



Opioids: Harmful Consequences with Opioid use in a University Setting

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Abstract

Objective: The access to and use of opioids is on the rise and is currently an epidemic in the United States. Opioid use can lead to misuse, serious opioid use disorder, overdose and even death. This study explores university students' knowledge of opioids and their harmful consequences in a university in Southwest Texas.

Methods: A statistical analysis of raw data was obtained from a survey of students in a small university in Southwest Texas. The survey named Core Alcohol and Drug Survey, was utilized by the university to collect pertinent data on drug and alcohol use and measures attitudes and perceptions, associated with drug and alcohol usage by students in four-year institutions.

Results: Eighty-two survey responses were received and the results indicated that 12.7% of university students had experienced public misconduct, fighting, arguing, and vandalism within the past year. These results suggest that students were aware of consequences involved with opioid use however, 13.9 % of students experienced serious personal problems such as injury, suicidal thoughts, and sexual assault.

Implications: Results of the study may be used to improve education and interventions aimed at reducing substance misuse and abuse among college students. In addition, providers may use the information to provide patient education at routine health care visits.

Conclusion: The consequences of opioid use and abuse are well documented in the literature, yet opioids remains a popularly used illegal substance among university students. Despite experiencing negative consequences of opioids use, much of the sample reported regular use of the substance.

Keywords: Opioids, Core Alcohol and Drug Survey, Addiction, Drug Abuse, Substance Use Disorders

Introduction

Opioid use in the United States has been increasing during the past decade, with approximately 400,000 deaths due to some form of opiate, legal and illicit, according to the Centers for Disease Control [1], (2019). Opioids are a class of drugs derived from the resin of the poppy plant. When Opioids are extracted they may be mixed with starch, or sugar and sold as a white or brown powder. Naturally occurring opioids are often obtained from Asia and South America

with black tar opioids, e.g., black tar heroin, are usually obtained from Mexico and thus may be more commonly sold in Western areas of the U.S. like Texas. A variety of opioids have been abused in the United States including oxycodone, hydrocodone, morphine, and codeine. There are also synthetic opioids which include methadone, tramadol and fentanyl to mention a few. There has been abuse of both illegal opioids and prescribed opioids [2].

Individuals who use opioids usually report a variety of "rewarding" effects, from its capacity to provide pain relief, drowsiness and relaxation, to the intense emotional well-being and pleasure. Other physical, impacts may include decreased respirations and possible bradycardia. Certainly we know that depression of the respiratory and cardiac systems can lead to serious consequences including death. Opioids do have therapeutic benefits such as pain control however, opioids are known to cause mental confusion, drowsiness, depression and a mental fog [2].

To assess a university student's knowledge of harmful consequences associated with opioids, the Core Alcohol and Drug Survey, is a self-reported questionnaire created by the Core Alcohol and Drug Survey Institute of 2018 [3].

This survey was given to undergraduate students in a small four-year, private university to measure their alcohol and drug usage, attitudes, and perceptions regarding drugs. The aim of this study was to investigate opioids use and knowledge of consequences among university students at a small university in Southwest Texas. This research will also seek to improve education regarding opioid misuse and risk management among university students. The information obtained would be used to develop a targeted educational intervention [3].

Background and Significance

The Center for Disease Control [1], reported in 2017, that nearly 494,000 people in the United States that were the ages of 12 years old and older reported using opioids in the past year and seems to be increasing with the years 2015. In 2015, 81,326 there were 81,236 of emergency room visits for opioids abuse related poisonings in the United States. In 2017, over 15,000 people died from opioids overdose in the United States [1].

According to Addiction Resource [4], opioids break down to morphine that attaches to opioid receptors in the brain, releasing

dopamine which triggers and boosts feelings of pleasure, relaxation, and happiness. University students are known to have stress and anxiety and some students choose to use drugs, such as opioids to cope with their anxiety and stress. Individuals who abuse opioids are at risk of acquiring hepatitis, and HIV/AIDS as this population is known to share needles. Socially, these individuals may have legal and criminal issues, as well as family dysfunction, represented by child abuse, domestic abuse, neglect, drug addiction, motor vehicle accidents and divorce [4]. Over time users may suffer from unemployment, homelessness, financial issues and additional family problems [1].

