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Tobacco Treatment Education Module for Nurses Working in the Inpatient Psychiatric Setting

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This is to certify that the doctoral study by

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Abstract

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by

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MSN, Gonzaga University, 2006

Excelsior College, 1996

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Tobacco use among people with mental illness remain a significant problem in the western United States. At the project site, there is widespread tobacco use among patients with mental illness and lack of training for nurses to address the issue. The purpose of this project was to educate nurses working in the acute psychiatric setting about evidence-based tobacco treatment interventions. The practice-focused question addressed whether a tobacco education program would increase nurses' knowledge, confidence, and skills to provide tobacco treatment interventions to patients with a mental illness. Self-determination theory and the transtheoretical model of change provided the theoretical framework for the project. Evidence was obtained from a comprehensive literature search. The Psychiatry RX for Change education modules were used to implement the education intervention. Nine participants completed pre- and post-test knowledge-based questionnaires and the Skills and Confidence for Smoking Cessation Tool survey. Results from GraphPad *t*-test analysis indicated a statistically significant increase in perceived knowledge, skills, and confidence among nurses related to tobacco cessation treatment. The mean knowledge pre-test scores were 10.3 and the mean for the post-test score was 14.7. The mean on the pre-survey scores for the nine confidence questions was 16, and the mean on the postscores was 23. The mean obtained on pre-survey scores for the six skills questions was 11.0, and the mean obtained on the post-survey was 18.0. Findings support the use of tobacco education for nurses to improve tobacco treatment offered to patients. The implications of the project for positive social change are that results may be used to improve the quality of life and health outcomes for the patient population.

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Dedication

This process could not have been accomplished without the love and support of my wonderful family, especially my daughter Samantha, son Jon, and husband Ron, who remind me each day of the bountifulness of my life in the presence of God.

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Section 1: Nature of the Project

Tobacco use is the most significant preventable cause of death and disease in the United States (U.S. Department of Health and Human Services, 2014). In 2016, approximately 38 million Americans smoked cigarettes nearly every day, which means 1 out of every 6 adults in the United States smoked cigarettes. Between 2005 and 2016, smoking trends have declined. In 2005, 20.9% of adults older than 18 years of age smoked cigarettes, and this percentage decreased to 15.5% in 2016 (Centers for Disease Control and Prevention [CDC], 2018). However, cigarette smoking rates remain high in certain groups such as men; adults ages 25 to 64; less educated persons; those below the poverty line; Midwest and South residents; the uninsured or Medicare insured; disabled persons; those suffering from serious psychiatric problems; American Indians; Alaska Natives; and those who are multiracial or lesbian, gay, or bisexual (CDC, 2018).

Twenty-five percent of adults in the United States have some form of a mental health disorder or substance use disorder (Substance Abuse and Mental Health Services Administration [SAMHSA, 2018]. The disproportionate number of adult smokers who also suffer from mental health issues is alarming. People with a mental health disorder smoke more frequently than those without a mental health disorder and consume 40% of all cigarettes smoked by adults (CDC, 2018). According to the 2013-2014 National Survey on Drug Use and Health Survey, 36.5% of adults with any mental health disorder reported current use of tobacco compared to 25.3% of adults with no mental health disorder (SAMHSA, 2015). Between 2004 and 2011, the decline in smoking among

individuals with mental health disorder was significantly less than among those without a mental health disorder (Cook et al., 2014).

Smoking in people with a mental illness is a significant problem. The United States spends $170 billion on medical care to treat smoking-related diseases in adults (Xu, Bishop, Kennedy, Simpson, & Pechacek, 2015). The focus of this project was to provide a tobacco education module to nurses working in the acute psychiatric inpatient setting with the goal to increase knowledge, skills, and confidence in providing tobacco treatment interventions.

In support of Walden University's mission to promote positive social change, my project involved staff education on tobacco treatment. Social change was achieved by improving the quality of the interactions between nurses and patients regarding tobacco treatment and potentially improving the quality of life and health outcomes for the population. Informed interactions may change relationships and transform the institutional culture to one that is knowledgeable of the harmful effects of tobacco, and that acknowledges the importance of educating patients about living a healthy, tobacco-free lifestyle (Dunfey, 2017).

Problem Statement

The doctoral project addressed the local nursing practice problem of widespread tobacco use in the mental health community and lack of training for nurses in the workplace to address the issue. The evaluation and treatment center provides mental health care to involuntarily committed individuals and is smoke-free. A personal estimate is that 80% of the patients, and 50% of the nurses are smokers in need of tobacco

treatment. The hospital smoking ban provided an opportunity to address unmet tobacco treatment needs in this patient population. Nurses who smoke are less likely to offer tobacco treatment interventions, which makes it essential to provide tobacco treatment education to nurses in the workplace.

Tobacco use remains the leading cause of preventable death and disease within the state. Data from the annual Behavioral Risk Factor Surveillance System indicated that individuals with more than 14 days of poor mental health composed 27.5% of smokers; 58.5% attempted to quit in the past year, and 72.8% were advised to quit by a healthcare provider (Washington State Department of Health, 2017).

Purpose

I sought to address the practice gap between the need to provide tobacco treatment to persons with a mental health disorder and adequate training for nurses to provide tobacco treatment interventions. Sixty-eight percent of adult smokers reported in 2015 that they wanted to quit smoking, less than 1 in 10 smokers completely quit, and less than one-third of persons attempting to quit used evidence-based cessation counseling and or medications (Babb, Malarcher, Schauer, Asman, & Jamal, 2017). Practice guidelines recommend that every clinician consistently identify and document tobacco use status at each patient encounter and provide interventions for those who use tobacco. This includes smokers with psychiatric disorders (Fiore et al., 2008; U.S. Preventive Services Task Force [USPSTF], 2017). The use of cessation counseling and medication increases quit rates, especially when they are combined (Fiore et al., 2008).

There is a lack of educational programs providing tobacco cessation content to nurses (VanDevanter et al., 2017). This knowledge gap contributes to nurses' inadequate experience in providing tobacco cessation interventions. Existing barriers to nurses providing tobacco interventions include smoking in the profession, lack of professional leadership, and lack of education and skills (Forman, Harris, Lorencatto, McEwen, & Duaso, 2017; Rezk-Hanna et al., 2018; Sharpe, Alsahlanee, Ward, & Doyle, 2018; VanDevanter et al., 2017). Nursing-delivered smoking cessation interventions are effective in assisting clients in quitting (Carson et al., 2012; Fiore et al., 2008; Rice, Heath, Livingstone-Banks, & Hartmann-Boyce, 2017; Sheffer, Barone, & Anders, 2011). There is a demand for improvements in formal education for nurses while in school and opportunities afforded nurses in the workforce to increase their knowledge, skills, and confidence to provide tobacco interventions to fill this knowledge gap.

The practice-focused question was the following: In the inpatient psychiatric setting, would a staff education module for psychiatric nurses increase nurses' knowledge, confidence, skills to provide patient education to patients with mental illness using the Psychiatry RX for Change curriculum? The current standard of care at the site is to conduct a brief tobacco history and provide nicotine patches and/or gum as needed.

Nature of the Doctoral Project

The site for the doctoral project was an urban nonprofit organization in the Western United States. The evaluation and treatment center serves a condensed area of individuals who disproportionately share problems with mental health and substance use disorders compared to other surrounding communities in the region. Nurses interact with

patients throughout their involuntary stay and are in an ideal position to provide tobacco interventions. Evidence indicated that there is a lack of educational programs providing tobacco cessation content to nurses (VanDevanter et al., 2017). This knowledge gap contributes to nurses' inadequate experience in providing tobacco cessation interventions. A staff education project was developed to educate nurses on tobacco interventions to increase their knowledge, confidence, and skills to provide tobacco interventions to patients.

Significance

This project was significant to stakeholders interested in improving the health outcomes of persons with mental illness. I expected that the project would promote interest in tobacco treatment and demonstrate positive outcomes, which could lead to reduced local tobacco problems. The nurses educated on tobacco treatment will be able to share their knowledge with patients and provide ongoing education and motivation to other staff members on the importance of tobacco treatment. The positive impact gained by the project is the recognition by the leadership of the importance of supporting nursing education and the support of the organization's vision to improve the health and well-being of all community members. The project advances the goals of Healthy People 2020 to reduce the use of tobacco (see Healthy People, 2011).

