12-1-2021

Columbia-Suicide Severity Rating Scale (C-SSRS) Suicide Algorithm's Educational Lesson Plan for Registered Nurses

Ernesto L. Sarduy
esard013@fiu.edu

Columbia-Suicide Severity Rating Scale (C-SSRS) Suicide Algorithm's Educational Lesson Plan for Registered Nurses

A Scholarly Project Presented to the Faculty of the

Nicole Wertheim College of Nursing and Health Sciences

Florida International University

In partial fulfillment of the requirements

For the Degree of Doctor of Nursing Practice

By

ERNESTO L. SARDUY, MSN, PMHNP-BC

Supervised By

FRANCISCO BRENES Ph.D., APRN-BC, FNP, PMHNP

Approval Acknowledged: _____, DNP Program Director
Date: _____

Abstract

Background: Suicide, regardless of whether it is completed, presents itself as a highly intricate and complex public health and global issue. Pre-suicidal behaviors are displayed in various ways depending on gender, age, geographical location, and socio-political status. Certain related principles from various disciplines, including psychology, sociology, and biology, can be incorporated into creating an algorithm to guide clinical nursing practice in identifying suicidal behavior(s) that may lead to suicide attempts.

Purpose/Methods: This Quality Improvement (QI) project utilized a Level I, randomized controlled trial, non-equivalent group pretest-posttest quasi-experimental design to assess the effectiveness of the suicide algorithm's educational lesson plan.

Results: The assessment of the effectiveness of a Psychiatric Mental Health Nurse Practitioner, Board Certified (PMHNP-BC) led initiative, which was to design and create an educational lesson plan that was tailored specifically to serve registered nurse's (RNs) yielded that the registered nurses (n=34) were the best category followed by unit secretaries (n=4) and finally the nursing assistants (n=8) in comprehending the content of the educational lesson plan.

Conclusion: This QI project was led by a psychiatric mental health nurse practitioner, board certified (PMHNP-BC) for registered nurses who care and serve this vulnerable veteran population. The author recommends that future QI projects are to be created by advanced practice nurse(s) for advanced practice nurses.

Keywords: suicide, veteran, mental health, advance practice nursing, health

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

Suicide, regardless of whether it is completed, presents itself as a highly intricate and complex public health and global issue (Turecki & Meaney, 2016). Pre-suicidal behaviors are displayed in various manners depending on gender, age, geographical location, and socio-political status. These particular and varied suicidal behaviors are correlated with risk factors, recommending an etiological heterogeneity (Turecki & Brent, 2016).

The literature has failed to provide structured guidelines of an algorithm for nurses that may be implemented to manage for individuals that test positive or at risk for suicide in clinical practice. Certain related principles from various disciplines, including psychology, sociology, and biology, can be incorporated in creating an algorithm to guide the nursing practice in identifying suicidal behaviors that may lead to suicide attempts in this population (Turecki & Meaney, 2016).

Suicide has a detrimental effect on public health and world health, ending the lives of over one million individuals per year (World Health Organization, 2018). The WHO (2015) has established that suicide prevention should be a priority in minimizing mortality rate. Suicide prevention is a theme that needs to be discussed openly, acknowledged, and recognized worldwide. Aslan et al. (2020) reported that approximately 45% of successful individuals in their suicide attempts consulted with their primary care physicians one month before their deaths; however, detailed documentation of physician inquiry into the matter, or patient admittance of the problem, is a rarity. “The severity of suicidal behaviors varies based on family studies, showing the progression from less to more severe forms of suicidal ideation and behaviors, and from

family and biological studies showing the overlap between attempted and completed suicide" (Brent et al., 1996, p. 1148). As a result, creating and implementing an algorithm of standardized nursing care based on evidence for individuals who test positive for suicide risk may reduce suicidality during patient care.

