrobe, H., & Rice, E. (2014). Prescription drug misuse among homeless youth. *Drug and Alcohol Dependence, 138*, 229-233.
doi:10.1016/j.drugalcdep.2014.02.011
- Richmond, B. (1997). The “thinking” in systems thinking: How can we make it easier to master. *The Systems Thinker, 8*(2), 1-5.
- Rieder, T. N. (2020). Solving the opioid crisis isn't just a public health challenge—It's a bioethics challenge. *The Hastings Center Report, 50*(4), 24-32. doi:10.1002/hast.1169
- Rodda, L. N., West, K. L., & LeSaint, K. T. (2020). Opioid overdose--related emergency department visits and accidental deaths during the COVID-19 pandemic. *Journal of Urban Health, 97*(6), 808-813. doi:10.1007/s11524-020-00486-y

- Rose, M. E. (2018). Are prescription opioids driving the opioid crisis? Assumptions vs facts. *Pain Medicine, 19*(4), 793-807. doi:10.1093/pm/pnx048
- Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner's theory of human development: Its evolution from ecology to bioecology. *Journal of Family Theory & Review, 5*(4), 243-258. doi:10.1111/jftr.12022
- Rosenblum, D., Castrillo, F. M., Bourgois, P., Mars, S., Karandinos, G., Unick, G. J., & Ciccarone, D. (2014). Urban segregation and the US heroin market: A quantitative model of anthropological hypotheses from an inner-city drug market. *International Journal of Drug Policy, 25*(3), 543-555. doi:10.1016/j.drugpo.2013.12.008
- Roulston, K. (2010). Considering quality in qualitative interviewing. *Qualitative Research, 10*(2), 199–228. doi: 10.1177/1468794109356739
- Rozenbroek, K., & Rothstein, W. G. (2014). Medical and nonmedical users of prescription drugs among college students. *Journal of American College Health, 59*(5), 358-363. doi:10.1080/07448481.2010.512044
- Ruan, X., Luo, J. J., Kaye, A. M., & Kaye, A. D. (2017). Non-medical use of prescription opioids is associated with heroin initiation among US veterans. *Addiction, 112*(4), 727-728. doi:10.1111/add.13639
- Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. Los Angeles: Sage.
- Rudd, R. A., Aleshire, N., Zibbell, J. E., & Gladden, R. M. (2016). Increases in drug and opioid overdose deaths—United States, 2000–2014. *MMWR. Morbidity and Mortality Weekly Report, 64*(50-51), 1378-1382. doi:10.15585/mmwr.mm6450a3

- Rudd, R. A., Seth, P., Scholl, L., & David, F. (2016). Increases in drug and opioid-involved overdose deaths-United States, 2010-2015. *Morbidity and Mortality Weekly Report*, 65(50-51), 1445-1452. doi:10.15585/mmwr.mm655051e1
- Ruhl, K. (2004). Qualitative research practice: a guide for social science students and researchers. [Rezension des Buches Qualitative research practice: A guide for social science students and researchers, von J. Ritchie, & J. Lewis]. *Historical Social Research*, 29(4), 171-177. doi:10.12579/hsr.29.2004.171-177
- Russell, B. S., Trudeau, J. J., & Leland, A. J. (2015). Social influence on adolescent polysubstance use: The escalation to opioid use. *Substance use & Misuse*, 50(10), 1325-1331. doi:10.3109/10826084.2015.1013128
- Saha, T. D., Kerridge, B. T., Goldstein, R. B., Chou, S. P., Zhang, H., Jung, J., . . . Grant, B. F. (2016). Nonmedical prescription opioid use and DSM-5 nonmedical prescription opioid use disorder in the United States. *The Journal of Clinical Psychiatry*, 77(06), 772–780. doi: 10.4088/jcp.15m10386
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Los Angeles: SAGE.
- Salomon-Fernández, Y. (2019). Evolving rural community colleges with innovation and agility. *New Directions for Community Colleges*, 2019(187), 95-106. doi:10.1002/cc.20373
- Saloner, B., McGinty, E. E., Beletsky, L., Bluthenthal, R., Beyrer, C., Botticelli, M., & Sherman, S. G. (2018). A public health strategy for the opioid crisis. *Public Health Reports* (1974), 133(1_suppl), 24S-34S. doi:10.1177/0033354918793627
- SAMHSA Center for Behavioral Health Statistics. (2014, September 4). Results from the 2011 national survey on drug use and health: Summary of national findings. Retrieved from