The contribution of the doctoral project to nursing practice is the introduction of a smoking cessation module for nurses working in the inpatient psychiatric setting, which has fostered new interest and commitment to address the problem of tobacco use in the organization. Increasing nursing knowledge, skills, and confidence to provide tobacco

treatment interventions may result in decreased tobacco use and may improve the quality of life of persons with a mental health disorder.

Summary

In Section 1, I addressed the problem, purpose, nature, and significance of this doctoral project, which addressed the lack of knowledge, skills, and confidence of nurses to provide tobacco treatment interventions to their patients in an inpatient psychiatric setting. To address the practice gap at the project site, I implemented a staff education project and collected and analyzed data. Section 2 includes a detailed literature review of the issues involving tobacco interventions and nursing practice with an explanation of the project's theoretical frameworks, discussion of the project's relevance to nursing practice, and an overview of the roles of the DNP student.

Section 2: Background and Context

This doctoral project addressed the lack of knowledge, skills, and confidence of nurses to provide tobacco treatment interventions. People with mental health conditions want to quit smoking, just as those without mental health conditions, and consume 40% of all cigarettes smoked by adults (CDC, 2018).

Studies have shown that fewer than 1 in 10 smokers have completely quit in the past year, and fewer than one-third of persons attempting to quit used evidence-based cessation counseling and/or medications (Babb et al., 2017). Nurses are the largest percentage of health professionals and consistently fail to provide smoking cessation interventions. Barriers cited in providing interventions include lack of training and skills, smoking among nursing professionals, and lack of administrative support (Carson et al., 2012; Obtel, et al., 2014; Sarna, Bialous, Kralikova, et al., 2014; Sheals, Tombor, McNeill, & Shahab, 2016; VanDevanter et al., 2017).

The lack of formal and continuing nursing education about tobacco dependence is cited as a barrier to action (Price, Jordan, Jeffrey, Stanley, & Price, 2008). The USPSTF (2017) guidelines indicated that clinicians should ask all adults about tobacco use, advise them to quit, provide behavior interventions, and offer U.S. Food and Drug Administration approved nicotine replacement therapy. The current project addressed the practice gap through the implementation of a staff education project based on the Walden University (2017) guidelines. I completed this project to increase the knowledge, skills, and confidence of nurses working in the inpatient psychiatric setting to empower them to offer tobacco treatment interventions.

Concepts, Models, and Theories

Ryan and Deci's (2002) self-determination theory and Prochaska and DiClemente's (1983) transtheoretical model of change were used as the theoretical framework for this project.

Self-Determination Theory

Self-determination theory (SDT; Ryan & Deci, 2002) was chosen as the theoretical framework for this project based on a desire to explore how to motivate nurses to acquire knowledge that may increase their confidence and competence to counsel their patients. SDT is a macro theory of human motivation and personality (Ryan & Deci, 2002). A macro theory seeks to encompass all aspects of some subject or phenomenon (Macro-Theory, 2018). There are three main intrinsic needs involved in self-determination: autonomy, competence, and relatedness. The intrinsic needs are conceptualized and identify the relationship between an individual's perceptions about his or her ability and intentions to engage or not to engage in a specific behavior or activity (Niemiec & Ryan, 2009; Ryan & Deci, 2000; Williams et al., 2006). Achievement of autonomy, competence, and relatedness needs to be accomplished to motivate the person to function and grow optimally. These needs are universal, innate, and psychological (Ryan & Deci, 2002).

SDT expanded on previous works on intrinsic motivation and became popular in the 1980s. SDT has been applied in many domains including adoption and maintenance of new health-related behaviors such as dental hygiene, physical activity, and smoking cessation (Halvari, Halvari, Bjonebekk, & Deci, 2012; Murcia, Roman,

Galindo, Alonso, & Gonzalez-Cutre, 2008; Williams et al., 2006). Empirical evidence indicated that an optimal motivational profile for sustained behavior change is one of high autonomous motivation and high perceived competence (Alvernini, Lucidi, & Manganelli, 2008; Chua & Koestner, 2008). Attendance at an autonomy-supportive smoking cessation workshop predicted perceived competence and autonomous motivation in health care providers, which in turn predicted positive changes for the time the provider devoted to tobacco-dependence counseling (Williams, Levesque, Zeldman, Wright, & Deci, 2003). Optimal learning was characterized by engaging students in their learning and providing informational feedback in a nonjudgmental and nonpressuring fashion (Niemiec & Ryan, 2009).

Stakeholders in primary and secondary educational settings, work sites, and health care settings have tested SDT (Black & Deci, 2008; Ryan & Deci, 2000). Black and Deci (2008) examined the support for autonomy, perceived competence, and relatedness among college students.. Students who reported higher autonomous self-regulation for learning also reported higher perceived competence, greater interest in the course material, and lower anxiety related to the course.

Nurses may lack intrinsic motivation and therefore, do not engage in tobacco treatment. They may also lack the requisite confidence to assist clients in quitting smoking (Niemiec & Ryan, 2009). Studies showed that training improves the self-reported knowledge and confidence of undergraduate nursing students to assess, advise, and assist clients to quit using tobacco (Butler et al., 2009; Sohn, Ahn, Park, & Lee, 2012). Though knowledge and a sense of competence are necessary to facilitate a change

in behavior, they are not sufficient to sustain that change over time (Ryan & Deci, 2000; Williams, Gagné, Ryan, & Deci, 2002). In the current study, SDT provided the framework for an educational intervention targeting the underlying motivational processes of nurses to intervene with their patients who smoke. Providing tobacco-dependence training for nurses in a supportive manner may boost their sense of competence and their autonomous motivation for delivering such interventions. Nurses may be more successful in internalizing the importance and value of the educational message and may be more likely to be engaged and retain knowledge over time. Nurses could then interact with patients in an autonomous, supportive way to guide patients toward improved health outcomes.

The major constructs of the stages of change model that individuals move through are autonomy, competence, relatedness (Ryan & Deci, 2017). Autonomy refers to the individuals' urge to be causal agents of their own life (Ryan & Deci, 2017). This may not mean that the individual is independent but that an individual's actions are initiated from within and are congruent with that individual's values, even if the actions originated with or were suggested by others (Ryan & Deci, 2017). Competence refers to seeking to control the outcome and experience mastery, which involves seeking and accepting the challenge and perceiving confidence and effectiveness in dealing with the environment (Ryan & Deci, 2017). Relatedness is the state of being connected to others (Ryan & Deci, 2017).

Transtheoretical Model of Change (TTM)

Prochaska and DiClemente (1983) developed TTM in 1977 and were trailblazers in the study of intentional change. TTM is one of the most widely used behavior change models. The model asserts that individuals move through stages of change in a nonlinear fashion, often relapsing back to earlier stages (Prochaska & DiClemente, 1983). Because TTM was designed to account for changes or lack of changes in smoking behavior, it is effective at predicting readiness to change in smoking cessation (Prochaska & DiClemente, 1983; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Velicer, 1997). Multiple quit attempts are the norm that is considered by TTM.

DiClemente and Prochaska (1982) compared 872 cigarette smokers who quit on their own with subjects from two therapy programs. A Change Process questionnaire was provided within seven weeks of cessation (DiClemente & Prochaska, 1982). DiClemente and Prochaska identified the stages of change individuals undergo to change unhealthy behaviors as well as the process of change. Similar studies showed that linear progression in behavior change is rare with addictive behaviors (Prochaska, DiClemente, & Norcross, 1992). Progression is more like a spiral demonstrating evolution of behavior changes in which many people will relapse and regress to an earlier stage (Prochaska, DiClemente, & Norcross, 1992) . Most patients are not prepared to take action on their smoking; however, most smoking cessation programs are designed for smokers who are so prepared (Prochaska & Goldstein, 1991). Action-oriented therapy is effective for those in the preparation or action stages. It is not effective with clients who are precontemplative or contemplative.

Stages of change provide an understanding of when shifts in attitudes, intentions, and behavior occur. The amount of progress patients make after an intervention is related to what stage they are in before the intervention. Patients progressing in one stage can double their chances of not smoking six months later (Prochaska et al., 1992). Providing personalized information about the cons of smoking, asking affect-arousing questions, and encouraging patients to reevaluate themselves as smokers are interventions providers can use to help patients who are not prepared to quit smoking (Prochaska et al., 1992).

