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Adolescent Substance Abuse Screening

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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2019

Abstract

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MS, Walden University, 2014

BS, Kaplan University, 2009

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Adolescent substance use is a key public health problem in rural Ohio. Primary care nurses lack substance use screening knowledge and skills. Early screening and detection of possible substance use issues aids in directing patients to appropriate health services. This project involved the implementation of an educational intervention on the CRAFFT screening tool for primary care nurses in rural Ohio. Guided by Kurt Lewin's 3-step model to emphasize prevalence of substance use and need for screening among adolescents, the purpose of this project was to provide training on the CRAFFT screening approach and share guidelines to implement routine substance abuse screening for adolescents seen in this rural primary healthcare setting. The project, based on a pretest and posttest design, was implemented among a sample of 7 nurses to evaluate whether the educational intervention had a significant impact on nurses' knowledge on using the CRAFFT screening tool. Data were collected using a questionnaire and were analyzed using descriptive and inferential statistics. The results showed a significant increase in the pretest scores (M =51.43, SD = 19.51) and the posttest score (M =94.29, SD = 7.868); $t(6)=7.039$, p = .000). The project findings support that the benefit of this educational intervention to improve the nurses' substance use screening knowledge using a lunchtime educational training to ensure that vulnerable adolescent patients with substance use receive early and appropriate preventive and treatment measures. For positive social change, early identification of substance use among adolescents may inform the adoption of preventive and treatment measures such as referral to mental health specialists, thereby improving adolescent health outcomes.

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Section 1: Nature of the Project

Introduction

Substance use often starts during adolescence (ages 10–19), but the prevalence rates for substance use rise during adulthood. According to Das, Salam, Arshad, Finkelstein, and Butta (2016), unhealthy behaviors can start in adolescence and can lead to disorders in adulthood. The researchers emphasize that behaviors such as drinking, smoking, and illicit drug use often start during adolescence. For instance, one in 10 girls and one in every five boys age 13–15, respectively, are smokers (Das et al., 2016). Substance use is associated with adverse effects, including physical, mental health and social problems for individuals and their families. Particularly, substance abuse is associated with poor health, unemployment, mental disorders, accidents, suicides, and reduced life expectancy (Das et al., 2016). As such, there is a need for initiatives and approaches to minimize the prevalence and negative effects of substance use among adolescents.

In this DNP project, I explored the implementation of the CRAFFT screening tool. When effectively implemented, CRAFFT screening leads to six screening questions that, when answered honestly, can be used to detect possible substance abuse among adolescents. This project involved developing an evidence-based educational program based on CRAFFT screening for healthcare providers in rural Ohio to facilitate substance abuse screening in adolescents. By improving the use of the CRAFFT screening tool, it may be possible to detect substance abuse disorders to prevent poor health outcomes.

In this project, I sought to empower healthcare providers in rural Ohio by providing them with substance abuse screening knowledge and skills, thereby facilitating early detection of substance abuse problems among adolescents. D'Amico et al. (2016) emphasized the importance of enhancing primary care providers' (PCPs) capability to identify youth at risk for substance use. The primary care setting offers a unique opportunity to screen many adolescents, identify those at risk, and provide counseling as well as referrals for further preventive or treatment services. The adoption of early screening could help at-risk youths seek mental health services and potentially prevent further substance abuse.

Problem Statement

Rates of substance abuse have increased among adolescents in rural Ohio, which in turn has led to a rise in accidental deaths among this population related to overdose of substances. Rembert, Betz, Feng, and Partridge (2017) noted that opioid addiction, abuse, and overdose deaths are one of the major pressing public health concerns in Ohio. Ohio leads the country in drug overdose deaths per capita, and the rate is increasing, which is overwhelming communities, governments, and families across the state (Ramos, Clemans-Cope, Samuel-Jakubos, & Basurto, 2018). In 2016, Ohio recorded 32.9 opioid-related overdose deaths per 100,000 people, whereas the national rate was 13.3 deaths per 100,000 people (Ramos et al., 2018). This has led to an increase in health-related costs; for instance, 92,000 to 170,000 Ohioans were abusing or dependent on opioids, which led to an annual cost associated with treatment, criminal justice, and lost productivity of $2.8 billion to $5 billion (Rembert et al., 2017).

Substance use among adolescents is a key public health concern. In 2017, approximately, 214, 000 adolescents (0.9%) in Ohio, between age 12 and 17, misused prescription opioids. Additionally, an estimated 2,000 adolescents (0.1%) used heroin. In 2011, over a third of the population from age 18 to 30 acknowledged having been admitted to the hospital due to heroin use and prescription opioid misuse before age 18 (Ramos et al., 2018).

Adolescents in rural Ohio also use other illicit substances. Falck, Siegal, Wang, and Carlson (1999) noted that 69.8% of high school girls in rural Ohio smoked cigarettes, compared to 71.3% girls in suburban areas. Additionally, 16.3% of girls in rural Ohio used smokeless tobacco, 79.1% used alcohol, 46.5% smoked marijuana, 4.7% used cocaine, 8.1% used crack, 20.9% were lysergic acid diethylamide (LSD) users, 8.1% used opiates, and 15.1% used inhalants (Falck et al., 1999). This was also the case among high school boys in rural areas, with 61.5% and 50.8% indicating they smoked cigarettes and used smokeless tobacco, respectively. Additionally, 75% drank alcohol, 38.5% smoked marijuana, 4.6% used cocaine, 3.1% used crack, 13% used LSD, 3.1% used opiates, 18.5% used inhalants, and 1.5% used steroids (Falck et al., 1999).

Pettigrew, Miller-Day, Krieger, and Hecht (2012) conducted a study on illicit substance use among 118 adolescents in rural Appalachia. The findings indicated that 65% of adolescents had received explicit and implicit offers for illicit substances in middle school. Additionally, 39% had smoked tobacco, 37% had taken alcohol, and 22% had used marijuana, and 20% had reported continuously using more than one illicit substance.

Adolescence is a particularly trying period in a person's life and can be made more difficult due to substance abuse (Radel, Baldwin, Ghertner, & Waters, 2018). Research has identified that, left to the discretion of the provider, screening for substance abuse is not regularly done. PCPs—particularly, nurses—are best placed to screen adolescent patients for substance abuse and implement interventions before the use escalates. However, actual screening does not occur consistently despite professional guidelines recommending annual screening for drug use (D'Amico et al., 2016; Hassan et al., 2009). In this project, I sought to provide education for nurses in rural Ohio on one such screening tool and its application to clinical practice for the care of adolescents.

This project can impact nursing practice by empowering nurses with the requisite skills for screening and identifying adolescents at risk of substance use. According to Knopf-Amelung et al. (2018), prelicensure nursing programs do not sufficiently prepare graduates to address substance use issues among patients. Most programs only have 1–5 hours of instruction on substance use, and the clinical skills necessary for addressing substance abuse are taught infrequently. Nurses are ill-equipped to deal with substance abuse issues, thereby emphasizing the project's importance. By educating nurses regarding the use of CRAFFT screening, there may be an improvement in the detection of substance use among adolescents.

Purpose

The gap in practice is that adolescent patients often do not have screenings completed for substance abuse or the potential for their development (D'Amico et al., 2016; Hassan et al., 2009). This has been attributed to several factors including time

constraints, discomfort discussing substance abuse, inadequate training, and lack of referral options (D'Amico et al., 2016). Lack of training for nurses limits their confidence or understanding of how to integrate substance abuse screening into practice (Knopf-Amelung et al., 2018). In this project, I sought to provide education for nurses in rural Ohio on one such screening tool and its application to nursing practice for the care of adolescent patients.

The guiding question was: Will education for nurses in a primary care setting on the CRAFFT screening tool improve their knowledge, skills, and practices in screening for substance abuse among adolescent patients in rural Ohio?