<https://www.samhsa.gov/data/sites/default/files/Revised2k11NSDUHSummNatFindings/Revised2k11NSDUHSummNatFindings/NSDUHresults2011.htm>

Sanders, A., Stogner, J., Seibert, J., & Miller, B. L. (2014). Misperceptions of peer pill-popping: The prevalence, correlates, and effects of inaccurate assumptions about peer pharmaceutical misuse. *Substance use & Misuse, 49*(7), 813-823.

doi:10.3109/10826084.2014.880485

Sanger-Katz, M. (2018). Bleak new estimates in drug epidemic: A record 72,000 overdose deaths in 2017. (2018). *Adverse Event Reporting News, 15*(17), 1.

Schaefer, B. P., & Petkovsek, M. A. (2017). Adolescent use of opioids and stimulants: Testing the influence of peers, self-control, and sports participation. *Criminal Justice Studies, 30*(4), 365-380. doi:10.1080/1478601X.2017.1325365

Schelle, K. K., Olthof, B., Reintjes, W., Bundt, C., Gusman-Vermeer, J., & van Mil, A. (2015). A survey of substance use for cognitive enhancement by university students in the Netherlands. *Frontiers in Systems Neuroscience, 9*, 1-10. doi:10.3389/fnsys.2015.00010

Schepis, T. S., Acheson, S., Zapp, D., & Swartzwelder, H. S. (2019). Alcohol use and consequences in matriculating U.S. college students by prescription stimulant/opioid nonmedical misuse status. *Addictive Behaviors, 98*, 106026.

doi:10.1016/j.addbeh.2019.06.015

Scherrer, J. F., Salas, J., Copeland, L. A., Stock, E. M., Ahmedani, B. K., Sullivan, M. D., . . . Lustman, P. J. (2016). Prescription opioid duration, dose, and increased risk of depression in three large patient populations. *The Annals of Family Medicine, 14*(1), 54–62.

doi:10.1370/afm.1885

- Schmidt, M. (2015). Quantitative analysis of focus group interviews. *Global perspectives in marketing for the 21st century* (pp. 23-27). Cham: Springer International Publishing. doi:10.1007/978-3-319-17356-6_6 Retrieved from http://link.springer.com/10.1007/978-3-319-17356-6_6
- Schrager, S. M., Kecojevic, A., Silva, K., Jackson Bloom, J., Iverson, E., & Lankenau, S. E. (2014). Correlates and consequences of opioid misuse among high-risk young adults. *Journal of Addiction, 2014*, 1-8. doi:10.1155/2014/156954
- Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2018). Monitoring the Future national survey results on drug use, 1975–2017: Volume II, College students and adults ages 19–55. Ann Arbor: Institute for Social Research, The University of Michigan. Retrieved from <http://monitoringthefuture.org/pubs.html#monographs>
- Sedgwick, P. (2013). Convenience sampling. *BMJ: British Medical Journal, 347*(oct25 2), f6304. doi:10.1136/bmj.f6304
- Shah, R., Kuo, Y., Baillargeon, J., & Raji, M. A. (2020). The impact of long-term opioid use on the risk and severity of COVID-19. *Journal of Opioid Management, 16*(6), 401-404. doi:10.5055/jom.2020.0597
- Shiflet, M. (2017). Addressing the opioid epidemic through an evaluation of overdose prevention policies at colleges and universities in Allegheny County, Pennsylvania and across the United States [Unpublished master's thesis]. Clemson University.
- Silva, K., Schrager, S. M., Kecojevic, A., & Lankenau, S. E. (2012). Factors associated with history of non-fatal overdose among young non-medical users of prescription