Fava, Velicer, and Prochaska (1995) conducted a study of 4,144 smokers to determine whether the relationship between the early stages of change (precontemplation, contemplation, and preparation) that a smoker passes through on the way to successful smoking cessation and the other key constructs (process of change, decisional balance, and situational temptation) could be validated in a representative sample of smokers. The precontemplators were least likely to use the processes of change, had fewer negative attitudes regarding their smoking behaviors, and were tempted to smoke in more situations (Fava et al., 1995). The precontemplators were also the most addicted to smoking (Fava et al., 1995). Cahill and Lancaster (2010) found that providing stage-based smoking cessation interventions for those trying to quit appears to be more effective than not intervening at all. Over the years, the TTM model has evolved based on published, peer-reviewed research.

Definitions of the major constructs of the stages of change model that individuals move through are precontemplation, contemplation, preparation, action, and maintenance (Bogart & Delahanty, 2004). In the precontemplation stage, the individual has no

intention to change behavior in the next 6 months (Bogart & Delahanty, 2004). In the contemplation stage, the individual plans to change behavior in the next 6 months but not within the next month (Bogart & Delahanty, 2004). In the preparation stage, the individual plans to change in the next month. In the action stage, the behavior has changed but the individual has been engaged in the behavior change less than 6 months (Bogart & Delahanty, 2004). In the maintenance stage, the individual is engaged in the new behavior for more than 6 months (Bogart & Delahanty, 2004).

The two social-cognitive constructs associated with the process of change are decisional balance and self-efficacy (Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985; Prochaska, Velicer, DiClemente, & Fava, 1988; DiClemente et al., 1991; Prochaska et al., 1994). Decisional balance is defined as the balance between comparative gains and losses, or pros and cons, from taking a course of action. The construct was taken from Janis and Mann's (1977) decision-making model. Decisional balance tends to change as individuals move through the stages of change (Prochaska et al., 1994). Individuals at earlier stages (i.e., precontemplation or contemplation) perceive more disadvantages than advantages to changing smoking behavior, whereas individuals at later stages (i.e., action or maintenance) perceive more advantages than disadvantages. The crossover in decisional balance tends to occur in the contemplation or preparation stage. Bandura's (1986) concept of self-efficacy has also been incorporated in the stages of change model. Individuals with higher levels of self-efficacy tend to be in higher levels of change (Prochaska et al., 1985; DiClemente et al., 1991).

Relevance to Nursing Practice

Locally, the widespread use of tobacco by nurses in the community is cause for alarm. It is paramount that all nurses have adequate education to address tobacco use with their patients. Nursing interventions to decrease tobacco use are effective (Rice et al., 2017). Nursing is the largest of the health care professions with registered nurses being the largest portion of all health care workers (Bureau of Labor Statistics, 2015). Nurses interact with patients frequently and have high credibility with smokers (Brenan, 2018).

Although smoking by registered nurses has decreased to 24% since 2003, nurses continue to smoke more than any other health care professionals, which complicates this trusted relationship and poses a significant problem to tobacco treatment efforts (Sarna, Bialous, Nandy, Antonio, & Yang, 2014). The attitudes and motivation of nurses who smoke to provide tobacco treatment interventions are different from those of nonsmokers (Fiore et al., 2008; Obtel et al., 2014) and affect whether interventions are offered. However, personal tobacco use status should not be a deterrent to providing tobacco cessation support to patients. Regardless of smoking status, nurses can intervene with patients who use tobacco, but often they do not.

The National Alliance on Mental Illness (2016) has a public policy to support people with a mental health disorder having the right to be smoke free and their need for education and support to make healthy choices. This support extends to providing smoking treatment interventions to hospitalized patients (National Alliance on Mental Illness, 2016). The American Psychiatric Nurses Association (APNA), along with the American Nurses Association, has an extensive history of advocating for smoking

cessation. The APNA's (2008) Tobacco Dependence Branch position statement indicates "that failure to act on tobacco dependence equals harm" (para. 1). Further, the APNA recognizes that a need exists to motivate psychiatric nurses to increase their provider knowledge and skills, educate students and fellow practitioners, and implement change in employing institutions.

A 2008 survey of 1,288 APNA members revealed that only 30% of the respondents provide tobacco dependence treatment consistent with national best practice guidelines, and another 33% rated tobacco dependence as a low priority in their work (Tobacco Dependence Survey, 2008). Additionally, only a few (12.3%) rated their ability to help clients stop smoking very high (Tobacco Dependence Survey, 2008). The American Psychiatric Association (as cited in Silverman et al., 2015) recommends that the initial psychiatric evaluation of patients include assessment of the patient's tobacco use during the substance use assessment. There is moderate-quality evidence that advice and support from nurses increase people's success in quitting smoking, whether in hospitals or community settings (Rice et al., 2017). The current doctoral project was conducted to fill a gap in practice by expanding treatment interventions and providing access to successful treatment to all smokers, which is an identified strategy to end the tobacco epidemic (Healthy People, 2011).

There are strategies to decrease the gap in practice. The USPSTF (2017) recommended that clinicians ask all adults about tobacco use, advise them to stop using tobacco, provide behavioral interventions, and encourage the use of U.S. Food and Drug Administration approved pharmacotherapy for cessation to adults who use tobacco. The

Clinical Practice Guidelines for Treating Tobacco Use and Dependence (Fiore et al., 2008) provides information to clinicians regarding multiple effective treatment options to enhance smoking cessation interventions. The Tobacco Free Nurse (n.d.) Initiative is the first national initiative to establish a framework for engaging nurses in tobacco use and cessation and provides support for nurses who smoke. The Registered Nurses Association of Ontario (2017) provides practice guidelines based on the Clinical Practice Guidelines and USPSTF recommendations to promote decision-making for nurses working with clients who use tobacco. Additionally, The American Psychiatric Nurse's Association Tobacco Dependence Branch has assembled a task force to examine competencies nurses need to provide tobacco cessation interventions (APNA, 2018).

Studies across the world have addressed both practicing nurses' and nursing students' knowledge, attitudes, and practices related to tobacco control and have consistently recommended that more education is needed to ensure that nurses have the knowledge, skills, and confidence to provide evidence-based smoking cessation interventions (Carson et al., 2012; Obtel et al., 2014; Sarna, Bialous, Kralikova et al., 2014; Sheals et al., 2016; VanDevanter et al., 2017). Barriers to smoking cessation interventions by nurses include lack of training and skills, smoking among nursing professionals, lack of administrative support, and other factors such as the perception that patients do not want to quit smoking (Obtel et al., 2014; Sarna et al., 2014; VanDevanter et al., 2017).

The lack of formal and continuing nursing education about tobacco dependence is cited as a barrier to action (Price, Jordan, Jeffrey, Stanley, & Price, 2008). Additionally,

many nurses are not prepared to intervene with patients due to the lack of tobacco cessation content in most schools of nursing curricula in the United States. A study found that only 9% of baccalaureate programs and 16% of graduate programs taught the 5 A's (Ask –screen all patients for tobacco use; Advise – advise users to quit; Assess – willingness to quit; Assist – provide assistance with quitting; and Arrange – arrange follow up) intervention technique (Wewers, Kidd, Armbruster, & Sarna, 2004). Researchers cited inadequate nursing education as a factor hindering the delivery of quality smoking cessation interventions (VanDevanter et al., 2017). Efforts are needed to ensure that nurses incorporate evidence-based interventions into clinical practice to help smokers quit (Sarna et al., 2009).

Local Background and Context

The site for the doctoral project was at a community, not for profit, inpatient, involuntary psychiatric unit in the western United States. The facility is non-smoking. The population served are adults >18 years old, diagnosed with any mental illness (AMI), involuntarily committed, low-income, state insured, predominantly white race, mostly high school educated, with a majority being homeless on admission. The nursing staff is composed of mostly white females, aged 30 to 60, who are registered nurses possessing a bachelor's degree, median income, and are a mixed composition of smokers and non-smokers. Locally, tobacco use remains a leading cause of preventable death and disease (Washington State Department of Health, 2015). Smokers are identified during the admission process and are offered nicotine patches and gum as needed. It was feasible to accomplish this project in this setting due to the organization's verbal commitment to

accommodate such a program and ease of access to the nurses within the facility. The organization's mission and strategic vision are "to educate our community to change the perception of poverty and deliver innovative services that equip individuals and families to thrive. We envision an equitable community with engaged individuals, working together to improve the health and well-being of all community members. We want a safe place to live, to raise a family, and to find meaning and purpose in our daily lives" (MDC, 2018).