This project has the potential to equip PCPs—particularly, nurses—with the skills and knowledge for implementing CRAFFT screening and interpreting the results, which may help them detect substance abuse in the adolescent patient population. Additionally, the identification of at-risk adolescents may lead to referrals to specialists and other preventive services.

Nature of the Doctoral Project

I used a quantitative methodology using a pretest and posttest design to evaluate the effectiveness of the educational intervention. I used this approach to determine the effectiveness of an intervention by analyzing data before and after implementation (Alam, 2019). The design was intended to capture and analyze data on nurses' substance abuse screening skills using the CRAFFT screening tool before and after the implementation of education intervention. The objective of the design was to determine if the education intervention had a significant effect on screening knowledge among nurses.

The pretest and posttest design were suitable for the project because they facilitated determination of the effect of the education program on substance abuse screening knowledge and practices by primary care nurses.

Data were collected using a competency evaluation test to gauge providers' knowledge of the CRAFFT screening process, which was issued before and after the intervention was implemented. The target population was primary care nurses in a rural healthcare clinic who treat adolescents who attend the clinic for preventive care and episodic acute health issues. All nurses in the primary care setting where I implemented the project were invited to participate in the training. I sought ethics approval from the Walden University Institutional Review Board (IRB) before implementing the project at the primary care setting.

Data collected were analyzed using descriptive and inferential statistics. Descriptive statistics were used to provide meaningful summaries of the participants' understanding of CRAFT screening tool and their views on the educational intervention. I did this by using measures of central tendency. Inferential statistics were used to explore if there was a significant effect on substance use screening knowledge after the education intervention. I achieved this using a *t*-test, which is used to explore if means of two samples are from the same population.

Significance

The significance of this project for nurses and nursing practice is the improvement of substance use screening knowledge, skills, and practices in primary care settings in rural Ohio. Primary care nurses will benefit from the project through education on how to

use CRAFFT screening, thereby improving their knowledge, attitudes, self-efficacy, and self-perceived competence for dealing with substance use. Nursing education programs do not adequately equip nurses to address substance use issues, which has created a need to improve their substance use screening skills (Knopf-Amelung et al., 2018).

This project may have a positive impact on adolescents in the long term. Particularly, adolescents will indirectly benefit from the project because early identification of substance use may lead to the adoption of preventive measures such as counseling and mental health specialist referrals. The use of CRAFFT screening for substance abuse detection in adolescent patients may lead to improved health outcomes among this population.

Summary

Substance abuse among adolescents is a significant health concern that has considerable negative effects. In Ohio, there are increased rates of substance abuse among adolescents, which in turn leads to a rise in health-related expenditures, economic losses, as well as physical, mental, and social health problems for individuals and their families. The challenge is compounded by the fact that many PCPs do not have an adequate understanding of tools that can be used to screen for substance abuse and their application in clinical practice. With this project, I sought to implement and evaluate an educational program for healthcare providers on the use of CRAFFT screening and the implications of its use. By improving the use of this tool, it may be possible to detect substance abuse disorders to prevent poor health habits. To evaluate the effectiveness of the tool, I used a quantitative research approach with a pretest and posttest design. The

following section will provide an in-depth review of relevant literature and will present relevant theories.

Section 2: Background and Context

Introduction

Substance abuse among adolescents is a significant health concern that has considerable negative effects. Increased rates of substance abuse among adolescents in Ohio have, in turn, led to negative health, economic, and social effects on users, their families, and society. In addition, many PCPs do not have an adequate understanding of tools that can be used to screen for substance abuse and their application in clinical practice. The guiding question is: Will education for nurses in a primary care setting on the CRAFFT screening tool improve their knowledge, skills, and practices in screening for substance abuse among adolescent patients in rural Ohio? This section includes a presentation of relevant concepts, models, and theories along with local background information as well as the role of the DNP student and a summary.

Concepts, Models, and Theories

Conceptual Model

This project was based on Kurt Lewin's unfreeze-change-refreeze model. The model is commonly used in quality improvement projects in nursing practice (Wojciechowski, Pearsall, Murphy, & French, 2016). Lewin opined that organizational or behavioral change is attained by leveraging the right driving forces. The first step in the model involves unfreezing—that is, preparing stakeholders for change and creating urgency for the anticipated changes. Unfreezing is achieved by emphasizing the need for change and training stakeholders to empower them with skills and knowledge necessitated by the proposed changes. The phase further involves overcoming resistance

to change by alleviating fears and anxieties among stakeholders, identifying change champions, and supporting the stakeholders through the change process (Siddiqui, 2017).

The transition or change phase entails moving the organization to its new form. The phase can also be said to represent the shift from old behaviors to new desired behaviors (Wojciechowski et al., 2016). Effective communication, training, and mentoring for stakeholders supports this phase to ensure a smooth transition from the old form to the new one. The final phase, refreezing, entails cementing the changes into the organizational culture and social fabric. Refreezing ensures that the organization is stabilized in its new form or behaviors, and this phase can be attained through creation of guidelines, policies, norms, values, and practices in support of the instituted changes (Siddique, 2017).

In the project, unfreezing was achieved by emphasizing the need for substance abuse screening among adolescents. This was attained by outlining available statistics on substance abuse among adolescents in rural Ohio. Additionally, the nurses were educated on the importance of screening as the first step to ensuring that affected youths are referred to the appropriate health services. The change phase was attained by training on the CRAFFT screening tool and its application in substance abuse screening. The training was conducted using digital tools, such as Microsoft PowerPoint. Lastly, the refreezing phase was achieved by developing guidelines requiring nurses to conduct substance abuse screening on adolescent patients.

Definition of Terms

Care: This asks a respondent if they have ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs (Agley, Nowicke, & Samuel, 2015).

Relax: Asks respondent if they have ever used alcohol or drugs to relax, feel better about themselves, or to fit in (Agley et al., 2015).

Alone: Asks respondents if they ever use alcohol or drugs while by themselves, alone (Agley et al., 2015).

Forget: Asks respondents if they ever forget things they had done while using alcohol or drugs (Agley et al., 2015).

Friends: Asks respondents if their family or friends have ever told them that they should cut down on their drug use or drinking (Agley et al., 2015).

Trouble: Asks respondents if they have ever gotten into trouble while they were using alcohol or drugs (Agley et al., 2015).

Screening tools: Brief measures that differentiate adolescents who are at risk for developing substance abuse issues (Harris et al., 2016).

Substance abuse: Chronic overindulgence in or dependence on an addictive substance, typically illicit drug use or alcohol.

Mind-altering substances: Substances that cause distorted perceptions or mood changes. These changes can include psychoactive or psychotropic changes that affect mental processes or mood.

Relevance to Nursing Practice

Substance abuse presents a key public health problem, particularly among adolescents. Screening can enhance the early identification of at-risk adolescents, creating a gateway for interventions, such as referrals to mental health specialists (Sterling, Kline-Simon, Wibbelsman, Wong, & Weisner, 2012). The American Medical Association encourages annual screening for youth ages 11 years and above through its Guidelines for Adolescent Preventive Services. However, PCPs—particularly, nurses—have not yet been motivated to adopt substance abuse screening at the primary care level (Sterling et al., 2012). The lack of screening has been associated with organizational and systemic factors, including lack of time and staff resources, insufficient training, concerns over patient privacy, as well as practitioners having low levels of self-efficacy and confidence for addressing substance abuse issues (Levy & Williams, 2016; Sterling et al., 2012). Levy and Williams (2016) also established that practitioners are not familiar with standardized screening tools and mostly rely on clinical impressions, which limits their capability to detect mild, moderate, and even severe substance use disorders. Researchers have noted that only a third of youth who engage in substance abuse are identified when standardized screening tools are not used (Levy & Williams, 2016).