- drugs. *Drug and Alcohol Dependence*, 128(1), 104-110.
doi:10.1016/j.drugalcdep.2012.08.014
- Silvestri, M. M., Knight, H., Britt, J., & Correia, C. J. (2015). Beyond risky alcohol use: Screening non-medical use of prescription drugs at national alcohol screening day. *Addictive Behaviors*, 43, 25-27. doi:10.1016/j.addbeh.2014.10.027
- Singh, R., Mathiassen, L., Stachura, M. E., & Astapova, E. V. (2010). Sustainable rural telehealth innovation: A public health case study. *Health Services Research*, 45(4), 985-1004. doi:10.1111/j.1475-6773.2010.01116.x
- Siste, K., Nugraheni, P., Christian, H., Suryani, E., & Firdaus, K. K. (2019). Prescription drug misuse in adolescents and young adults: An emerging issue as a health problem. *Current Opinion in Psychiatry*, 32(4), 320-327. doi:10.1097/YCO.0000000000000520
- Skolnick, P. (2018). The opioid epidemic: Crisis and solutions. *Annual Review of Pharmacology and Toxicology*, 58(1), 143-159. doi:10.1146/annurev-pharmtox-010617-052534
- Somerville, N. J., O'Donnell, J., Gladden, R. M., Zibbell, J. E., Green, T. C., Younkin, M., . . . Walley, A. Y. (2017). Characteristics of fentanyl overdose—Massachusetts, 2014–2016. *MMWR. Morbidity and Mortality Weekly Report*, 66(14), 382-386.
doi:10.15585/mmwr.mm6614a2
- Stake, R. E. (2010). *The art of case study research*. Thousand Oaks, CA: Sage.
- Stanghellini, G., & Rosfort, R. (2013). *Emotions and personhood*. Oxford: Oxford Univ. Press.
- Staton, S., Melekis, K., & McCarthy, P. (2018). A review of collegiate recovery communities and recommendations for implementation on a small residential campus. *Innovative Higher Education*, 43(6), 447-462. doi:10.1007/s10755-018-9442-2

- Steiker, L. H. (2016). Opioid overdose prevention initiatives on the college campus: Critical partnerships between academe and community experts. *Journal of Drug Abuse*, 2(2) doi:10.21767/2471-853X.100026
- Stein, M. D., Anderson, B. J., Kenney, S. R., & Bailey, G. L. (2017). Beliefs about the consequences of using benzodiazepines among persons with opioid use disorder. *Journal of Substance Abuse Treatment*, 77, 67-71. doi:10.1016/j.jsat.2017.03.002
- Sternberg, R. J. (2014). The development of adaptive competence: Why cultural psychology is necessary and not just nice. *Developmental Review*, 34, 208–224.
- Stoicea, N., Costa, A., Periel, L., Uribe, A., Weaver, T., & Bergese, S. D. (2019). Current perspectives on the opioid crisis in the U.S. healthcare system: A comprehensive literature review. *Medicine*, 98(20), e15425. doi:10.1097/MD.00000000000015425
- Stone, A. L., Becker, L. G., Huber, A. M., & Catalano, R. F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive Behaviors*, 37(7), 747-775. doi:10.1016/j.addbeh.2012.02.014
- Substance Abuse and Mental Health Services Administration. (2019). *Key substance use and mental health indicators in the United States: Results from the 2018 National Survey on Drug Use and Health* (HHS Publication No. PEP19-5068, NSDUH Series H-54). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
- Suzuki, J., & El-Haddad, S. (2017). A review: Fentanyl and non-pharmaceutical fentanyls. *Drug and Alcohol Dependence*, 171, 107-116. doi:10.1016/j.drugalcdep.2016.11.033