The doctoral project evaluated the impact of a staff education program, aimed at nurses, to increase knowledge, skills, and confidence to offer tobacco treatment interventions. The education project was based on the Psychiatry RX for Change curriculum (University of California San Francisco, 2013) and based on the tobacco treatment clinical guidelines (Fiore et al., 2008). Both pre- and post-test results and pre- and posttest survey results were collected and analyzed after the intervention to determine any associated improvement in nursing knowledge, skills, and confidence to offer tobacco treatment interventions. A knowledge questionnaire and the Skills and Confidence for Smoking Cessation tool were utilized. Unpaired sample *t*-tests were conducted to determine statistical significance.

Tobacco use remains a leading cause of preventable death and disease in the local community. The state administers an annual Behavioral Risk Factor Surveillance System (BRFSS) survey that measures changes in the health of the Washington State adult population. The BRFSS, supported by the Centers for Disease Control and Prevention (CDC), is the longest continuously running phone survey in the world (CDC, 2018). One

of the categories reported by the WA BRFSS 2014-2016 survey is individuals, age 18 and older, who reported having poor mental health less than 14 days and those who suffer from poor mental health greater than 14 days in the past month. The survey identified 13.4% of individuals who reported less than 14 days of poor mental health identified themselves as smokers, 56.7% attempted to quit in the past year, and 64.4% were advised to quit by a healthcare provider.

In comparison, individuals reporting more than 14 days of poor mental health composed 27.5% smokers, 58.5% attempted to quit in the past year, and 72.8% were advised to quit by a healthcare provider (Washington State Department of Health, 2017). The results indicate that individuals with a greater number of mental health days were more likely to be smokers, had more quit attempts in the past year, and were advised to quit by a healthcare provider more often. These results could be interpreted to signal that those with more chronic mental health problems require more intensive interventions other than being advised to quit. The state Medicaid program currently pays more than $780 million per year in smoking-related healthcare costs to include coverage of nicotine replacement therapy as a pharmacy benefit (Washington State Department of Health, 2015). The evidence justifies the need for nursing to participate in educational opportunities to provide tobacco treatment interventions to patients who smoke.

Definitions of locally used terms relevant to understanding the doctoral project include:

Any mental health disorder/mental health disorder: Defined as the presence of any mental, behavioral, or emotional disorder based on diagnostic criteria in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (2013).*

Educational module: Includes information about the topic, focus on student-centered learning activities, and culminate in a project for students to demonstrate understanding (Sweet, n.d.).

Nicotine Replacement Therapy (NRT): Nicotine gum or nicotine transdermal patch are effective therapy forms for maintaining smoking abstinence (Shiffman, Dresler, & Rohay, 2013, p.84).

Tobacco cessation training: Six-hour program offered to nurses using the Rx for Change modules, a shared curriculum developed in 1999 by the University of California San Francisco (2013).

Federal Guidelines

The US Public Health Service Clinical Guidelines (Fiore et al., 2008) recommend clinical intervention and system changes to promote the treatment of tobacco dependence. The current update was reviewed by an independent panel of 24 scientists and clinicians selected by the US Agency for Healthcare Research and Quality who reviewed over 8,700 English language peer-reviewed research articles and abstracts in 11 different databases and collaboration among eight governmental and nonprofit organizations. The evidence justifies that addressing smoking cessation in the mentally ill population is important to the nursing profession and would benefit from further investigation (Fiore et al., 2008).

In 2017, the United States Preventative Task Force (USPSTF) published updated guidelines recommending that clinicians ask all adults about tobacco use, advise them to stop using tobacco, and provide interventions. This recommendation is given an "A" rating that recommends the service with high certainty that the net benefit is substantial, and this service should be offered to patients. A systematic review of best practice evidence and models of benefits experienced over longer periods concluded that current recommendations are consistent with the 2009 recommendations. The task force reviewed 11 good-or fair-quality systematic reviews on behavioral interventions, including complementary or alternative therapies and smoking-cessation outcomes. Evidence on increasing smoking abstinence was strongest for physician and nurse advice, tailored self-help materials, and telephone counseling (USPSTF, 2017). The U.S. Public Health Service practice guidelines reflect the most current practice considerations in the treatment of tobacco use and dependence. The evidence-based findings from this comprehensive review resulted in the following key findings (Fiore et al., 2008).

- Dependence on tobacco is a chronic disease that requires repeated interventions and multiple quit attempts.
- Tobacco users should be identified, use status documented, and treatment offered to every tobacco user seen.
- Tobacco dependence treatment is effective across a broad range of patients.
- Brief tobacco dependence treatment is effective.
- Individual, group, and telephone counseling are effective.
- Clinicians should offer nicotine replacement therapy.

- A combination of counseling and medications are more effective together than alone.
- Telephone quit lines are effective.
- If a tobacco user is unwilling to make a quit attempt, motivational treatments are helpful in increasing future quit attempts.

The organization and local health department support the state's requirements that no person may smoke in a public place or any place of employment (Washington State Legislature, 2005).

Definition of Terms

Definitions of locally used terms relevant to understanding the doctoral project include:

Any mental health disorder/mental health disorder: Defined as the presence of any mental, behavioral, or emotional disorder based on diagnostic criteria in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (2013).*

Educational module: Includes information about the topic, focus on student-centered learning activities and culminate in a project for students to demonstrate understanding (Sweet, n.d.).

Knowledge questionnaire: A 20-question survey I developed based upon the Psychiatry RX for Change curriculum (University of California San Francisco, 2013)

Nicotine Replacement Therapy (NRT): Nicotine gum or nicotine transdermal patch are effective therapy forms for maintaining smoking abstinence (Shiffman, Dresler, & Rohay, 2013, p.84).

Skills and Confidence for Smoking Cessation Tool: A valid 15-question tool that includes six questions addressing skills and nine questions addressing confidence. The tool has a reliability coefficient of 0.81 (Matten et al., 2011).

Tobacco cessation training: Six-hour program offered to nurses using the Rx for Change modules, a shared curriculum developed in 1999 by the University of California San Francisco (2013).

Role of the DNP Student

The role of the DNP student was as a planner/facilitator for developing and implementing the doctoral staff education project. I provided the leadership to assist in improving health care (Ward-Smith et al., 2014). As a psychiatric nurse practitioner working on the inpatient psychiatric unit, I can identify smokers after reviewing either their pre-admit hospital records or during the admission intake assessment. It is difficult to obtain an initial smoking history as most of the patients are experiencing acute psychosis on admission and are experiencing high anxiety because of the no smoking policy. All tobacco users are provided nicotine patches and/or gum as requested. After stabilization, a window of opportunity exists to engage in motivational counseling with our clients. The project was undertaken to educate nurses on evidence-based tobacco cessation interventions to increase tobacco treatment offered and to decrease tobacco use amongst the population.

Role of the Project Team

A multidisciplinary team consisting of the medical director, nurse practitioner, registered nurse, mental health professional, mental health technicians, and administrative

personnel were identified in the planning of the education module. The goal was to increase participation and build a team designed to be successful. Senior executive leadership, the medical director, and the program director gave verbal approval and support for the educational module.

The project team was presented with information regularly. Before the final project results being disseminated, the project findings will be disseminated to the project team during a weekly meeting to obtain feedback. The final doctoral project results will be disseminated via a meeting. Team members were encouraged to provide feedback within two weeks to incorporate suggestions into the next educational module.

Summary

Section 2 involved a discussion addressing the lack of evidence-based training available to the nurses and its impact on their abilities to have the knowledge, skills, and confidence to offer treatment and the need to address tobacco use in the acute inpatient psychiatric setting. It includes an explanation of the background and context about the supporting literature, theoretical frameworks being used, the project's relevance to nursing practice, and the role of the DNP student. Section 3 explains the collection and analysis of evidence.

Section 3: Collection and Analysis of Evidence

In 2015, 68% of adult smokers reported they wanted to quit smoking (Babb et al., 2017. Fewer than 1 in 10 smokers quit successfully, and less than one-third of persons attempting to quit used evidence-based counseling and or medications (Babb et al., 2017). The purpose of this evidence-based educational project was to educate nurses on tobacco use, interventions, and interviewing techniques to increase their knowledge, skills, and confidence in providing tobacco cessation education to clients in the inpatient psychiatric setting.

People with a mental health disorder want to quit smoking, just as those without mental health disorder, and consume 40% of all cigarettes smoked by adults (CDC, 2018). Studies have shown that nurses fail to consistently provide smoking cessation interventions, and researchers have recommended smoking cessation education for nurses to ensure they have the knowledge, skills, and confidence to provide evidence-based smoking interventions (Sarna et al, 2009; Sarna et al., 2014). The lack of formal and continuing nursing education about tobacco dependence is a barrier to action (Price et al., 2008). In this section, I present the practice-focused question and discuss the sources of evidence. I also describe analysis and synthesis of the data.