Epidemiology Worldwide

Suicide is a phenomenon that affects every nation. As a result, the World Health Organization (WHO) has recognized and tracked suicide rate since 1950 (World Health Organization, 2018). The WHO (2018) has reported that males have not only attempted suicide but completed acts of suicide twice as often as women. However, when comparing the suicide documentation of 183 countries, the male to female ratio has a variance of 0.8 in Bangladesh and China to 12.2 (Bachmann, 2018). The lowest rates of suicide in the total population, i.e., between 0 and 4.9, were found, for example, and in order of increasing rates, in Antigua and Barbuda, Barbados, Pakistan, Guatemala, Egypt, Syrian Arab Republic, United Arab Emirates, Indonesia, Iraq, Venezuela, Algeria, Jordan, Saudi Arabia, Philippines, Iran, Kuwait, Greece, and Morocco (Bachmann, 2018). Suicide rates between 5.0 and 9.9 were documented in Mexico, Somalia, Bangladesh, Panama, Afghanistan, Libya, Tunisia, Peru, Nepal, Bosnia and Herzegovina, Brazil, Zambia, Kenya, Ghana, United Republic of Tanzania, Uganda, Kyrgyzstan, Vietnam, Ecuador, Namibia, Italy, Macedonia, Ethiopia, Mozambique, Spain, United Kingdom, Turkey, Congo, Nigeria, Chile, and Singapore (Bachmann, 2018). Finally, rates between 10.0 and 14.9 existed in China, South Africa, Gabon, Norway, Ireland, Romania, Bhutan, Australia, Cambodia, Cameroon, Netherlands, Denmark, Lao People's Democratic Republic, Canada, Slovakia, New Zealand, Iceland, Germany, Portugal,

Czech Republic, Argentina, and United States (Bachmann, 2018). The highest rates of ≥15 was found in Switzerland, Sierra Leone, Sweden, India, Democratic People's Republic of Korea (North), Bulgaria, Thailand, Finland, Austria, France, Serbia, Bolivia, Estonia, Japan, Russian Federation, Belgium, Slovenia, Hungary, Latvia, Poland, Kazakhstan, Mongolia, Republic of Korea (South), Lithuania, and Sri Lanka (Bachmann, 2018).

Age

In adolescents and young adults, the highest occurrence of completed suicide is between the ages of 15 and 29 years (Bachmann, 2018). In the United States (U.S.), statistical analyses reported deaths up to the age of 29 years; however, in the age group of 10 to 14 years, suicide has been documented to be responsible for the third leading cause of death “representing the second most common cause of deaths up to the age of 29 years after that" (Aslan et al., 2020, p. 147). In general, younger individuals than older individuals encounter their demise through suicide, but the relative numbers per age group are up to eight times higher in the elderly (Aslan et al., 2020). Moreover, based on data collected by the WHO (2015), children and adolescents up to the age of 15 years have shown the lowest suicide rate globally and per capita, which progressively upsurges after that, until the age of 70 years (World Health Organization, 2015).

Special Groups

Members of our societal communities, the underserved, and individuals who work in specific areas, merit a closer look because they are at an even higher risk of suicide (Aslan et al., 2020). These groups include members of the “police, firefighters, as well as military personnel and other individuals in high-security institutions, and minorities that

are at risk (Turecki & Meany, 2016, p. 3) and homeless people" (Aslan et al., 2020, p. 147). Furthermore, out of the LGTBQ community, it is noted that lesbians and gays have the highest rate of suicide attempts, amid transgender individuals that have suicide rates that reach 30%–50% in some countries (Aslan et al., 2020).

Problem Statement

Healthcare institutions and hospitals that include a mental health unit utilize either one or several suicide screening assessment tools as standard protocol. These tools are used in many types of mental health illnesses but predominantly in depression. The literature has failed to demonstrate a suicidal algorithm's educational lesson plan that is a psychiatric mental health nurse practitioner, board certified (PMHNP-BC) led initiative to be designed and created for registered nurses (RNs) who care for psychiatric and non-psychiatric patients that have tested positive for suicidal ideation has not yet been created. The design of a suicidal algorithm's educational lesson plan may become standard protocols to guide day-to-day advanced clinical practices. It is postulated that the creation and implementation of a suicidal algorithm's educational lesson plan of standardized nursing care based on evidence-based practices will reduce suicide attempts in this population (Turecki & Brent, 2016). The standardized management or approach in the form of a suicidal algorithm has been initiated when a patient has tested positive for suicidal ideation in any of the many suicide assessment tools out in the market. The algorithm's educational lesson plan adheres to the theory of learning—andragogy, by Knowles (1984).