- Thanh, N., & Thanh, C. (2015). The interconnection between interpretivist paradigm and qualitative methods in education. *The American Journal of Educational Science, 1*(2), 24–27.
- The New York Times Editorial Staff. (2018). *The opioid epidemic*. New York, NY: Rosen Publishing Group. Retrieved from [https://ebookcentral.proquest.com/lib/\[SITE_ID\]/detail.action?docID=5568546](https://ebookcentral.proquest.com/lib/[SITE_ID]/detail.action?docID=5568546)
- Thomas, R. S., & Van Horn, R. L. (2016). Are college presidents like football coaches? Evidence from their employment contracts. *Arizona Law Review, 58*(4), 901.
- Tudge, J. R. H., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory & Review, 1*(4), 198-210. doi:10.1111/j.1756-2589.2009.00026.x
- Tzilos, G. K., Reddy, M. K., Caviness, C. M., Anderson, B. J., & Stein, M. D. (2014). Getting higher: Co-occurring drug use among marijuana-using emerging adults. *Journal of Addictive Diseases, 33*(3), 202-209. doi:10.1080/10550887.2014.950024
- Vallance, K., Roth, E., Thompson, K., Chow, C., & Martin, G. (2016). Partying last weekend: Factors related to heavy episodic drinking among people who use recreational drugs. *Substance use & Misuse, 51*(13), 1731-1740. doi:10.1080/10826084.2016.1197262
- Vashishtha, D., Mittal, M. L., & Werb, D. (2017). The North American opioid epidemic: Current challenges and a call for treatment as prevention. *Harm Reduction Journal, 14*(1), 7. doi:10.1186/s12954-017-0135-4

- Veliz, P. T., Boyd, C. J., & McCabe, S. E. (2015). Competitive sport involvement and substance use among adolescents: A nationwide study. *Substance use & Misuse, 50*(2), 156-165.
doi:10.3109/10826084.2014.962049
- Veliz, P., Epstein-Ngo, Q., Austic, E., Boyd, C., & McCabe, S. E. (2015). Opioid use among interscholastic sports participants: An exploratory study from a sample of college students. *Research Quarterly for Exercise and Sport, 86*(2), 205-211.
doi:10.1080/02701367.2014.983219
- Vélez-Agosto, N. M., Soto-Crespo, J. G., Vizcarrondo-Opppenheimer, M., Vega-Molina, S., & García Coll, C. (2017). Bronfenbrenner's bioecological theory revision: Moving culture from the macro into the micro. *Perspectives on Psychological Science, 12*(5), 900-910.
doi:10.1177/1745691617704397
- Volkow, N. D. (2020). Collision of the COVID-19 and addiction epidemics. *Annals of Internal Medicine, doi:10.7326/M20-1212*
- Volkow, N. D., Frieden, T. R., Hyde, P. S., & Cha, S. S. (2014). Medication-assisted therapies—tackling the opioid-overdose epidemic. *The New England Journal of Medicine, 370*(22), 2063-2066. doi:10.1056/NEJMp1402780
- Volkow, N. D., & McLellan, A. T. (2016). Opioid abuse in chronic pain - misconceptions and mitigation strategies. *The New England Journal of Medicine, 374*(13), 1253-1263.
doi:10.1056/NEJMra1507771
- Wardenburg, M., & Mason, J. B. (2018). Fr-12 evolution of the opioid crisis: The surgeon's role and responsibilities. *The Journal of Urology, 199*(4), e1245.
doi:10.1016/j.juro.2018.02.3032

- Weatherson, K., Bourne, J. E., Hucul, M., Anand, A., & Jung, M. E. (2015). Implementing a community-based physical activity intervention: The importance of staff knowledge and attitudes. *SCAPPS*, *47*(1). Retrieved from <https://www.scapps.org/jems/index.php/1/article/view/1246>.
- Weiss, R. S. (1995). *Learning from strangers: The art and method of qualitative interview studies*. New York, NY: Simon and Schuster.
- Willis, J. (2007). *Foundations of qualitative research: Interpretive and Critical Approaches*. Thousand Oaks, CA: Sage. Retrieved
- Woicik, P. A., Stewart, S. H., Pihl, R. O., & Conrod, P. J. (2009). The substance use risk profile scale: A scale measuring traits linked to reinforcement-specific substance use profiles. *Addictive Behaviors*, *34*(12), 1042-1055. doi:10.1016/j.addbeh.2009.07.001
- Wolgemuth, J. R., Erdil-Moody, Z., Opsal, T., Cross, J. E., Kaanta, T., Dickmann, E. M., & Colomer, S. (2015). Participants' experiences of the qualitative interview: Considering the importance of research paradigms. *Qualitative Research*, *15*(3), 351-372. doi:10.1177/1468794114524222
- Wu, L., Blazer, D. G., Li, T., & Woody, G. E. (2011). Treatment use and barriers among adolescents with prescription opioid use disorders. *Addictive Behaviors*, *36*(12), 1233-1239. doi:10.1016/j.addbeh.2011.07.033
- Yang, L. H., Grivel, M. M., Anderson, B., Bailey, G. L., Opler, M., Wong, L. Y., & Stein, M. D. (2019). A new brief opioid stigma scale to assess perceived public attitudes and internalized stigma: Evidence for construct validity. *Journal of Substance Abuse Treatment*, *99*, 44-51. doi:10.1016/j.jsat.2019.01.005