Practice-Focused Question

The doctoral project addressed the lack of knowledge, skills, and confidence of nurses to provide tobacco treatment interventions in the acute inpatient psychiatric setting. The evaluation and treatment center used in the study provides mental health care to involuntarily committed individuals, and most of the patients admitted to the smoke-

free facility are smokers in need of tobacco treatment. The hospital smoking ban provides an opportunity to address unmet tobacco treatment needs in this population. Nurses at the evaluation and treatment center who smoke are reluctant to discuss tobacco treatment with patients. It is imperative that nurses receive tobacco treatment education to increase their knowledge to provide tobacco cessation interventions. Tobacco treatment education for nurses needs to address motivational factors that will encourage all nurses to engage in interventions to reduce smoking in the population of patients who suffer from a mental health disorder and nicotine addiction. The gap in practice that needs to be addressed is the lack of educational programs providing tobacco cessation content to nurses (Wewers et al., 2004). This knowledge gap contributes to nurses' inadequate experience to provide tobacco cessation interventions. Existing barriers to nurses providing interventions include smoking in the profession, lack of professional leadership, and lack of education and skills (Sarna et al., 2009). Nursing-delivered smoking cessation interventions are effective in assisting clients in quitting (Carson et al., 2013; Fiore et al., 2008; Rice et al., 2017; Sheffer et al., 2011;). There is a demand for improvements in formal education for nurses while in school. Nurses in the workforce must be afforded the opportunity to increase their knowledge, skills, and confidence to provide interventions to fill this knowledge gap.

The aim of the project was to address the practice gap through the implementation of a staff education program guided by the Walden University (2017) *Manual for Staff Education Project*. Based on Walden's guidelines, consent for anonymous questionnaires was provided to each participant. The study site organization's CEO provided the site

approval documentation for staff education doctoral project. The education program was based on the RX for Change using the Psychiatry curriculum (University of California San Francisco, 2013). The curriculum is based on the clinical practice guidelines published by the U.S. Public Health Service (as cited in Fiore et al., 2008).

The practice-focused question was the following: In the inpatient psychiatric setting, would a staff education program for psychiatric nurses increase nurses' confidence, skills, and knowledge to provide patient education to patients with a mental illness using the Psychiatry RX for Change curriculum? I completed the project to increase the knowledge, skills, and confidence of nurses working in the inpatient psychiatric setting to offer tobacco treatment interventions. The outcomes for this education intervention were (a) nurses demonstrated a statistically significant increase in knowledge on tobacco interventions, (b) nurses demonstrated a statistically significant increase in counseling skills and confidence to provide tobacco interventions, and (c) nurses demonstrated motivation to participate in educational training.

The purpose of the project was to implement a tobacco cessation educational module in the acute psychiatric inpatient setting. The evidence supports the problem of smoking in the mentally ill population and the lack of education of nurses to provide smoking cessation interventions. The local practice problem and practice-focused question were aligned to address gaps in current practice in tobacco treatment. This doctoral project has the potential to address the gap in practice by providing education to nurses to increase motivation and confidence to provide tobacco treatment interventions.

Operational definitions of key aspects of the project were as follows:

Adult with a serious mental health disorder: Persons age 18 and older who at any time during the past year had a diagnosable mental, behavior, or emotional disorder that caused serious functional impairment that substantially interfered with or limited one or more major life activities (SAMHSA, 2017).

Educational module: A program of instruction that includes information about the topic, focuses on student-centered learning activities and culminates in a project for students to demonstrate understanding (Sweet, n.d.).

Self-determination theory: A theory of human motivation concerned with the motivation behind choices people make without external influence and interference. The focus is on the degree to which an individual's behavior is self-motivated and self-determined (Ryan & Deci, 2000, 2017).

Smoking cessation training: A 3-hour program offered to nurses using the Rx for Change modules, which is a shared curriculum developed in 1999 by the University of California San Francisco (University of California San Francisco, 2013).

Transtheoretical model of change: A model that explores individual behavior change. For change to occur, an individual goes through five stages: precontemplation, contemplation, preparation, action, and maintenance. These stages are found to be nonlinear and may overlap. Smokers who relapse often revert to earlier stages of change (Hodges & Videto, 2011; Prochaska & DiClemente, 1983; White & Dudley-Brown, 2012).

Sources of Evidence

I evaluated the impact of a staff education intervention on the nurses' knowledge and perceived skills and confidence related to a tobacco cessation intervention using a pretest-posttest design. The education content was developed in alignment with the Public Health Services clinical practice guidelines *Treating Tobacco Use and Dependence: 2008 Update* and was accessible via handout or online PowerPoint presentation. The guidelines support the use of brief interventions, counseling, and FDA-approved nicotine replacement to decrease tobacco use in adults (USPSTF, 2017). The project also addressed the gap in practice between knowledge and tobacco interventions available to be offered by nurses and addressed the need to increase nurses' motivation to engage in an educational activity.

The one group pretest-posttest knowledge-based questionnaire measured smoking cessation knowledge. The content focused on people with a mental health disorder and encompassed epidemiology, psychiatric medication interactions, and counseling strategies. The Skills and Confidence for Smoking Tool (Matten et el., 2011) was used to measure perceived skills and self-confidence to provide tobacco treatment interventions. Nurses completed both the knowledge-based questionnaire and the Skills and Confidence for Smoking Tool before and after completion of the education intervention.

Participants

Participants for the project included nine nurses working on the inpatient psychiatric unit. To increase the depth of information obtained, both licensed practical nurses and registered nurses were recruited to address the practice-focused question. The

target sample of nurses was chosen due to the ease of access and their ongoing work with patients having a mental health disorder who also use tobacco.

Procedures

The Psychiatry Rx for Change Program (University of California San Francisco, 2013) was used to implement the education modules. The program developed by the University of California San Francisco is used to teach professional students and practicing clinicians evidence-based knowledge and skills for assisting patients with quitting. The program is based on the U.S. Public Health Service Guidelines for Treatment of Tobacco Use and Dependence and has been reviewed by content experts in the field of psychiatry. The Rx for Change program has been used as the basis for training over 100,000 health care professionals in the past decade. There are six modules in the 4-hour psychiatry education program: (a) epidemiology and impact of tobacco use and mental health disorders, (b) psychiatric medication interactions with smoking, (c) factors associated with the high-rates of smoking in psychiatric populations, (d) assisting clients with quitting, (e) pharmacotherapy for cessation, and (f) treatment of special populations (University of California San Francisco, 2013).

The knowledge-based smoking cessation questionnaire and the Skills and Confidence for Smoking Cessation Tool were used for pretest-post-test data collection. Six questions addressed skills, and nine questions addressed confidence in providing tobacco cessation information. Permission to use the Skills and Confidence for Smoking Cessation Tool was obtained from the Oncology Nursing Society (Matten, 2011, see

Appendix C). The knowledge-based questionnaire was based on the educational content and was reviewed for validity by the organization's medical director.

Protections

As outlined by Walden University's (2017) *Manual for Staff Education Project* for doctoral scholarly projects, an ethics preapproval exists for staff education projects. I obtained approval from the clinical site before project development and implementation. I also obtained approval from the institutional review board (IRB # 02-12-19-0672100) based on the steps outlined in the Walden manual. All participants were allowed to decide to participate in the education session without coercion and were provided with Walden's Consent Form for Anonymous Questionnaires (Terry, 2015).

Analysis and Synthesis

Pre-test and post-test paper-based and online questionnaires related to the learning objectives of each module were completed anonymously before and at the end of the staff education intervention. Collected data were analyzed using unpaired sample *t* tests. Statistical significance was confirmed using GraphPad (2019) software. Separate unpaired *t* tests were conducted on the knowledge test on tobacco cessation, the six questions addressing skills, and the nine questions addressing confidence.

Missing information and outliers were removed to avoid skewing the results. An attempt was made to obtain missing information. It was determined that the impact of including missing information would compromise the statistical power of the study and the reliability of the results (see Grove, Burns, & Gray, 2013). A decision was made to

use available data after removing all missing values. Outliers were removed by excluding them before analysis.