Significance

One of the three objectives of this QI project was to create and assess the effectiveness of the algorithm's educational lesson plan that was well-organized and provided a step-by-step pattern of actions that is a PMHNP-BC specifically catered to RNs that care for this population. The purpose of this educational lesson plan was geared towards veterans that have tested positive for having suicidal ideation. The registered nurse and ancillary healthcare providers were able to identify the evidenced-base suicidal behavior(s) that may lead to suicide attempt. This educational lesson plan has supported the overall structured management of those that have tested positive for suicidal ideation.

Summary of Literature

A literature review consists of a summary and synthesis of the existing scholarly project with topics of interest (Aslan et al., 2019). The composition or execution of a literature review is a form of academic writing primarily seen in the sciences, social sciences, and humanities. The author systematically organized the literature review, including four subheadings: suicide risk-factor, suicide prevention, suicide protocol, and suicidal behaviors. Each sub-header includes the most current, evidence-based practices and research-supported literature on their respective topic.

For suicide risk factors, two authors identified sexual orientation (LGBTQ) and sexual identity as a culprit (Aslan et al., 2020; Ream, 2020). Raffaella et al. (2020) studied and found that the Multi-Informant Modular Assessment of Risk for Imminent Suicide (MARIS) was reliable and valid. The desire to inflict self-harm (SH) is among the most substantial risk factors for eventual suicide death (Sinyor et al., 2020). However, there is limited documentation and reporting on which of the various suicide prevention

interventions currently exist are the most operative for treating SH in the younger population (Sinyor et al., 2020).

The deterrence of suicide must remain a priority for public health systems and institutions. One contribution to suicide prevention is the Catalonia Suicide Risk Code (CSRC). This risk code is deemed as a secondary suicide prevention program that provides a methodical tactic to follow-up care for patients at risk (Perez et al., 2020). Finally, while there is an assortment of suicide prevention programs in the United States, many are ineffective in older adults that live in rural areas (Hong et al., 2020). As a result, the efficacy and design of suicide prevention programs for elderly population residing in rural areas is lacking.

Suicide protocols were also included in this literature review. The efficacy and challenges of these protocols in any healthcare institution must consist of training the current personnel, developing a rigorous protocol, assessing patients' risk perceptions, and developing and designing patient information or learning materials (Simonetti & Brenner, 2020). Suicide is a significant public health issue that has managed to affect the entire globe. Those individuals who have worked to attempt suicide at that current time (past or present) will most likely die of suicide soon (Bliokas et al., 2019). As a result, the transition from a patient hospital setting back into the community is essential when establishing protocols to minimize or reduce suicide in this population. There is a need for the research community to further investigate these protocols during this stage, which is also known as after-care interventions (Bliokas et al., 2019). The implementation of this protocol was begun in seven designated Dutch regions (Gilissen et al., 2017). Each of the seven Dutch areas was selected to be a Suicide Prevention Action Network

(SUPRANET). This paper describes the SUPRANET program components and the evaluation of its feasibility and impact.

Detecting patients that have an increased desire for suicide attempts, as manifested by an augmented display of suicidal behaviors, remains, until today, an obstacle and concern for healthcare providers that provide care to these patients (Malik et al., 2014). Several suicidal behavior(s) that may lead to suicide attempts include excessive sadness or moodiness and threatening self-injury (Cleveland Clinic, 2021). An individual contemplating suicide may demonstrate changes in personality and appearance such as fluctuations of attitude or behaviors. For example, they exhibit hypo or hyper verbality, present with a steady yet fast or slow gate, and become less concerned with their hygiene and personal appearance (Cleveland Clinic, 2021).