This project is relevant to nursing practice because it will empower nurses with the knowledge and skills to use the CRAFFT screening tool. Consequently, the nurses will be able to apply the acquired skills and knowledge to screen for substance use among adolescents. Levy and Williams (2016) noted that practitioner knowledge of screening options and tools can influence effective integration of screening into nursing practice.

Primary care settings present unique opportunities for addressing substance use among adolescents, when the practitioners are knowledgeable about the issue and are perceived by the youth as an authoritative source of knowledge on substance use.

Local Background and Context

Ohio has been referred to as *Ground Zero* for the opioid and drug addiction crisis (Ohio Department of Health, 2016). For instance, more than 4,000 Ohioans died of an unintended drug overdose in 2016. Substance abuse is one of the leading causes of death for Americans under the age of 50, and Ohio has the second highest rate of overdose deaths of any state in the nation (Ohio Department of Health, 2016). For instance, according to Hedegaard, Warner, and Minino (2018), West Virginia (57.8, per 100,000), Ohio (46.3, per 100,000), and Pennsylvania (44.3, per 100,000) were the three states with the highest age-adjusted drug overdose death rates in 2017. For adolescents between ages 15 and 19, the death rate as a result of drug overdose rose from 3.1 per 100,000 population in 2014 to 3.7 per 100,000 in 2015 (Curtin et al., 2017). Adolescent young men were the most affected with 4.6 per 100,000 death rates in 2015 compared to adolescent young women at 2.7 per 100,000 in the same year.

Similarly, Ramos et al. (2018) noted that Ohio's 2016 rate of the opioid-connected overdose death of 32.9 deaths per 100,000 people was among the highest in the US. The rate was more than twice the national rate of 13.3 deaths per 100,000 people. In particular, rural counties are affected. Pickaway County had an overdose death rate rising from 3 in 2004 to between 6 and 14 deaths each year between 2011 and 2016 (Ohio Department of Health 2017). Likewise, in Warren County, the number of overdose

deaths increased from 11 in 2004 to 58 in 2016. Butler which is an urban county recorded 34 deaths per 100,000 in 2016 while another urban county, Hamilton had 28 overdose deaths per 100, 0000 in 2016. Despite the urban areas still being in the lead as pertains to overdose deaths, the rural counties numbers are increasing.

After evaluating national level statistics, Bowman (2018) found that states leading in heroin-related deaths were Ohio, New York, Illinois, and Pennsylvania. Although there was an increase in all states, the highest rates of the increase occurred in Washington D.C., West Virginia, and Ohio. In Ohio cocaine-related overdose deaths rose expressively from 685 in 2015 to 1,109 in 2016 which was a 61.9% increase.

Substance abuse is based on the perception of those who use drugs. Park et al. (2016) stated that the common perception among Ohio adolescents is the belief that the non-medical use of these substances is safe. This perception has led to an increasing number of adolescents who are misusing drugs and other substances. For instance, Ohio was categorized among the top ten states for non-medical use of prescription pain relievers among adolescents aged 12-17. Additionally, the youth in Ohio are exposed to other illicit drugs such as methamphetamine, with lab seizure incidents increasing by 36% (258 incidents) in 2008 to 352 incidents in 2011 (Ohio Drug Control, 2013). The youth are also exposed to cocaine though drug treatment admissions associated for cocaine reduced from 30% to 14% in the 2004-2010 period (Ohio Drug Control, 2013). Park et al. (2016) also identify that a 17% of the students have experimented with alcohol, marijuana, cigarettes, and cocaine at least once. The group comprises of 9th and 12th graders who have wanted to use marijuana at one point in their lives. These are

indications of the existence of a major problem in Ohio. For instance, the results of Hamilton County in Ohio in 2018 showed 16.6% usage of alcohol among 7th-to-12th-grade population, 4.1% tobacco use, 7.8% usage of marijuana and 1.7% usage of prescription drugs (Prevention First, 2018).

Various reasons have been identified as the causes of substance abuse among adolescents. Hilton et al. (2018) identified peer pressure among the most significant causes of engagement in substance abuse. Most of the adolescents have tried the use of particular drugs so that they can be socialized with their friends. The age of the adolescents is an intricate stage of growth where self-esteem and perception are usually based on the group mentality. An adolescent will readily try out a substance just to appeal to the acceptance of the friends. Peer pressure is a major contributor to increased substance abuse among adolescents in Ohio (Hall et al., 2016). The rise and continued use of these drugs among school-going adolescents is a further indication of the peer pressure that enhances drug and substance abuse.

Hilton et al. (2018) also noted that adolescents are motivated by those around them to use drugs. For instance, depending on the family history of a child, they might be lured into substance abuse right from their homes. In fact, Hilton et al. argue that some of the children who abuse drugs are from unstable homes and where the parents abuse the drugs as well. While the children might not show it to the elders at home that they are hooked on drugs, they go out searching for peace and calmness in their lives. This pushes them to hang out with the wrong crowds as they aim at running away from problems at home. Before they know it, they start using drugs that help enhance their moods and

make them feel excited and not as awful as they feel at home (Hilton et al. 2018). Other adolescents indulge in drug and substance abuse out of curiosity and to experience new things. VanGeest et al. (2017) noted that in most cases, this happens as they watch people they know and interact with every day, like addicted relatives, use the drugs and describe magnificent feelings that come with it.

According to Harstad and Levy (2014), in other cases, drug abuse comes involuntarily for adolescents. This is especially in cases whereby the adolescents start to use prescription drugs as a control or treatment option and before they know it, they are addicted and unable to control these effects. For instance, in the case of the children suffering from Attention Deficit Disorder or Attention Deficit Hyperactivity Disorder, they often start using illicit substances to control their symptoms (Harstad & Levy, 2014).

The substance abuse issue in rural Ohio is one of the most significant problems that necessitate the need for the screening process. Unfortunately, current governing bodies and regulatory environment have not strongly encouraged for screening for substance abuse among adolescents. Due to this, there are many PCPs/nurses who may not understand the importance of and use of screening tools for substance abuse among the adolescent population. By providing education on the use of the CRAFFT screening tool this may help improve the understanding and interpretation of its use.

Available Resources for Substance Abuse Patients

The state of Ohio provides different resources for assisting those affected by substance abuse. The state has created The Drug Free Communities (DFC) Program under which different organizations work with the local communities to address

substance abuse among the youth through local data-driven strategies. Some of the organizations who receive grants under the program include Community Mental Health and Recovery Board, AWAKE to a Safe and Healthy Community, Chemical Abuse Prevention Association, and Community Awareness and Prevention Association, among others (Ohio Drug Control, 2013).

Individuals in wider Ohio have access to different healthcare centers offering mental health services. Examples of such institutions include Lumiere Healing Centers, Ohio Hospital for Psychiatry, Discovery Institute, and Dear Hollow Recovery and Awareness, among others. The youth can also access programs geared towards preventing substance abuse such as Start Talking!, which brings together adults, children, and teenagers to address the substance abuse issue (Juergens, 2019). Additionally, adolescents have access to evidence-based programs such as the keepin' it REAL program, which is a drug and alcohol prevention program targeting middle school students in rural areas in Pennsylvania and Ohio. The program is founded on the acronym *REAL* for refuse, explain, avoid, and leave. The program has been shown to reduce substance use and acceptability to substance use among middle school students. Other examples of such programs include Contingency Management Smoking Cessation in Appalachia and School-based Drug Misuse Prevention Program, both which target high school students (Rural Health Information Hub, 2019).

Lack of Health Screening for Drug Abuse

Despite the drug problem being prevalent among the adolescents as illustrated, screening is rarely done in primary care. Several barriers for implementation of screening

intervention that have been evaluated in literature include busy primary care practices, time required for screening, difficulties in integrating screening into the clinical workflow as well as poor quality of screening (Sterling et al., 2012).