Summary

Section 3 outlined the steps taken to address the lack of tobacco cessation interventions by nurses in the acute inpatient psychiatric setting of a nonprofit evaluation and treatment center in the Western United States. A staff education intervention was used based on the outline of Walden University's *Manual for Staff Education Project* and the U.S. Public Health Services' (2008) clinical practice guidelines for tobacco cessation for adults. IRB approval for the doctoral project was obtained from both Walden University and the organization. The intervention comprised handouts and online presentations. As identified in Washington State's nursing commission standards for continuing education, a 4-hour continuing education credit was approved for the training. Nurses received the Consent Form for Anonymous Questionnaire prior to beginning the pretest tests and surveys. Pencil-based pretest and posttest results were entered into the same online database used by participants electing to use the online version of the tests/surveys. Unpaired *t*-test analyses were conducted using GraphPad (2019) software to determine statistical significance. In Section 4 I discussed the findings and recommendations from the doctoral project.

Section 4: Findings and Recommendations

In 2015, 68% of adult smokers reported they wanted to quit smoking, fewer than 1 in 10 smokers completely quit, and fewer than one-third of persons attempting to quit used evidence-based counseling and or medications (Babb et al., 2017). It is imperative that nurses engage with patients about tobacco treatment. The project addressed this gap in practice in tobacco treatment offered to those who also have a mental illness by educating nurses on tobacco use, interventions, and interviewing techniques to increase their knowledge, skills, and confidence in providing tobacco treatment education to clients in the inpatient psychiatric setting. The practice-focused question addressed was the following: In the inpatient psychiatric setting, would a staff education program for nurses increase nurses' confidence, skills, and knowledge to provide patient education to patients with a mental illness using the Psychiatry RX for Change curriculum? The current standard of practice on the unit is to identify tobacco users and offer nicotine patches or gum as needed.

I developed a staff education project to improve the knowledge and skills of nurses in providing tobacco treatment interventions with a goal to increase their motivation and confidence to offer smoking interventions to their patients. The evidence-based project supported the identified practice need to provide tobacco education to nurses to decrease tobacco use in the mentally ill population. Nine nurses working on an acute inpatient psychiatric unit were given unpaired pretests and posttests, which consisted of a 20-question smoking knowledge questionnaire and a 15-question Skills and Confidence for Smoking Tool. The 15 questions on the skills and confidence for

smoking cessation tool included six questions addressing skills and nine questions related to confidence. Data were compiled using Survey Monkey. Unpaired t tests were conducted on pre- and posttest raw scores, means, and standard deviations to determine statistical significance.

Participants were provided with the Consent Form for Anonymous Questionnaires from Walden University prior to completing the pretest surveys. The consent outlined questionnaire procedures, voluntary nature of the project, risks and benefits of being in the project, privacy, and contact information to privately discuss their rights about the project. The participants were given the option of completing the tests/surveys online or completing a paper version. The education intervention consisted of a self-paced review of handouts or PowerPoint presentations consisting of 4 hours of materials. Participants were requested to complete the posttest and formative questionnaire after the presentation and a summative questionnaire at the end of the program. Participants were offered a certificate for 4 hours of continuing education credit.

Findings and Implications

Findings

The knowledge test consisted of 20 multiple-choice questions with 20 being the highest score. GraphPad software was used to compute unpaired sample *t* tests in which the pretest and posttest raw scores, mean scores, and standard deviation were computed (see Table 1). The level of significance (p) was set at 0.05. The mean pretest scores were 10.3 (SD = 2.00). The mean for the posttest score was 14.7 (SD = 2.2). A statistically significant increase ($p < 0.05$) was demonstrated.

Table 1

Unpaired Statistics for Pretest and Posttest Scores for Knowledge

Test	*M*	*SD*	*SEM*
Pre-test	10.3	2.200	0.667
Post-test	14.7	2.20	0.733

Pretest and posttest survey scores for both the smoking cessation confidence and skills tools were analyzed using unpaired *t* tests with the level of significance (*p*) set at 0.05. The confidence tool's nine questions rated confidence in providing smoking cessation. The five Likert-scale responses on the confidence tool were given numerical codes as follows: 0 = not confident, 1 = not very confident, 2 = moderately confident, 3 = very confident, and 4 = extremely confident. The skills counseling tool's six questions rated perceived counseling skills. The five Likert-scale responses on the skills section were given numerical codes as follows: 0 = none, 1 = poor, 2 = good, 3 = very good, and 4 = excellent. The highest obtainable score on the confidence section was 36. The highest obtainable score on the skills section was 24. Internal consistency for the nine questions measuring skills was good with a Cronbach's alpha of 0.81. The nine questions measuring confidence showed a Cronbach's alpha of 0.93 (see Matten et al., 2011).

As shown in Table 2, the mean on the presurvey scores for the nine confidence questions was 16 (*SD* = 1.9), and the mean on the postscores was 23 (*SD* = 1.6). The mean obtained on presurvey scores for the six skills questions was 11.0 (*SD* = 2.20), and the mean obtained on the post-survey was 18.0 (*SD* = 1.50). A statistically significant increase ($p < 0.05$) was demonstrated in both nurses' perceptions of their skills and

confidence for providing tobacco cessation interventions after completion of the education intervention.

Table 2

Unpaired Sample Statistics for Pretest and Posttest Scores for Counseling Skills and Confidence

Test	*M*	*SD*	*SEM*
Skills pre-survey	11.0	2.20	0.733
Skills post-survey	18.0	1.5	0.500
Confidence pre-survey	16.0	1.9	0.633
Confidence post-survey	23.0	1.6	0.533

Unanticipated Implications or Findings

There were multiple staff changes during the project that led to confusion on roles. A project team member was identified to ensure assigned random numbers were placed on the pre- and posttest surveys prior to being placed in the collection box. However, this was not accomplished, which precluded using paired *t* tests to make a comparison between the same subject. Also, after the nurses elected to complete the modules on their own, online tests/surveys were also made available to provide an additional option to the nurses to complete the pretest/posttest surveys. The nurses used multiple computers, which precluded specific paired identification of the nurses between pre- and posttest surveys.

Implications

By educating nurses working in the inpatient psychiatric setting on tobacco treatment interventions, nurses can influence the health outcomes of their patients. Nurses

educated on tobacco treatment interventions can help motivate patients to remain smoke-free after discharge. Nurses may also take advantage of opportunities to fight the tobacco epidemic in the inpatient psychiatric setting by extending their knowledge to other staff members. Efforts should be made to partner with leadership to incorporate tobacco treatment education into annual training for all employees, which aligns with the organization's mission to promote healthier communities. The tobacco treatment education program would benefit other local evaluation and treatment centers as well.

Social Change

A goal of this project was to provide tobacco treatment education to nurses to improve the quality of interactions between nurses and patients regarding tobacco treatment and improve the quality of life and health outcomes for the population. By reducing nicotine use and dependence in this population, communities will benefit from the ongoing dialogue and commitment by nurses to end the tobacco epidemic. Informed nurses can share their vision with colleagues, organizations, and schools of nursing to provide training for students and continuing education for licensed nurses.

Recommendations

To address the gap in practice as informed by the findings, I recommend that a formal tobacco education program be adopted and a policy implemented to require tobacco treatment education to all nurses in the organization. This education should be provided to all new hires and be an annual requirement for nurses. The RX for Change curriculum (University of California San Francisco, 2013) has multiple learning content modules that would benefit patients, mental health technicians, and mental health

professionals. The goals, objectives, training material, and supplemental handouts are provided as a part of each RX for Change curriculum. The implementation and evaluation of these modules would require that each user register on the online site, and the organization and/or individuals must agree not to charge participants for the training. RX for Change has a train-the-trainer program that would be helpful to individuals desiring to facilitate tobacco education training.

Contribution of the Doctoral Project Team

The key project team positions that were consistent were the medical director, registered nurse, and mental health technician. The medical director was instrumental in ensuring the integrity of the completed tests and that questionnaires remained anonymous and confidential. The registered nurse was instrumental in reminding the nurses about deadlines, and the mental health technician manually inputted test scores from questionnaires completed by hand, which the registered nurse double-checked. My role was to oversee the project, keep leadership informed, provide supplemental education materials, and act as a point of contact for questions or concerns the nurses had while completing the modules. The plan is to discuss the implementation of the education modules at other evaluation and treatment centers in the county.

Strengths and Limitations of the Project

Strengths

This project provided an opportunity to explore ways to motivate nurses to increase their knowledge. The learning environment supported nursing autonomy by allowing the nurses to choose the desired method to complete the modules. The nurses

unanimously opted to complete the modules in an individualized, self-paced environment. The online material and printed handouts were available 24 hours a day during the implementation period.