- Yeong, M. L., Ismail, R., Ismail, N. H., & Hamzah, M. I. (2018). Interview protocol refinement: Fine-tuning qualitative research interview questions for multi-racial populations in Malaysia. *The Qualitative Report*, 23(11), 2700-2713. Retrieved from <https://search.proquest.com/docview/2151128806>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Los Angeles: Sage.

Appendix A - Liberty University IRB Application/Approval

Date: 6-5-2022

IRB #: IRB-FY21-22-11

Title: A Case Study of College Administrators' Experiences Related to Opioid Use and Misuse on a College Campus in South Carolina

Creation Date: 7-6-2022

Status: **Approved**

Principal Investigator: Buck Wilson

Review Board: Research Ethics Office

Sponsor:

Study History

Submission Type	Initial	Review Type	Limited	Decision	Exempt - Limited IRB

Key Study Contacts

Member	James Swezey	Role	Co-Principal Investigator	Contact	[REDACTED]

Member	Buck Wilson	Role	Principal Investigator	Contact	[REDACTED]

Appendix B - Correspondence to Participants

[Date]

[Recipient]

[Title]

Limestone University

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a Ph.D. degree. The purpose of my research is to gather administrators' experiences related to opioid use and misuse in college students and I am writing to invite you, as an eligible participant, to be a part of the study.

Participants must be employed as an administrator or manager at the University. Participants, if willing, will be asked to participate in an interview and a focus group. It should take approximately 30 minutes to one hour to complete the procedures listed. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please contact me at [REDACTED] for more information or to schedule an interview.

A consent document is included with this letter. The consent document contains additional information about my research. If you choose to participate, please sign the consent document and I will pick it up at the interview, or at another scheduled time.

Sincerely,

Buck Wilson, MS, RD.
Liberty University student

[REDACTED]

[REDACTED]

Appendix C – Informed Consent Form

Title of the Project: A Case Study of College Administrators' Experiences Related to Opioid Use and Misuse on a College Campus in South Carolina

Principal Investigator: Buck Wilson, MS, RD. Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be an administrator at a South Carolina college or university. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to investigate experiences of college administrators related to opioid use and misuse by students on a college campus in South Carolina. The objective is to learn more about the experiences of college administrators and provide information that may be utilized by other college administrators in South Carolina, or other states.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Participate in an 11 question, voice recorded interview on the university campus, or via video conferencing. The interviews will take place between July 2021 and December 2021.
2. Participate in a 9 question, video recorded focus group on the university campus, or via video conferencing. The focus group will take place between July 2021 and December 2021.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include information available to colleagues that work on and around college campuses.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records. Data collected from you may be shared for use in future research studies or with other researchers. If data collected from you is shared, any information that could identify you, if applicable, will be removed before the data is shared.

- Participant responses will be kept confidential through the use of pseudonyms. Interviews will be conducted in a location where others will not easily overhear the conversation, or via secured video conferencing.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.
- Interviews and focus groups will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.
- Confidentiality cannot be guaranteed in focus group settings. While discouraged, other members of the focus group may share what was discussed with persons outside of the group.

How will you be compensated for being part of the study?