Literature Search

A search was conducted and led by the PICO question using major electronic databases in nursing, medicine, psychology, sociology, biology, and education. Using ProQuest Direct and Google search engines, the following databases were accessed: The Cumulative Index to Nursing and Allied Health (CINAHL), Medline in PubMed, and Dissertation Abstracts. The research was limited to English language articles and articles published after 2016. Earlier articles have been cited to explain the historical involvement of the main theoretical frameworks, the theory of suicide, and the theory of andragogy. The keywords used to search for peer-reviewed articles included: suicide, suicidal ideations, suicidal behaviors, suicide risk factors, suicide prevention, suicide protocols, education on suicide and suicidal behaviors. A random selection process delimited the profusion of theoretical references that were found.

Implementing PRISMA methodology, the search produced 122 articles that were found. These were critically critiqued for the applicability to the objective of this study. The authors were able identify 44 original articles, which were kept. From these 44 original articles that were selected, a total of 23 research studies were accepted because they included a review in which the experience of change or transition was explored. The literature review was divided by discipline into the major theoretical and research literature addressing living with changing expectations, change, and evolution.

Purpose

The purpose of this Quality Improvement (QI) project was threefold. First, it presents a PMHNP-BC led initiative to design and develop a suicidal algorithm that caters to registered nurses that care for this high-risk veteran population. The suicidal algorithm has been developed for standardized nursing approach and intervention for individuals that have screened positive for suicidal ideation using the Columbia-Suicide Severity Rating Scale (C-SSRS). Secondly, an ongoing educational lesson plan was developed whose constructs derived from the adult learning theory – andragogy by Malcolm Knowles (1992). This purpose aims to educate registered nurses and ancillary healthcare providers in the algorithm's concepts and logic between each action. Third, the algorithm's educational lesson plan was assessed to determine its effectiveness as standard protocols and a day-to-day operational tool to successfully achieve advanced clinical practice to disrupt veterans with suicidal behavior(s) from attempting suicide. The educational lesson plan included recognizing suicidal behavior(s) that may lead to suicide attempt and a step-by-step pattern of actions to apply and implement when caring for these high-risk veterans.

PICO Clinical Question

Among registered nurses that care for patients that have tested positive for suicidal ideation based on the C-SSRS tool, what effect would there be for a PMHNP-BC led initiative to design and create a suicidal algorithm's educational lesson plan that is tailored specifically to serve RNs, that is supported and guided by a theoretical framework, and is evidence-based to identify suicide behavior(s), compared to not having a suicidal algorithm's educational lesson plan at all, to decrease the registered nurses' patient suicide behavior(s) that may contribute to a suicide attempt?

Objectives

Construct an algorithm following the interpersonal-psychological theory of suicidal behaviors (Joiner, 2002) for patients who test positive for suicidal ideation to identify suicidal behavior(s) that may lead to a suicide attempt. Develop a suicide algorithm's educational lesson plan that adheres to the adult learning theory – andragogy by Malcolm Knowles (1984) for registered nurses and ancillary healthcare providers that teaches suicidal behavior(s) that may lead to suicide attempt. Assess the algorithm educational lesson plan's effectiveness in identifying suicidal behavior(s) that may lead to suicide attempt in patients that test positive for suicidal ideations in the C-SSRS.

Working and Operational Definition of Terms

Working Definition

Suicidal behaviors include behaviors that may put a patient at risk for suicide attempts (Clayton, 2019).

Operational Definition

Suicidal behaviors such as feeling burdensome and/or staying away from friends and family are the two most common suicidal behaviors that may lead to suicide attempts (Aslan et al., 2020).

Working Definition

Suicide attempts are acts of self-harm intended to result in death but do not. A suicide attempt may or may not result in injury (Clayton, 2019).

Operational Definition

Suicide attempts include medication overdose without success, non-compliance to life-saving medications (cancer, HIV/AIDS), survival, and wrist slashing but only affecting veins and not arteries (Cleveland Clinic, 2021).