Time pressures is one of the system-level barriers hindering substance abuse screening in primary care settings. Primary care visits are usually brief and are characterized by many competing priorities. As such, practitioners usually address patients' key complaints and other medical conditions (McNeely et al., 2018). Additionally, primary care practitioners feel that they cannot fully address the substance abuse issues due to their full schedules as well as the perception that substance use patients have a lot of underlying psychosocial issues. McNeely et al. (2018) further established that primary care practitioners further cite lack of resources as one of the key barriers to lack of substance use screening. The practitioners voiced that effective treatment systems are necessary before adoption of screening programs. Additionally, that lack of referral options limits them from connecting patients with suitable care. The practitioners noted that substance use treatment occurs outside primary care and necessitates referral to community-based programs.

Poor quality of screening can be associated with factors such as lack of privacy whereby primary care practitioners feel that the settings do not provide sufficient privacy for the patients which makes both the practitioners and patients uncomfortable. Lack of knowledge and training also leads to poor quality screening. According to McNeely et al. (2018), practitioners are trained on behavioral health conditions including smoking cessation and depression, but have minimal knowledge on alcohol and drug use.

Particularly, they lack education on substance use as well as familiarity with screening patients and referring them to appropriate resources. The lack of knowledge erodes the confidence of primary care practitioners in relation to screening for substance use.

According to Sterling et al. (2012), there are missed opportunities to problem identification in pediatric primary care because of lack of screening. Medical visits by adolescents present crucial chances for detection of substance abuse problems but such chances are often lost for lack of relevant screening tools. According to Sterling et al., (2012) the screening problem is brought about by lack of training of medical professionals, discomfort with overdose screening process among other factors.

Practitioner Education Programs for Substance Use Screening

Nurse education programs have been adopted to improve substance use screening knowledge and practices. Knopf-Amelung et al. (2018) note that Substance Abuse and Mental Health Services Administration (SAMHSA) started funding health practitioners training programs for screening, brief intervention, and referral to treatment (SBIRT) in 2013. Knopf-Amelung et al. (2018) conducted a study to evaluate whether nursing students can be trained to deliver SBIRT. The researchers also compared different methods for instructing the students. The findings indicated that in-person, narrated slides, and online training improved the students' knowledge and attitudes for working with substance use patients. The training further improved their confidence for handling such patients.

SBIRT training has been adopted among primary care physicians in the United Arabs Emirates context. In a study by Pflanz-Sinclair et al. (2018) the physicians

attended a two-day training program on substance use management using the SBIRT model. The researchers noted the physicians welcomed the skill development opportunity in substance use screening. The training empowered the physicians with new approaches of handling substance use patients and screening them. The training created a gateway for generating dialogue on substance use, gaining patients' trust and confidence, and exploring available treatment options.

SBIRT training has been implemented among emergency medicine trainees. The training was implemented using online modules, simulation, a one-hour group discussion on SBIRT practices, and role playing (Mello et al., 2019). Mello et al. noted that the trainees found the skills they acquired from the SBIRT training initiative useful and they applied them to screen substance use patients. The researchers emphasized that training is an important step towards improving the integration of SBIRT services into clinical practices in the emergency department.

Use of CRAFFT Screening Tool in Clinical Settings

The CRAFFT substance use screening tool is particularly developed for evaluating substance use among adolescents. Knight, Sherritt, and Shrier (2002) affirmed the accuracy of the protocol in screening for substance use among this population. The researchers conducted a study among 538 adolescents aged 14-18 years in a large, hospital-based adolescent clinic. The study results indicated that 49.6% of the adolescents had not used illicit substances in the past one year, 23.6% reported occasional use, 10.6% indicated problem use, 9.5% abused the substances, while 6.7% were dependent (Knight et al., 2002). These categorizations strongly correlated with the CRAFFT scores

(Spearman ρ, 0.72; $p < .001$). A CRAFFT score of 2 or above aided in identifying substance use problems, disorders, and dependency (Knight et al., 2002).

CRAFFT is appropriate for primary care settings. The protocol is brief and can be conveniently used by busy clinicians such as primary care practitioners who have cited time pressures as one of the limitations to substance use screening (Harris et al., 2016). CRAFFT is widely recommended both in the United States and abroad as it is characterized with 80% and 86% sensitivity and specificity for detecting substance use disorders in primary care settings, respectively. The protocol has been improved to include questions on history of drug use within the last 12 months which provide primary care practitioners with crucial information on usage, facilitate early intervention, and enables them to apply a skip pattern for nonusers, thereby reducing confusion and enhancing time efficiency. Recently, CRAFFT has been expanded to include tobacco use (Harris et al., 2016).

Role of the DNP Student

In my personal experience, I have seen many individuals come into the Emergency Room with issues related to substance abuse. Many of these individuals have stated that they began abusing substances during adolescence. My role in the project was to educate healthcare providers in the clinic regarding the use of screening tool for substance abuse among adolescents. My role also extended to data collection and analysis of pre- and posttest results.

My motivation for this doctoral project was because I have seen many patients suffer from the effects of substance abuse. Many of which likely began substance abuse

behaviors during adolescence. I feel that this is a worthwhile topic that may have far-reaching effects on improving the health of the community. Potential biases that could be represented is that the area of the practicum site does have a large population of Amish and those with a low socioeconomic status. Substance use among the Amish could go unreported or unidentified as the community prefers to deal with such matters within the church. This creates an illusion that the Amish community does not experience any drug-related problem and substance use education and treatment programs are unnecessary (Ruiz, 2017).

Research shows that people from low socioeconomic backgrounds are more likely to report having substance abuse problems. Baptiste-Roberts and Hossain (2018) noted that individuals with a family income of less than $20, 000 were 34% more likely to report substance-abuse related problems compared to those with higher incomes. Such statistics could create bias due to impressions that all individuals from low socioeconomic backgrounds are potential substance abusers. Steps to deal with potential bias was to learn more about these populations and how it could relate to substance abuse.

The project was accomplished with the help of a project team. The team entailed providers who were trained to assist in collection of the required data. As a team leader, I guided the team members throughout the process by ensuring accurate data were obtained. The team members included the front desk staff in the clinic who assisted with data collection. Additionally, a statistician was engaged to aid with the data analysis. As the project leader, I engaged the managers and supervisors in the clinic to seek support

for the project by emphasizing the importance of substance screening at the primary care level. I sought and obtained permission to implement the project at the clinic.

Summary

There are many times where substance abuse issues are missed among the adolescent population. By improving education on the correct use and application to clinical practice it may be possible to detect possible issues earlier. By educating healthcare providers in the local area it may be possible to improve the health of not only the individual patients but also of those they encounter. Data for the project were collected from the local clinics where the project was implemented.

Section 3: Collection and Analysis of Evidence

Introduction

Problem Statement

Increased rates of substance abuse among adolescents in rural Ohio have, in turn, led to a rise in accidental deaths among this population related to overdose of substances (Ohio Drug Control, 2013). Rembert et al. (2017) noted that opioid addiction, abuse, and overdose deaths are one of the major pressing public health concerns in Ohio. Ohio leads the country in drug overdose deaths per capita, and the rate is increasing, thereby overwhelming communities, governments, and families across the state (Ramos et al., 2018). This has led to an increase in health-related costs; for instance, 92,000 to 170,000 Ohioans were abusing or dependent on opioids, which led to an annual cost associated with treatment, criminal justice, and lost productivity of $2.8 billion to $5 billion (Rembert et al., 2017).