Although the sample size was small (9), it was representative of the nursing population (14). Interest in the learning modules was such that it was felt that the nurses sought to master the material. The project provided tobacco treatment knowledge, and the nurses acknowledged increased skills and confidence to assist patients with smoking interventions. The significant difference in pretest and posttest scores measuring knowledge, skills, and confidence supported these assertions.

Limitations

The same questionnaire was used as both a pretest and posttest, and there was limited control over the instrument availability, which may have decreased the generalizability of the findings. This circumstance may have threatened the validity of the project because the change in posttest scores might have been due to either the nurses using their corrected pretests answers for the posttest, group completion of the tests, or memorization of the questions. These factors, coupled with the education intervention, may have caused the scores to increase. The poor formative and summative evaluation responses led to no assessment of whether the nurses felt the course objectives had been met.

Reminders in the form of verbal/visual cues, texts, and e-mails were provided, which may have improved the response rate; however, this may have negated the possibility of intrinsic motivation. More emphasis was placed on the pretest/posttest

completion of the training, which may have accounted for the poor return of formative and summative evaluations. The nature of the project did not allow for patient participation. This hindered important feedback on the program from the patients. Although the nurses were paid for the training, no special accommodations were made to allow the nurses time to complete the modules during scheduled shifts, such as providing relief staff.

Recommendations for Future Research

There are several recommendations for future research. Research on the knowledge, skills, and confidence for helping clients with tobacco cessation should be offered to all nurses. Nursing competencies should be developed to identify basic knowledge that nurses should possess regarding tobacco treatment. Nursing curricula should include more hours to train nurses on tobacco interventions with emphasis on application of the skills needed to perform a tobacco history, discuss nicotine replacement therapy, provide motivational interviewing, and refer clients to providers for prescriptive needs and to community resources for tobacco users.

Providing nurses with a learning environment that allows for autonomy is complex. Organizations must provide adequate opportunities for nurses working varying shifts to engage in continuing education. Utilizing a classroom/workshop environment was assessed. I recommend further studies with larger samples and a stronger design to determine the impact of the educational treatment on the nurses' knowledge, skills, and confidence. More emphasis must be placed on obtaining the course evaluations to better

understand the nurses' perception of the course offerings and how this will affect future practice. Budgeting and resources should be made available to support the training.

Summary

In Section 4 I discussed the findings and implications, recommendations, contributions of the project team, and strengths and limitations of the project. Findings showed that the mean pretest and posttest scores for both the knowledge test and the confidence and skills survey were statistically increased after the tobacco treatment education intervention to nurses, which aligns with the literature. Providing tobacco treatment education to nurses provided an opportunity to support nurses in acquiring new knowledge to influence the health outcomes of their patients. I recommend that a formal tobacco education program be adopted and a policy implemented to require tobacco treatment education for all nurses in the organization. The project team was invaluable to the success of the project. An identified strength of the project was the support provided to the nurses to encourage autonomy. Limitations of the project included the need for stronger project design. In Section 5 I discuss the dissemination plan and provide an analysis of self.

Section 5: Dissemination Plan

The project findings will be disseminated to the organization. The findings will be presented to the staff via e-mail and at a staff meeting. A one-on-one meeting will be held with the CEO to discuss the results with a plan to distribute the results at the next monthly organization meeting. I will also seek permission to have the results printed in the organization's newsletter. A poster presentation was made at the annual Washington Chapter of the American Psychiatric Nurses Association's conference on April 27, 2019.

I plan to elicit publication in the *Journal of the American Psychiatric Nurses Association* after my approval for publication. The target audience of the publication (psychiatric nurses) would be aligned with the education program offered to the staff nurses. The journal regularly solicits original articles that inform psychiatric nurses about clinical issues and has a large audience that would benefit from this education. A long-term summative evaluation will be done 3 months after the initial presentation to determine the impact on practice beyond the project requirements.

Analysis of Self

Practitioner

I have experienced sustained professional growth as a practitioner because of the project. The problems of tobacco use and its effects have been foremost when educating my patients. Exploring the literature provided evidence of the barriers to treatment for my patients. It became evident that nurses are not providing tobacco interventions as a result of a lack of educational opportunities to learn more about tobacco use. In previous clinical work, evidence-based practice was viewed as being difficult to implement in the

workplace. The doctoral program has clarified my previous misconceptions and has allowed me to develop new practice patterns in a logical and systematic manner. The growth experienced during this program has allowed me to step out of my comfort zone, to learn and understand how to successfully integrate evidence into practice, and to motivate nurses to make positive changes for better patient outcomes.

Scholar

The project provided an opportunity to develop skills, to apply relevant findings to develop practice guidelines, and to improve practice at the practice site (AACN, 2006). As a scholar, I have developed the skills to identify a problem, research the literature, synthesize the findings, and apply those findings to an evidence-based project. As a scholar. I presented a poster at the state chapter's annual conference of the Association of Psychiatric Nurses Association in April. I also plan to do the following:

- learn how to make a YouTube presentation and a video of my project presenting both the proposal and the finished scholarly project,
- increase availability with a local university as clinical faculty for undergraduate and graduate students in the psychiatric mental health program,
- continue to work with the Tobacco Addiction Council to generate competencies for nurses on tobacco education, and
- continue membership in the community's advocacy council for mental health issues.

Project Developer

The experience of developing and implementing the evidence-based project has enhanced my leadership abilities. Leadership was essential to guide the project to completion. Collaborative working relationships with all stakeholders were essential to ensuring that all points of view were considered to meet the goals and objectives of the program. Future project development will involve the same steps taken to undergo the project. As a result of this project, the CEO has asked if I would lead a new initiative to implement a no-smoking campus. An opportunity also exists within the county to bid for a grant to promote tobacco cessation in youth. The analytical skills developed during my project are invaluable and will be used in future projects as well.

Summary

The tobacco education intervention demonstrated that tobacco education significantly increased the knowledge, skills, and confidence of nurses working in the acute setting to provide tobacco interventions to patients suffering from a mental illness. Nurses who perceive themselves as confident and competent in tobacco treatment knowledge can be catalysts to educate and motivate patients to quit smoking. The benefits of undertaking this project are already realized within by the organization wanting to identify itself as a nonsmoking campus. Mandatory inpatient smoking bans force patients to quit tobacco use and should be used as an opportunity for nurses to implement tobacco treatment interventions. Nurses benefit from continuing education that addresses the risks of tobacco use, FDA approved nicotine replacement therapies, and motivational skills to engage patients in a dialogue about tobacco use and how to

engage in healthier lifestyles. Without nursing involvement, the goal of Healthy People 2020 to reduce tobacco use will not be achieved.

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Appendix A: Permission to Use the Skills and Confidence for Smoking Cessation Tool

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Job Title: Student, Walden University

Date: 1/2/19

Appendix B: Recruitment

February 18, 2019

I am pleased to announce that I am ready to begin my doctor of nursing project on tobacco education for nurses working in the inpatient psychiatric setting.

Nurses are the largest group of health professionals and have great potential to address the issues of tobacco use. Studies have shown that in general nurses are not providing treatment or education to clients about tobacco. The lack of engagement is partly due to nurse's not receiving adequate education in their school's of nursing and no exposure to continuing education after graduation. Another factor identified as why nurse's are not involved, is a nurse's smoking status. Regardless of a nurse's smoking status, tobacco interventions should be provided to our clients. We are in an enviable position to provide treatment and education to our clients and should take advantage of this opportunity.

.

The purpose of my project is to support nurses in gaining the skills to feel they have the knowledge, confidence, and competence to provide tobacco treatment to patients. I also want to support nurses to be autonomous in their quest to improve the health outcomes of individuals with a mental health disorder.

Prior to the training and after the training, each participant will need to complete de-identified pre-test/post-test knowledge survey and a Skills and Confidence for Tobacco Cessation Training survey which is aimed to assess changes in knowledge, confidence, and skills. The project consists of six education modules which are a part of the RX for change program developed by the University of California, San Francisco. Each participant will need to establish a log in ID for the RX for change curriculum. We will be using the psychiatry RX for change modules which has 6 core modules. I anticipate 1 hour weekly for 4 weeks (240 minutes) will be needed to complete the modules. The self-paced learning modules will be accessed via the web. However, for those nurses who wish more individualized training, weekly training sessions or 1:1 sessions will be arranged. I am in the process of applying for continuing education credits for the education program.

It is important to me that all participants feel engaged, supported, and motivated to learn how to help our clients to decrease tobacco use.