Method

A secondary analysis of survey students at a small, private university, in South Central Texas. The Core Alcohol and Drug Survey Alcohol and Drug survey, was utilized to measure alcohol and drug usage, attitude, perceptions, and multiple personal questions regarding drug and alcohol usage. This survey was distributed by the university's research department in a yearly survey to all 6,872 undergraduate students. The survey included several types of questions about drugs and alcohol. In addition, multiple questions focused on past and current use.

The survey results were collected over a three-month period and surveys were answered by students online. Students received an email with survey information. Survey responses were received from 82 students. No additional follow-up to non-responders was made. Surveys were reviewed for the following demographics: age, gender, and ethnicity. In addition to opioid specific items were examined. The focus of this research was on students' knowledge of consequences associated with opioid use [3].

Results

From the Core Alcohol and Drug Survey that was emailed (2018), eighty-two survey responses were received. No additional attempts were made to contact students who did not respond. Responses received indicated that students had some knowledge of the harmful consequences associated with the illegal use of opioids and other illegal drugs. The Consequences of Student Drug Use were the harmful consequences that were indicated by students who had used illegal drugs which included opioids. Survey results indicated that 12.7% of the respondents reported some negative consequences due to opioid/other drugs experienced within the past year, such as, public misconduct, fighting, arguing, and vandalism. These responses suggest that at least some students are aware of the consequences involved with opioid use (See Table 1). Serious personal problems experienced as consequences of opioids/other drugs were reported by 13.9 % of students and included injury, suicidal thoughts, and sexual assault [3].

These issues may or may not have been presented to the campus Title IX department, which is responsible for enforcing complaints under the U.S. Department of Education vis-a-vis the Office for Civil Rights, which protects individuals from discrimination (based on sex) in education programs or activities that receive federal financial assistance. The U.S. Department of Education also has a statute on Safe and Drug-Free Schools and communities under section 4002 [5]. The statute supports programs that help to prevent drug use and penalizes universities that have had violence or abuse associated with drug use. Therefore, education is critical for universities and student's welfare to understand the consequences of cannabis use [5]. Table: 1 below illustrates the consequences of drug use [3].

Serious Personal Problems (Suicidality, injuries and sexual assault)	13.9 %
Serious Conduct Problems (Fighting, arguing and vandalism)	12.7%

Table 1. illustrates the consequences of drug use

According to the National Institute of Drug Abuse [6], opioids can affect areas of the brain that regulate mental function, drowsiness, nausea, vomiting and severe itching [6]. These effects are detrimental to college students, where learning, studying and problem-solving are essential elements in order to earn a college degree. Approximately 27% of respondents who used opioids within the past 30 days reported making grades of C or lower (See Table: 2 below).

According to the National Institute of Drug Abuse [6], long-

term use of opioids can change the structure of the brain creating imbalances in the neuron and hormone system. Destruction of the white matter may also affect decision making abilities [6]. Education is needed so that college students might be able to understand the consequences that can occur over time and possibly improve their quality of life as well as learning outcomes and potential for success. Table 2 below illustrates all of the results from university students who responded to the Core Alcohol and Drug Survey[3].

Sample sizes	Gender		Age		Average Grades		Residence	
	Female	Male	16-20	21+	A-B	C-F	On campus	Off campus
	56	26	40	42	70	12	26	56
Currently use alcohol (past 30 days)	49.1	46.2	30.8	64.3	51.4	27.3	38.5	52.7
Currently use marijuana (past 30 days)	18.2	11.5	15.4	16.7	14.3	27.3	15.4	16.4
Currently use illegal drugs other than marijuana (past 30 days)	5.5	0.0	2.6	4.8	4.3	0.0	3.8	3.6
Had 6 or more binges in the last 6 weeks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Have driven a car while under the influence during the past year	9.3	12.0	10.3	10.0	11.6	0.0	7.7	11.3

Table 2. to be cont..