Adolescence is a particularly trying period in a person's life and can be made more difficult due to substance abuse (Radel et al., 2018). Unfortunately, among many healthcare providers, there is a lack of understanding of the proper use and clinical application of tools to screen for substance abuse among this age group. In this project, I sought to provide education for a group of healthcare providers in rural Ohio on one such screening tool and its application to clinical practice for the care of adolescents.

Purpose

The gap in practice is that often adolescents do not have screenings completed for substance abuse or the potential for their development (Curry et al., 2018; D'Amico et al.,

2016; Hassan et al., 2009). This may be because of a lack of education among nurses in a primary care setting, who may lack confidence or understanding of how to integrate this screening into practice. Providing PCPs and nurses with information on screening tools may help improve their understanding and use of screening tools. In this project, I sought to provide education for a group of healthcare providers in rural Ohio on one such screening tool and its application to clinical practice for the care of adolescents. The guiding question was: Will education for nurses in a primary care setting on the CRAFFT screening tool improve their knowledge, skills, and practices in screening for substance abuse among adolescent patients in rural Ohio?

This project has the potential to show that educating nurses and PCPs on using and interpreting the CRAFFT screening tool may help them detect and refer adolescents with substance use problems to the appropriate resources. This section starts with the practice-focused question followed by an in-depth provision of the sources of evidence. Published outcomes and research, evidence generated for the doctoral project and analysis and synthesis are part of this section too. This section concludes with a concise summary.

Practice-Focused Question

Ohio has been referred to as *Ground Zero* in the opioid and drug addiction crisis that has taken a significant effect on U.S. society (Ohio Department of Health (2016). More than 4,000 Ohioans died of an unintended drug overdose in 2016. Substance abuse is one of the leading causes of death for Americans under the age of 50, and Ohio has the second highest rate of overdose deaths of any state in the nation. According to

Hedegaard, Warner, and Minino (2018), West Virginia (57.8), Ohio (46.3), and Pennsylvania (44.3) were the three states with the highest age-adjusted drug overdose death rates in 2017. Similarly, Ramos et al. (2018) noted that Ohio's 2016 rate of opioid-connected overdose deaths of 32.9 deaths per 100,000 people was among the highest in the United States. Substance abuse perception varies among people and can only be based on the specific perception of the individual using the substance. Park et al. (2016) stated that the common perception among Ohio adolescents is the belief that the nonmedical use of these substances is safe.

The purpose of this project was to implement and evaluate an educational program for healthcare providers on the use of the CRAFFT screening tool and the implications of its use. The practice-focused question was: Will education for nurses in a primary care setting on the CRAFFT screening tool improve their knowledge, skills, and practices in screening for substance abuse among adolescent patients in rural Ohio?

By improving education for nurses and PCPs, it may be possible to improve on the identification of adolescent patients with substance use disorders and referral to appropriate resources. Earlier treatment could lead to improved health overall for this population. Improved rates of screenings among patients ages 12–19 years may allow for earlier diagnosis and treatment of substance abuse, which could allow for longer and healthier lives. For this project, the population was adolescents age 12–19 years, living in rural central Ohio.

Sources of Evidence

Many resources were used for evidence during this project. I used the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, (*DSM–5*) for defining and providing data about substance abuse and screenings, along with information from Substance Abuse and Mental Health Services Administration and the Agency for Healthcare Research and Quality Website. These resources assisted in clearly defining and providing background information for substance abuse among adolescents.

The *DSM* is a guideline for assessment and diagnosis of mental disorders. This is in line with the principle that determining a precise diagnosis is the first step toward being able to suitably address a medical condition. In addition, the *DSM* helps in measuring the effectiveness of treatment as dimensional. In this regard, its use was suitable in measuring how health practitioners capture the elements of the CRAFFT screening tool—namely, care, relax, alone, forget, friends, and trouble.

The sources capture data on the number of adolescents in certain populations who have abused any form of substance and sought medical attention. In addition, the sources of evidence show how nurses and PCPs use screening tools and other approaches to diagnose and treat substance abuse patients. This is in line with the capstone project problem, the purpose, and the context of where there is high substance abuse among adolescents. The evidence revealed the efficiency of screening in reducing substance abuse among adolescents. Data collection and analysis have shown that using screening tools improves earlier detection and treatment of substance abuse among adolescents.

Published Outcomes and Research

This project involved reviewing literature published in the last 5 years to review key recent literature and resources. Keywords were used to query databases and retrieve the necessary evidence. The primary database used for research was CINAHL, and I used key search terms such as *adolescents*, *substance abuse*, *CRAFFT*, and *screening tools*. In addition, I reviewed publications extracted from Google Scholar, Cochrane, PubMed/Medline, and EBSCOhost. My search was exhaustive, and I reviewed relevant publications in line with the project purpose. I compared findings from various studies to establish patterns, and I included publications on substance abuse in Ohio to make comparisons to those from other states.

Evidence Generated for the Doctoral Project

This project involved providing an educational program for healthcare providers on the use of the CRAFFT screening tool to identify possible substance abuse behaviors among adolescents. Evidence was collected by assessing healthcare providers' understanding of the use of the screening tool. All healthcare providers who practice in the clinic were provided with the education on using the CRAFFT tool. This project was primarily based providing an educational program for healthcare providers on the use of the screening tool and how to appropriately use its results.

Protections

To foster relationships with healthcare providers to provide education on the screening processes, it would be essential to find methods that would allow for a quick and meaningful method to provide information. One method employed would be a lunch

educational seminar for participants. The educational intervention was based on the SBIRT approach which has been adopted extensively in substance use studies. The approach focuses on prevention, early detection, risk assessment, brief counseling, and referral for assessment. The education sessions covered an overview of the SBIRT screening program, an introduction to the CRAFFT screening tool as well as the instructions on using the tool. The sessions also focused on motivational interviewing skills utilized during the screening process and communication of the results. Having nurses trained on methods to employ the use of the screening tool would make it easy for them to screen adolescents for substance use.

Permission to implement the project was acquired from the administrators and management of the primary care clinic which served as the project setting. Additionally, permission was obtained from Walden Institutional Review Board to ensure that this project adheres to research ethics. The nurses who participated in the project were informed that participation in the project was on a voluntary basis and they were free to withdraw at will. Additionally, the clinic and its location were de-identified to ensure confidentiality and privacy. Similarly, identifiers such as nurses' name and number were not collected or published in the project report.

Analysis and Synthesis

The CRAFFT tool was adopted given that has acceptable validity and it is reliable, which are important aspects of screening. For instance, Madras et al. (2009) stated that the CRAFFT screening tool has been adopted as an important mechanism in the screening for substance abuse among adolescents. The screening tool applies best on

issues to do with drug and substance abuse, and it has been used widely in the screening for substance abuse. In addition, Gamarel et al. (2017) noted the CRAFFT screening tool reliably identifies youth who engage in drug abuse. Thus, screening measures such as the CRAFFT should be utilized routinely in HIV clinical settings for youth. Similarly, Pilowsky and (2013) concluded that the CRAFFT was the best instrument for screening for alcohol/drug use and related problems given that other screening instruments need more testing or evaluation in more demonstrative samples of adolescents in primary care settings. Likewise, Harris, Louis-Jacques, and Knight (2014) established that CRAFFT was reliable compared to other tools such as DAST-10, NIDA-modified Alcohol, Smoking and Substance Involvement Screening Test and ultra-brief screens.

Regarding reliability, Pourat, Zima, Marti, and Lee (2017) noted that CRAFFT tool had a Cronbach alpha of 0.85 while Kandemir et al. (2017) found that CRAFFT had a Cronbach's alpha of 0.9014; hence, it had levels of consistency. Similarly, Carney, Myers and Louw (2016) used a test-retest reliability approach and found that the CRAFFT tool had a score of 0.8. This shows that the tool is reliable.