Participants will not be compensated for participating in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address or phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Buck Wilson. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED] or [REDACTED]. You may also contact the researcher's faculty sponsor, Dr. James Swezey, at [REDACTED].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the researcher using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

The researcher has my permission to audio-record me as part of my participation in this study.

Printed Subject Name

Signature & Date

October 1, 2021

Appendix D – Participants Demographics Participants

Administrator	Years in Field	Specialty	Highest Degree
Betty	40	Nursing	B.S.
Buford	25	Safety/Security	B.S.
Emily	20	Curriculum	M.S.
Gray	26	Enrollment	M.S.
Joe	35	Leadership	Ph.D.
Lorenzo	30	Athletics	M.A.
Natasha	32	Academic Affairs	Ph.D.
Sanjay	35	Medicine	M.D.
Will	20	Finance	M.B.A.
Zach	30	Comm/Marketing	B.S.

Appendix E – Interview Questions

1. What are the major factors contributing to the problem of opioid use and misuse on college campuses in South Carolina?
2. Please describe your education and training related to challenges with opioid use and misuse in students on your campus.
3. How does the knowledge, training, and background of the school staff help the students on your campus, as it relates to opioid use and misuse?
4. Please describe policies, procedures, and guidelines that are in place to help with challenges related to opioid use and misuse in the students on your campus.
5. What experiences have been most helpful to university administrators when dealing with opioid use and misuse among the student population?
6. What experiences have been most helpful to staff when dealing with opioid use and misuse among the student population?
7. What are the attitudes and dispositions of the staff related to opioid use on campus?
8. What are university administrators doing to improve the work being accomplished to help with opioid use and misuse?
9. What are health staff doing to help university students with challenges related to opioid use and misuse?
10. What resources would South Carolina colleges and universities need to address opioid use and misuse in schools?
11. What resources are available in the community to help students address opioid challenges?

Appendix F – Focus Group Questions

1. Please discuss your previous and current experiences as an administrator related to opioid use and misuse among college students?
2. Please share a specific example of an interaction or experience you have had with opioid misuse in college students?
3. What thoughts, feelings, and associations first come to mind when you think about opioid misuse in college students?
4. If you could change one thing about the way your college handles opioid misuse in your students, what would it be?
5. How do you prefer your college to address issues related to opioid misuse in college students? Some examples are policies, procedures, guidelines, or other. Please explain why you prefer one over the other.
6. What are the three most challenging items that impact the work your college does related to opioid misuse in college students?
7. Please share any other points or comments you would like to make about opioid misuse in college students?
8. Please share related information or topics that we should have covered, but did not?
9. Follow-up questions to be used after questions are asked:
 - a. Will you please expand on your thoughts related to this?
 - b. Will you please give us a few examples?
 - c. How did you respond when that happened?
 - d. Why do you think it made you feel that way?

- e. Will you please expand on your comment?
- f. Who has had a similar or different experience?

Appendix G – Transcripts

Transcript –

BW- What are the major factors contributing to the problem of opioid use and misuse on college campuses in South Carolina?

X-

You know, it doesn't apply to the admissions process, but obviously it's a crisis nationwide and this is coming from just basic information that you can pick up on the news or those types of things. It hasn't affected my life personally, I thank God. Um. But addiction is real in this world we live in today?

BW-

Yes, sir. All right. Uh, number 2 please describe your education and training related to challenges with opioid use and misuse in students on your campus?

X-

My education again, I was an undergraduate at multiple institutions. I started University A. I went to B college, and then I finished here.. So it was it was a ride for me. I did not, luckily, have any instances in my life where drug overdoses or abuse were a part again knock on wood praise the Lord. You know, it, it destroys a family or destroy a life in a heartbeat. You know, as a coach here, I was former coach. I never had incidences where It was, but I know in today's world, it's very real, um. You know, here, we had a player on a sports team that passed away this past summer. Semester ended went home and again, I don't know all the details on it. You're going to talk to the AD. I think our athletic director, he has more detail because it's in his area as an athlete. The young man. I knew him did obviously know him know him, but His family is devastated right now so, you know, it affects our college community, but it didn't affect me personally, aside of the fact that one time I was a coach I just didn't coach this young man. I can't imagine losing the life that young, you know, to a drug overdose.