Have driven a car while under the influence during the past year	9.3	12.0	10.3	10.0	11.6	0.0	7.7	11.3
Have been taken advantage of sexually during the past year	9.3	0.0	5.1	7.5	5.8	10.0	7.7	5.7
Have taken advantage of another sexually during past year	0.0	4.0	0.0	2.5	1.4	0.0	0.0	1.9

Table 2. illustrates all of the results from the Core Alcohol and Drug Survey

Students who had used illegal drugs other than cannabis in the past year	7.4 %
Students who had used illegal drugs other than cannabis in the last 30 days	3.7 %
The most frequently reported illegal drugs used in the past 30 days: Opioids (heroin, smack, horse)	2.5 %

Table 3. Southern Illinois University Core Alcohol and Drug Survey Institute [3].

The Core Alcohol and Drug Survey of students in a small university located in South Central Texas have used illegal drugs other than opioids in the past year. 3.7 % of the university students had used illegal drugs other than opioids in the last 30 days and finally 2.5 % of the most reported illegal drugs used in the past 30 days were opioids illustrated in Table above [3].

Implications for Practice

According to the National Institute of Drug Abuse [6], opioids have been known to cause short-term effects such as euphoria and pleasure, however, some physiological effects that college students are unaware of include flushing skin, itching, and clouded mentation. Long-term physical effects have been known to trigger collapsed veins caused by injecting opioids, students who sniff opioids have been known to damage tissue inside the nose, and abscesses may form due to chronic injection of opioids. Other side effects associated with this drug include stomach cramps, depression, mental disorders and sexual dysfunction in men to mention a few [6].

Education should be provided to university students as to the effects of opioids and the harmful consequences associated with their use. Education should explain medical problems that can result from the use of opioids, as so many young people are unaware of the effects of opioids. Educating university students in such an endeavor can be facilitated via remote learning as appropriate.

According to Marsh and Borodovsky [7], smartphone-based technologies have been utilized for education on various types of drugs and their harmful effects. Although smart applications are helpful they are limited and are not necessarily a substitute for medical care. Telemedicine is also available for assistance in providing an evaluations patients, as well as providing ongoing recommendations.

Traditional methods of providing education regarding the harmful effects of opioids can also be used remotely or in-person and includes lecture-discussion, small groups and Powerpoint presentation during freshmen orientation with a possible follow-up during mid-term and in later academic levels. Finally, Cognitive Behavioral Therapy and Motivation Interview have been demonstrated to help individuals concerning the use of harmful drugs and are typically available at the through various student respective university services.

Limitation

Limitations with this study included:, Students' possibly being concerned about maintaining their anonymity by answering personal questions on the Core Alcohol and Drug Survey, which in turn may have triggered fear that their grades and scholarships would be affected, another limitation of this study was its small sample size and thus limitations for generalizing to the larger student population. Also, the competing academic and personal demands of student life may have caused many not to complete the survey.

Conclusion

Opioids are currently an epidemic in the United States and university populations likely reflect this epidemic, possibly all the more so given the stressors of the current COVID-19 pandemic, such that the numbers are likely continuing to rise . A secondary analysis of a survey called the Core Alcohol and Drug Survey was utilized to assess alcohol and drug usage, attitudes and perceptions, and options regarding drug and alcohol usage at a small, four-year institutions. This study indicates that university students have some knowledge of the harmful consequences associated with illegal, as well as possibly legal, drug use however, there was a need for more education.

Utilizing technology such as smartphones to provide education to students is one of many ways to help students become more aware of the consequences associated with drug use. Traditional options such as providing education through traditional lecture is another way to teach students and this face-to-face method also offers students to ask questions. Education is key to help minimize the risks associated with opioid use in this population.

Conflict of interests: There was no financial support or financial profit to gain from this scholarly work, and no conflict of interest.

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