Evaluation

In the evaluation of the success of the CRAFFT Screening Tool, it is important to consider the various aspects of the screening. Griffin et al. (2010) noted that the design of this tool is focused on the identification of any patterns that are related to substance abuse. The screening mechanism generates the name from the abbreviation of the components that are usually investigated. The acronym stands for Care, Relax, Alone, Forget, Friends, and Trouble. These are the key areas that are addressed in this screening

tool. The design of the apparatus is narrowed down to the personal experiences of the individual, and as such, the tool can easily be self-administered or administered by a clinician. The relevance of the questions that are asked in the screening is linked to the goals of the screening process which is carefully structured to indicate the relationship that the adolescent has in their day-to-day life.

It is also essential to identify the different approaches that are used in the administration of the screening tool. Madras et al. (2009) noted that the guidelines of the CRAFFT testing dictate that the responses to the first three questions of the questionnaire determine whether the testing continues or not. For instance, if the adolescent replies "no" to all the first three questions, the clinician administering the questions should stop, but if the first three answers are "yes," then the screening can continue. Additionally, the impact of the questionnaire should be evaluated based on the responses that the interviewee provides.

Moreover, the CRAFFT Screening Tool is regarded as a specific tool in the screening for substance abuse in comparison to other mechanisms for screening. Lambert (2017) notes that the CRAFFT approach in the screening is integral in the determination of the spread, dependence, and the nature of substance abuse among the affected population. It is therefore important to note that the administration of the questions should be done in the manner that they exist without any modification. Reliability and validity of the screening tool are enhanced when the device is used just as it exists without any changes whatsoever (Madras et al., 2009). Clinicians who administer CRAFFT are challenged to use the tool in the form that it exists to increase the similarity

in the screening experiences. It should be noted that before the administration of the tool, the clinician should also remind the adolescent of the need for honesty as well as the confidentiality of the screening outcomes. Secrecy plays a vital role in determining the responses to the questions as well as the possibility of getting more volunteers for the screening. Lambert (2017) noted that most adolescents live with their parents and may likely be reprimanded hence the need to keep their secrets although it is important to suggest recovery strategies for them. For instance, the introduction of family education could help a lot in helping the adolescents recover effectively.

Descriptive statistics were used to compare nurses' knowledge on the CRAFFT tool before and after the implementation of the educational intervention. Pretest data and posttest data were collected one week before and after project implementation, respectfully. To analyze and synthesize data, I used Microsoft Word and Excel to record, track, and organize data. Data were recorded on Word documents and entered on an Excel spreadsheet for analysis. The Statistical Package for Social Sciences (SPSS) was used to analyze data to determine statistical significance.

Summary

The relevance of the CRAFFT screening process in the reduction of drug use among Ohio adolescents is a crucial consideration. The importance of this project is on the impact of the screening procedure by providing education on its use, and the screening tool has proven to be effective in the reduction of the drug use among the adolescents. The impact of the screening tool can be major. By encouraging adolescents to address the dangers of drug and substance abuse, they are helped to understand the

need to avoid these substances (Levy et al., 2016). Use of CRAFFT encourages use of supportive strategies which ensure that the adolescents who have tested positive for high-risk substance abuse are given the relevant treatments and put through prevention measures to reduce substance abuse.

The preventive measures that are put in place also play a vital role in determining the relevance of the screening tool in the reduction of the rates of substance abuse among adolescents in Ohio. One main concern has been the lack of education that many healthcare providers have regarding a proper screening tool that will reveal the adolescents who are at risk of substance abuse (Greene, 2017). The tool is important in revealing the drug trends and behavior among adolescents in rural Ohio. There are various differences between adolescents in rural Ohio and those in urban areas. However, the impact of these drugs remains the same in both areas.

Reliance on CRAFFT screening is a way of improving the use of proper preventive strategies that will lead to a reduction in substance abuse among adolescents. The hospital referrals follow the preventive strategies that are aimed at providing long term solutions to the addiction that comes with drug and substance abuse (Levy et al., 2016). It is vital to understand the relevance of these measures in handling substance abuse in rural Ohio.

The impact of CRAFFT on substance abuse is also linked to the improved relationships between adolescents and adults, especially their parents. Through the institution of the family, the tool provides the adolescents with the opportunity to be open with the adults around them and hence help them through some of the issues they face.

Depressions, anxiety disorders and even tension are some of the reasons for the abuse of drugs among adolescents. Some of them could also be acting out their frustrations (Greene, 2017). The connection between the adolescents and the parents then gives them a potential outlet and source of encouragement. The results are a reduction in the rates of substance abuse

The discussion on the impact of CRAFFT on substance abuse is based on the understanding of what constitutes drug abuse, as well as the causes of substance abuse among adolescents. By learning what constitutes drug and substance abuse, one can then effectively apply the CRAFFT tool considering that he or she then knows what to evaluate and look out for in the subject.

Section 4: Findings and Recommendations

Introduction

Drug and substance abuse among adolescents has been on the rise in the United States. Ohio has continued to record the highest cases of drug abuse among adolescents (Ramos et al., 2018). There is a growing concern about the need to develop a better way of handling the problem. Adolescents are more vulnerable to peer pressure and more likely to engage in drug abuse with their peers. Because Ohio has such a high rate of drug and substance abuse among adolescents, appropriate measures need to be taken to ensure that the problem is brought under control (Veliz, McCabe, Eckner & Schulenberg, 2019). Substance abuse among adolescents has permeated institutions of learning; many high school students in rural Ohio have encountered drugs, which could adversely affect their educations (Falck et al., 1999; Pettigrew et al., 2012).

There is a gap in practice with regards to substance use screening among adolescents in rural Ohio. Without proper screening, it is difficult for nurses and PCPs to identify adolescents experiencing substance abuse issues and refer them for appropriate treatment. In this project, CRAFFT screening was proposed as the most appropriate tool to ascertain if adolescents are at risk of drug abuse. Specifically, I sought to evaluate and answer the question of whether education for nurses in a primary care setting on the CRAFFT screening tool would enhance their knowledge, skills, and practices in screening for substance abuse among adolescent patients in rural Ohio.

This project involved an initial educational intervention on CRAFFT screening for nurses in primary care settings in rural Ohio. The process involved the use of a lunch

educational seminar based, which was based on the SBIRT approach that has been widely used in substance use research studies (Knopf-Amelung et al., 2018; Mello et al., 2019; Pflanz-Sinclair et al., 2018). The educational program was administered to nurses to provide them with knowledge on CRAFFT screening for substance abuse. Seven nurses were recruited for the project. Data were collected from the participants before and after the educational intervention and recorded in an Excel spreadsheet. The main aim of collecting two sets of data was to evaluate whether the educational intervention had a significant impact on nurses' knowledge on using the CRAFFT screening tool.

The evidence/data used in the project were collected from primary care nurses in rural Ohio who took part in a CRAFFT educational intervention. The data were collected using a self-developed survey to evaluate the nurses' CRAFFT knowledge and skills. The questionnaire contained 10 questions focusing on different aspects of the CRAFFT screening tool. The collected data were analyzed on SPSS through both descriptive and inferential statistics.

Findings and Implications

Based on the data obtained, I used summary statistics to give an overview of the basic statistical analysis. I performed a paired sample *t*-test on the two sets of data to give more inferential statistics to help in assessing the impact of the educational intervention.

Descriptive Statistics

The results of the analysis using descriptive statistics are describe in Table 1.