BW-

Yeah, that's tragic. Number 3, how does the knowledge training and background of the school staff help the students on our campus, as it related to opioid use and misuse?

X-

Again, you know, other areas are covering this on a daily basis. I think our security staff they have some training obviously our student service staff has some training. Um. You know, a lot goes on when a young man or a young woman comes to your institution regardless of whether they are 5 miles or 500 miles away, those parents are depending on you to take care of their child. Again, it helps if they were raised properly and they understand the difference between right and wrong. You hope that is always the case but it is not always the case. I think here as a whole as an institution, we are trained in those areas, or at least those that need to be trained in those areas are trained in those areas. Um. Admissions reps no. I mean, it's, it's not part of our pitch. Um, but safety is. So, we do, we do boast and brag on what we have and, uh. And what we offered to those families.

BW-

Say, number 4, please describe policies, procedures and guidelines that are in place to help with challenges related to opioid use and misuse in the students on our campus.

X-

Yeah, that would fall under the student handbook conduct and that goes to every student as they come returning or new comes from student services and, um you know I'd be surprised if the provost didn't put you in touch with somebody in that area obviously you're looking at an administrative side in your interviews but she does have a trained staffed that is responsible for all of these questions that you've asked so far. Um, you know, again, the student, I'd like to think that the student from the start understands. But reality maybe not, you know, again, it falls back on the environment they were raised in. Um, I'd hate to think that, uh, educating people would think that, uh drug overdoses and drug misuse or drug use period is okay. Um. You know, addiction though. It's sad. Very sad.

BW-

Number 5, what experiences have been most helpful to university administrators when dealing with opioid use and misuse among the student population?

X-

Well, and like I said we had a young man who passed away, affected us all, and maybe in a good way, the students weren't here when it occurred. But a bad way, also, because those students, you know, were on their own in some cases. They had the support at home if they were here on our campus. Well, obviously you have open invites for those students to seek assistance and

counseling. Just basically explaining to them what happened. You know, that could be so helpful. You know, when a young man or a young woman loses their life senselessly to a mistake those that are around them, their friends, their classmates, they're lost. They, they have no idea that in some cases, this is the 1st time they've ever experienced death. So, as administration, as an institution, as a whole, we're here to help. We're here to help, you know, I don't want to say, talk them off the ledge, but pretty much, you know, make sense of what's happening. And how it doesn't happen to them or happen to someone they know. They, you know, all the, all the signs are usually there. Sometimes not, and you're totally surprised when you see something like this happen to the people it happens to.

X-

Yeah, I, I couldn't agree more. Um, this next question is similar. What experiences have been most helpful to staff versus administrators when dealing with opioid use and misuse among the student population.

CP-

Like I said, you know, real life experiences and, uh, I've been here for a while, um. We've been very fortunate here. We've had students that passed away for various reasons. But when something like this happens and its more accidents You know, over my 28 years here, um. You know, automobile, hiking, you know, those types of things. I can't really recall a lot of times when it was You know, a drug overdose and then opioids, they're unforgiving, you know, it's not like, you know, and again, I, I don't I wasn't raised in a drug culture, even though, you know, back in the day there were those. Um, yeah, nothing is safe these days. You know, it used to be I yeah, I just smoked a little marijuana. But some people in today's world think that marijuana is simple and as innocent as you think it is, could be laced with anything. You're taking your life in your own hands every time you do something like that. They're going to legalize in most states already. You know, the use of marijuana, but marijuana laced with fentanyl is illegal. So, you know, I, I can't get behind that. Um, if I have a vote, I know where my vote is. Um, but Unfortunately, um, I don't make those rules, so. Could you legalize drugs? Yeah, sure. You could try to get that through. I mean, I thought it was, you know Act of God to get the lottery passed in the state of South Carolina and that's simple gambling. We all have vices, I guess, but that's another thing, I've never been a big on drugs and gambling. I don't see the need for either one,

but I have vices. We're gonna, we're gonna keep that clean right now. We're not going to discuss those in detail. I'm not searching for counseling whatsoever at this point.