Planned schedule:

Week of February 18th – Recruitment

Week of February 25th - Complete the demographic data sheet, pre-tests on knowledge survey and the Skills and Confidence for Smoking Cessation survey, sign consent for anonymous questionnaires, and establish a log-in for RX for Change http://rxforchange.ucsf.edu/

Week of March 4th thru March 31st – Complete the education modules

Week of April 1st – Complete the post-test knowledge survey and the Skills and Confidence for Smoking Cessation survey

I am excited to share my journey with you and look forward to implementing the project. If you have questions, please email me at mspielmann@mdc-hope.org or marchell.spielmann@waldenu.edu or call 253 961 7754.

Thank You,

M. Rene Spielmann, ARNP
Doctoral Student
Walden University

Appendix C: Smoking Knowledge Tool

1. Estimates of the impact of smoking-attributable estimated costs include:

    a. $150 billion in health care expense and loss of work productivity

    b. $288 billion in health care expense and loss of work productivity

    c. More than one million deaths annually and $200 billion in health care expense and loss of work productivity

    d. 700,000 deaths annually and $150 billion in health care expense and loss of work productivity

2. Estimates of the number of cigarettes sold in the US include:

    a. 31% to 46% are smoked by adults with mental health conditions

    b. 60% are smoked by adults with mental health conditions

    c. 75% are smoked by adults with mental health conditions

    d. Less than 25% are smoked by adults with mental health conditions

3. Persons with mental health conditions who smoke:

    a. Die at the same rate as those who smoke without a mental health condition

    b. Die on average, 1-2 years prematurely

    c. Die on average, 5-10 years prematurely

    c. Die on average, 15-25 years prematurely

4. Health risks of smoking include:

    a. An increased risk of various forms of dementia, in particular Alzheimer's disease

    b. No increased risk of various forms of dementia

c. Gray matter density hyper proliferation

d. Gray matter density hypo proliferation

5. Tobacco and cannabis smoking cessation can:

a. Lead to intoxication with any antipsychotic

b. Be helpful when taking antipsychotic medications

c. Lead to intoxication with Clozapine or Olanzapine

d. Lead to intoxication with Sertraline or Fluoxetine

6. What statement is NOT TRUE regarding second hand smoke (SHS)?

a. SHS has been linked to sudden infant death syndrome (SIDS)

b. Exposure to second hand smoke is less risky than actively smoking

c. Exposure to SHS may cause immediate respiratory and cardiovascular effects

d. Separating smokers from non-smokers has been effective in eliminating exposure to SHS

7. The neurobiological basis for nicotine addiction is:

a. Nicotine activates the glutamate reward pathway in the brain, which reinforces continued tobacco use

b. Nicotine activates the serotonin reward pathway in the brain, which reinforces continued tobacco use

c. Nicotine activates the dopamine reward pathway in the brain, which reinforces continued tobacco use.

d. There is no neurobiological basis for nicotine addiction

8. Perceptions of psychiatric providers include:

   a. smokers with mental health disorder do not want to quit and quitting smoking is too stressful for these patients

   b. smokers with mental health disorder don't want to quit and quitting smoking is not stressful for these patients

   c. smokers with mental health disorder want to quit and quitting smoking is too stressful for these patients

   d. smokers with mental health disorder want to quit and quitting smoking is not stressful for these patients

9. What specialty is least likely to address tobacco use with their patients?

   a. Family Medicine

   b. Internal Medicine

   c. Psychiatry

   d. OB/GYN

10. Withdrawal effects of quitting peak 24-48 hours after quitting and subside within 2-4 weeks, which symptoms are NOT associated with withdrawal effects:

   a. Irritability/frustration/anger

   b. Euphoria or giddiness

   c. Insomnia and fatigue

   d. Anxiety or nervousness

11. Smoking in adolescence is associated with:

   a. psychiatric disorders in adulthood

b. psychiatric disorders in childhood

c. no correlation has been found between adolescent smoking and psychiatric disorders in adulthood

d. a correlation has been found between adolescent smoking and higher grades

12. It is important to assess a patient's readiness to quit. The difference between pre-contemplation and contemplation is:

a. The number of quit attempts

b. The amount of time since the last cigarette smoked

c. The difference between not thinking about quitting and considering to quit

d. Whether a quit date has been set

13. The 5A's recommended through the US Public Health Service Practice Guidelines include:

a. Ask, Attempt, Advise, Allow, Arrange

b. Ask, Assess, Authorize, Allow, Adjust

c. Ask, Advise, Assess, Assist, Arrange

d. Advise, Ask, Advice, Arrange, Assist

14. Strategies for patients not ready to quit include all EXCEPT:

a. Demonstrate empathy, foster communication

b. Ask non-invasive and open-ended questions; identify reasons for tobacco use

c. Advise to quit and provide information

d. Tell the patient ow bad tobacco is in a judgmental manner

15. Within 2 weeks to 3 months after quitting, the following occurs:

a. Circulation improves, walking becomes easier, and lung function increases up to 30%

b. Circulation improves, walking becomes more difficult, and lung function increases by 50%

c. Circulation is not affected, walking becomes easier, and lung function increases by 30%

d. Circulation is not affected, walking becomes more difficult, and lung function increased by 30%

16. An alternative to the 5A's approach can be brief counseling, which can be effective and consists of:

a. Ask about tobacco use, advise patient about the dangers of tobacco, and refer for follow-up counseling

b. Ask about tobacco use, accept that the patient does not want to quit and avoid further conversations about tobacco, refer patients if they are willing to establish a quit date

c. Ask about tobacco use, advise tobacco users to quit, refer to resources such as follow-up counseling

d. Ask about tobacco use, enter information in the record, provide nicotine replacement therapy only to those patients who appear to be having withdrawal symptoms

17. First line nicotine replacement therapy includes:

a. Clonidine

b. Nicotine gum, nicotine patch, and nicotine nasal spray

c. Nortriptyline

d. Albuterol Inhaler

18. The rationale for using nicotine replacement products includes the fact that using NRTs approximately doubles quit rates. Which of the following is INCORRECT:

a. Using NRTs reduces physical withdrawal from nicotine

b Using NRTs will ensure that a craving for a cigarette will not occur in the future

c. Using NRTs eliminates the immediate, reinforcing effects of nicotine that is rapidly absorbed via tobacco smoke

d. Allows patient to focus on behavioral and psychological aspects of tobacco cessation

19. Among depressed patients who quit smoking the following is true:

a. No increase in suicidality

b. No increase in psych hospitalization

c. No difference in use of marijuana, stimulants or opiates

d. All of the above are correct

20. In the psychiatric setting, tobacco treatment:

a. Is shown to be generally effective with current available interventions

c. Is always effective with current available interventions and homeopathic therapies

d. Is shown to increase psychiatric symptoms

e. Decreases abstinence rates with integration into mental health treatment

Appendix D: Skills and Confidence for Smoking Cessation Tool

Smoking Cessation Counseling Skills

Instructions: Please rate your smoking cessation counseling skills and confidence by circling one of the numbers for each. Smoking cessation counseling skills values range from 0 to 4 with 0 as no skills, 1 as poor, 2 as good, 3 as very good, and 4 as excellent.

Smoking cessation confidence skills values range from 0 to 4 with 0 as no skills, 1 as poor, 2 as good, 3 as very good, and 4 as excellent.

1. Asking patients whether they use tobacco

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

2. Advising patients to quit

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

3. Assessing patients' readiness to quit

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

4. Providing tobacco cessation assistance

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

5. Providing patient counseling

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

6. Knowledgeable about available resources for patients

None		Poor		Good		Very Good	Excellent
0	1	2	3	4			

Smoking Cessation Confidence

Instructions: Please rate your smoking cessation confidence by circling one of the numbers for each. Smoking cessation confidence values range from 0 to 4 with 0 as not confident, 1 as not very confident, 2 as moderately confident, 3 as very confident and 4 as extremely confident.

1. Knowledge of appropriate questions to ask

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

2. Skills to counsel for addiction

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

3. Ability to provide motivations for those trying to quit

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

4. Knowledge of pharmaceutical products

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

5. Ability to know when to refer patients to physicians

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

6. Ability to sensitively suggest tobacco cessation

Not Confident	Not very Confident	Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4

7. Ability to provide adequate counseling

Not Confident		Not very Confident		Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4		

8. Ability to help recent quitters learn coping

Not Confident		Not very Confident		Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4		

9. Ability to counsel those not interested in quitting

Not Confident		Not very Confident		Moderately Confident	Very Confident	Extremely Confident
0	1	2	3	4		

Matten et al., 2001, p. 70