Table 1

Descriptive Statistics (N = 7)

	n	Range	Min.	Max.	Mean	*SD*	Variance
Pretest	7	50	20	70	51.43	19.51	380.952
Posttest	7	20	80	100	94.29	7.868	61.905
Valid *N* (listwise)	7						

Based on the results, it is evident that during the pretest, for the 10 questions asked about the CRAFFT screening tool, the participants had a low performance with an overall mean of 51.43. The lowest result from the participants was 20 points, whereas the highest result was 70 points. All the points were graded against 100 points; hence, a participant could score a maximum of 100 points in a single test. In the second test, which was administered 1 week after the educational intervention, the mean of the seven participants had increased to 94.29 from the previous 51.43. Additionally, the results showed that the minimum score increased from 20 points to 80 points, and four respondents scored 100 points in the second test. This finding shows that there was an improvement in the score after the educational intervention.

Inferential Statistics

Summary statistics do not give statistical characteristics like the relationship between two paired samples. Due to this weakness of summary statistics, it is important to run inferential analysis to understand whether there is a significant improvement in the pairs being tested. I ran the paired sample *t*-test to help in understanding whether there was a significant improvement in the posttest after the educational intervention. With a positive result, this test would justify the importance of the educational intervention for

the nurses to help in increasing their accuracy in using the CRAFFT screening tool. The test was performed at a significance level of 95%; see Table 2 for results of the paired samples *t*-test.

Table 2

Paired Sample Test Results

		Paired Differences					*t*	*df*	Sig. (2-tailed)
		Mean	*SD*	*SE* Mean	95% *CI* of the Difference				
					Lower	Upper			
Pair 1	Posttest–Pretest	45.714	17.182	6.494	29.823	61.605	7.039	6	.000

The paired sample *t*-test showed the relationship between the pretest and the posttest. A test statistic value of 4.954 was found. The significance value for the test was 0.000, which is less than the significance level of 0.05. In this case, the results showed that there was improvement in the second test. This finding indicates that the educational intervention was important in enhancing the nurses' knowledge and skills on CRAFFT screening tool.

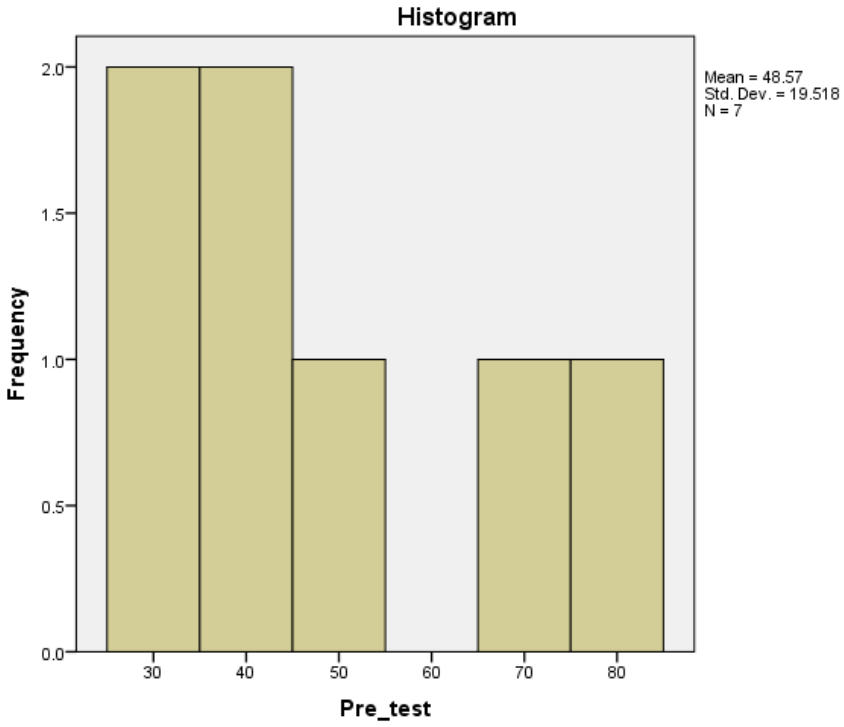

Figure 1. Histogram for pretest.

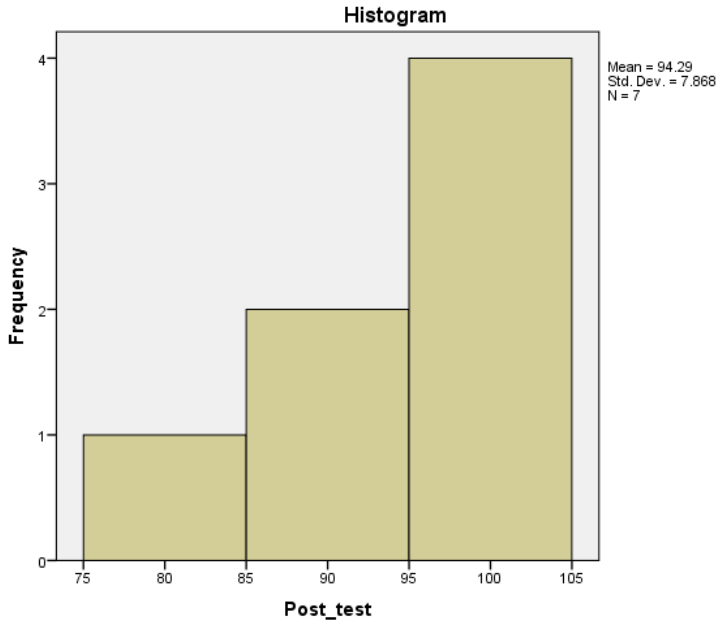

Figure 2. Histogram for posttest.

Table 3

Test Statistics

N	7
Chi-Square	7.000
df	1
Asymp. Sig.	.008

a. Friedman Test

The nonparametric test was performed on the data, and it emerged that there was a strong statistical evidence to show that the two variables were dependent. The significance level was 0.008 which is less than 0.05 alpha level. In the data collection process, one of the limitations was the sample size. A sample of seven participants was used for educational intervention. This could impact on the results as it may lead to an increase in the marginal error in the final results. There is need to focus on a larger sample in the future to help in reducing the anticipated marginal error term thus making the results more reliable. Even though it was expected that before the educational intervention the outcome of the test would be low, the extreme values of the tests were not anticipated since the test was administered to nurses who had prior knowledge of such screening tools. During the first test, one of the participants scored 20 points, implying that the participant managed to correctly answer two questions only. This result was never anticipated, and this affected the average score in the first test by decreasing the mean value. Another limitation with the findings is the generalizability of results owing to the small sample size and the fact that the project was implemented in a single setting. The results are only applicable to the setting in Ohio; therefore, there is a need to

conduct similar projects in various cities, states, and settings across the United States using larger samples to find more conclusive and comparative results.

The project findings have significant implications for nurses and primary care clinics handling adolescent patients in rural Ohio. The results indicate that educational interventions on substance screening tools such as CRAFFT can empower PCPs such as nurses with knowledge and skills necessary for using the tools to screen for substance use among adolescents. The literature indicates that insufficient training and low levels of self-efficacy and confidence among nurses are some of the factors hindering substance abuse screening (Levy & Williams, 2016; Sterling et al., 2012). Education interventions can be used to address these barriers by improving nurses' self-efficacy and confidence, thereby enhancing their ability to identify mild, moderate, and severe substance use disorders among adolescents.

The findings also have significant implications on adolescent patients in rural Ohio. The patients will benefit from the improved substance use screening knowledge and skills among the nurses. The nurses will be more effective in screening for substance use among the adolescents. The acquired knowledge will also help the nurses understand the individual needs of adolescent patients who are victims of substance abuse. This will allow them to provide or refer the patients to specialized care based on the results of the screening process.

The rural communities will benefit from these findings as the CRAFFT screening tool will be highly applicable in identifying adolescent patients with a history of substance abuse. Not all parents are aware that their teenagers abuse drugs. Some could

be attending schools in different geographical locations, and parents might not get the opportunity to monitor their lives. When the adolescents have health problems, the CRAFFT screening tool will help in identifying their behaviors and make it easier for effective intervention programs to help them stop substance abuse. Also, the screening tool will be critical in identifying adolescents in society who are struggling with substance abuse. Data from healthcare settings on drug and substance abuse among adolescents provide critical analysis and make it possible to develop community rehabilitation centers.