BW-

I gotcha number 7, what are the attitudes and dispositions of the staff related to opioid use on campus?

X-

I, I think you'd be hard pressed to find any institution that would condone any type of drug activity. Even if it's legal Um, it's legal in the state. I don't think that we're gonna just open our doors, you know, hey, have a good time in a dorm, you know, if we have a choice, I'm pretty safe in assuming that our choice is gonna be, you can't do it here. You may be able to do it somewhere else, but you can't do it here. Alcohol. Perfect example. I mean, alcohol is legal. If you're 21 years old, it's not legal on our campus.

BW-

Okay, yeah, that's a good point. 8. What are university administrators doing to improve the work being done or accomplished to help with the opioid use and misuse on campus?

X-

Again, that goes through training through your student services staff, um, your health services they're involved obviously, as I said earlier, your security staff, um, campus security staff, they're involved, counseling. Um, we have taken steps to help, um, the student has to open that door and ask. It is available to him non stop 24 7. If they needed assistance, they can get it. You find many students don't. You know, particularly if they're doing something that's illegal, or in the eyes of perception of the world that's wrong then they don't tend to ask for help.

BW

uh, what are the health staff doing to help university students with challenges related to opioid use and misuse?

X

Again, a 24-7 open door policy, contact us and we'll get you counseling that you need. Um, it's a good staff over there. Our nurse, our campus nurse, has been here for quite some time. And I'm pretty safe in assuming that her opinion of of drugs as a whole is a bad thing. Um. But you can't just discipline, you know, there has to be a counseling, a deep rooted talking to get to where they live. Um, just because I live my life one way doesn't mean that someone else's student in

particular was raised that way. You know, you have to have an understanding. Then I think our health service staff does. You know, different backgrounds, different opinions, meet them halfway.

BW-

And then #10, what resources would your university need to address opioid use and misuse in schools?

X-

Yeah, that that's that's a conversation. I think that happens at the upper level not even as a cabinet. That that's that's a decision that happens in the independent college university president meeting. Um, I don't think you'd be hard pressed to have them all on the same page and come up with a solution. That solution may not have to come from them, though, it may be presented to them and then they vote on it. So, if some of the research you're doing can be presented in that meeting, that would be appreciated. I think, by all. Yeah, and again, I think most institutions, if not all institutions, um. it all starts with your president and then it trickles down. I serve at the leisure of the president if he needs me to do something and it's the goal for this institution, I'm all 100% behind it. Um. You know, I don't have opinions and agendas that I push. You know, that, that makes no sense whatsoever, but the president, at that level, they meet continually if I'm not mistaken, it's probably weekly. They have an open discussion, whatever issues and topics are hot at that moment. We're trying to get ahead of things.

BW

last question number 11 what resources are available in the community to help students address opioid challenges

X-

Uh, again, we, we are very fortunate. Um, you know, it's a close knit community. I'm not saying that we don't have issues here in this county. Um, I think most communities do, um, when it comes to drugs, and that's a hidden world. Cause it's not something that is open, but will not be naive. It occurs in every neighborhood, every, every neighborhood, regardless of your financial status. We, we communicate with our community, our community is welcome any time to use the resources we have on our campus it's not just for our students. Um. I would think that we could get behind anything that would mutually benefit both parties.

Appendix H – Theme Information

Major Themes	Sub-Themes
Services and Resources	Resource availability
	Providing information
	Types of resources needed
	Staff as a resource
	Value in networking
	Health resources
	Funding
Knowledge and Perception	Opioids and other drugs
	Overdose in students
	Staff
	Access
	Addressing the correct issue
	Impact of opioid use
	Interaction with students
	Staff experiences and knowledge
	Family and parents
	College students
	Reasons for use
	Impact of use
Education and Training Students and Staff	Methods of education
	Lack of education

	Education needed
Policies, Laws, and Guidelines	High-level decisions
	Legal
	Policies/rules
	Staff interaction with students