Institutions, particularly primary care centers, are the major beneficiaries of these findings. First, the institutions can provide better educational intervention to the nurses to increase their accuracy when screening adolescent patients. The findings will help primary care institutions to improve their systems to accommodate new screening tools such as CRAFFT and provide more specific treatment for adolescent patients who are victims of substance abuse. The systems play a significant role in the adoption of new intervention programs and technologies. With the current results, it becomes critical to evaluate the different parts of the systems that could be affected by these results. Implementation of the CRAFFT screening tool requires quality training for the users; hence, the system should provide the required facilities and programs to support such trainings. D'Amico et al. (2016) emphasize the importance of empowering PCPs to identify youths at risk of substance use since primary care serves, therefore. offering counseling as the gateway to the healthcare system. The practitioners can make referrals to preventive or treatment services.

For the positive social change, the findings will be of great benefit in identifying vulnerable adolescents in society and ensuring they get access to substance use interventions. Early identification of substance use among adolescents may inform the adoption of preventive and treatment measures such as referral to mental health specialists; thereby, improving their health outcomes. Due to improved substance use screening knowledge among nurses in primary care settings, the youth will feel more confident approaching the nurses with such issues due to the perceived competence.

Recommendations

Primary care clinics in rural Ohio should develop similar educational interventions for improving substance use screening knowledge among their nurses. Researchers indicate that nurses at the primary care level lack sufficient training on substance use screening or the use of standardized screening tools (Levy & Williams, 2016; Sterling et al, 2012). The clinics should support the nurses by creating time for the trainings as well as providing the requisite resources. The training sessions would facilitate the integration of standardized screening tools into primary care practice.

Prelicensure nursing programs fail to prepare nursing graduates on substance use issues (Knopf-Amelung et al., 2018). As such, nurses rarely get the clinical skills required for addressing substance use among patients. Consequently, primary care clinics should develop policies requiring the nurses to be trained routinely on substance use issues. The policy should indicate that administration in the clinics should support the training efforts by providing the necessary resources. The policy should also indicate the standardized substance use screening tools that should be used by the nurses.

Strengths and Limitations of the Project

One of the key strengths in the project is that the findings indicate the educational intervention significantly improved nurses' substance use screening knowledge. The educational intervention was crucial as it addressed a practice gap in primary care settings. However, the project used a small sample size which may have introduced bias into the findings. The small sample size also limits generalizability of the project results. Generalizability is further limited by the fact that the project was implemented in a single primary care clinic. The project should be replicated using a larger sample of nurses from different primary care clinics.

Section 5: Dissemination Plan

The findings of this study will be presented to nurses and physicians in the primary care clinic where the project was implemented. Additionally, the findings will be presented in nursing seminars and workshops in Ohio. Workshops and seminars are among the key venues where healthcare practitioners learn about research (Brownson, Eyler, Harris, Moore, & Tabak, 2018). The project results will be shared with the administrators of the primary care clinic using an executive summary detailing the findings, implications, and recommendations. Lastly, the project may be published in a nursing journal where it will be available to scholars and practitioners.

The audience required in this dissemination plan includes the nurses, nursing scholars, and primary care administrators. The nurses constitute the immediate care providers to patients in primary care in the rural areas, emphasizing the need to create awareness on the importance of substance use screening training among them. Additionally, nursing scholars can benefit from the project findings which would prompt them to improve skills for using standardized substance use screening tools. Primary care administrators are an appropriate audience for the project findings because their support is necessary toward ensuring that nurses receive substance use training.

The project findings have significant implications for nurse education and can be presented to nursing schools. Available evidence shows there is a gap in relation to substance use education among nurses . Primary care nurses receive minimal education on alcohol and drug use during their nursing programs (Knopf-Amelung et al., 2018). They are rarely trained on standardized screening tools for substance use (McNeely et al.,

2018). This project shows that educational interventions can play a role in enhancing nurses' substance abuse screening knowledge. As such, nurse educators should integrate education on substance use into coursework and training.

Analysis of Self

As a health practitioner, this project is critical in understanding the use of substance use screening tools used in healthcare practice. The project is specifically essential in understanding the role of nursing practice in adopting and implementing new screening tools in the primary care setting. As a nursing practitioner, the current findings elaborate more on my role in the management of patients with unique characteristics, such as adolescent victims of drug and substance abuse. The findings of the project are critical in improving knowledge and skills in my area of specialization to enhance service delivery among patients under my care. Based on the findings, it is evident that most changes in healthcare settings start with nurses; therefore, I should be prepared to undergo more training and educational interventions in my career in the future. Also, the project impacts my ability to grasp nursing concepts regarding the adoption of new intervention programs.

As a scholar, the current project is critical in developing not only theoretical nursing knowledge but also developing better recommendations to improve nursing practice. The current project gives me satisfaction because it contributes to the wider knowledge base on substance use screening within nursing practice. I have gained insights on the application of CRAFFT screening tool in primary care settings.

The success of any project depends on the willingness and dedication on the side of the project manager. As a project manager, I have learned that there are numerous challenges when implementing a DNP project. For instance, such projects can be hindered by methodological factors which have an impact on the findings. In this project, the major challenge was a small sample. I thought it would eventually fail to bring tangible results. Despite the challenge, I managed to find significant results. Another possible challenge in staff education projects is possible resistance from participants. However, participants in the current project were cooperative and this made the educational intervention program a success.

The scholarly journey was not an easy task. Browsing various websites and journals to get the right material for references was tiresome. At some point, I felt the information I was looking for on the internet was missing. However, after adjusting my search engines in terms of search terms, I was surprised to find numerous materials about the CRAFFT screening tool. I believe for any scholars who wish to have an easy time with secondary sources from the internet, the best thing is to reduce the scope of research and be more specific when keying in search terms. Also, one needs to be very close to a supervisor since they offer good guidance whenever one is stuck. They have the relevant skills and expertise regarding projects, and they can provide quick solutions to hurdles that come with research projects.

Summary

Doctoral projects are designed in a way that focuses on a specific concept that directly links to the area of specialization. Doctoral projects are powerful in providing

solutions to specific problems within a given field. The scope is, therefore, limited to a specific problem. In regard to the contents of doctoral projects, they offer significant information since they are often detailed. With the help of highly experienced supervisors, doctoral projects are pivotal in making changes within the field of specialization. The current project focuses on a problem that has, for a long time been neglected. The ability to accurately screen adolescent patients for substance abuse has not been researched widely in the past years. The findings of this project are, therefore, important in implementing new screening models among adolescent patients with a higher success rate.

The current project has revealed that substance abuse in Ohio among adolescents remains high. Despite this revelation, the nursing practice in the region has not developed adequate screening tools to identify victims of drug and substance abuse in Ohio among adolescent patients. By screening the patients by use of CRAFFT screening tool, nurses can focus on providing specialized care to the patients and improve their experience in the healthcare setting. Furthermore, the nurses can also monitor the patients for any behavioral changes since most of the victims have behavioral disorders after abusing the drugs. This project has revealed that education programs have a great impact on changing the direction of action. Initially, the participants had poor scores; however, the educational intervention changed the entire results to give better outcomes. When the right procedures are put in place, it is possible to implement any change within the healthcare setting. The implementation of new intervention programs in healthcare requires committed staff with positive attitude. It calls for individuals who are willing to

learn and flexible to organizational changes. Having the right team to adopt and implement new health program almost guarantees greater levels of success. The nursing practice is the central pillar for implementing many programs in healthcare. Nurses should, therefore, be ready to change the common practices and accommodate new healthcare models to enhance efficiency.

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