Working Definition

Suicidal ideation refers to thinking about or planning suicide (Brazier, 2020).

Operational Definition

Suicidal ideation or thoughts can range from creating a detailed plan to having a transitory consideration. (Brazier, 2020).

Working Definition

Completed suicide is death caused by self-directed injurious behavior with an intent to die because of suicidal behaviors (Crosby et al., 2019).

Operational Definition

Completed suicide's operational definition includes when an individual freely and willing chooses to participate in self-directed injurious behavior(s) with intent to die such as,

slashing of wrist(s), overdosing, hanging, etc., (National Institute of Mental Health, 2021).

Conceptual Underpinning and Theoretical Framework of the Project

The Interpersonal-Psychological Theory of Suicidal Behaviors

The interpersonal-psychological theory of suicidal behavior (Joiner et al., 2002) postulates that a person will not engage in suicidal behaviors lest they have both the yearning to die by suicide and the willingness and means to do so. The interpersonal-psychological theory of suicidal behavior and its constructs have guided the creation and development of this DNP capstone project and algorithm. The constructs of this theory, perceived burdensomeness, and low belonging/social alienation, usually presents in individuals from all walks of life (Joiner et al., 2009). Moreover, the fundamentals of this theory have guided the author to design a well-thought-out, well-organized, and methodically planned algorithm to prevent suicide or suicidal behaviors in the patient setting of this population. The constructs of this theory ask the following questions: "What is the actual desire for suicide? What is the ability to die by suicide and in whom and how does it develop?" (Joiner et al., 2009, p. 6)

To answer who desires suicide, the interpersonal-psychological theory of suicidal behavior (Joiner et al., 2002) is the appropriate framework. It declares that when an individual embraces two particular and unique psychological states of minds simultaneously and when they develop the desire for death, such as burdensomeness and a sense of low belongingness or social alienation this puts the individual at risk for suicide (Joiner et al., 2009).

In answering the second question related to the capability or capacity for engaging in suicidal behaviors, this theory supports that the instinct of self-preservation is a potent character that few can overcome by force of will (Joiner, 2009). The very few who have been able to muster a sense of fearlessness during pain, injury, and death procure through repeated experiences of painful and provocative life episodes are at high risk for suicidal behaviors. These experiences that are a part of the individual's past include self-inflicted injuries, repeated accidental injuries, involved in constant physical fights, and select occupations where exposure to pain and injury is a continuous variable (Joiner, 2009).

Assumptions

Perceived Burdensomeness. Perceive burdensomeness occurs when the individual believes that they are a burden to family, friends, and society (Joiner, 2009). This deviated and distorted perception generates the idea by the individual that "my death will be worth more than my life to family, friends, society, etc." (Joiner, 2009, p. 7). It is imperative to assert that this distorted perception may prove to be fatal. De Catanzaro (1995), for example, discovered that the sense of burdensomeness towards family members was interrelated with high levels of suicidal ideation, which places them in high-suicide-risk groups. In two separate studies that focus on suicide notes, Joiner et al. (2002) demonstrated that his colleagues found two similarities in the expressions of burdensomeness. First, "the notes of people who had died by suicide compared to the notes of those who intended to die but survived" (Joiner et al., 2002, p. 548). Secondly, "the notes of those who died by violent means compared to the notes of those who died by less violent means" (Joiner et al., 2002, p. 548). In a research study whose predominant intervention was outpatient psychotherapy, researchers disclosed that a

measure of a sense of burdensomeness had a potent correlation with an individual obtaining a suicide attempt status and current suicidal ideations (Van Orden et al., 2006).

Low Belonging/Social Alienation. A diminished sense of belongingness results in the individual experiencing separation from family, friends, society, or esteemed groups (Joiner, 2009). Evidence suggests that along with a sense of burdensomeness, there is sufficient documentation that a diminished sense of belonging increases the likelihood of engaging in suicidal behaviors (Van Orden et al., 2006). “Indeed, a persuasive case can be made that, of all the risk factors for suicidal behaviors ranging from the molecular to the cultural levels, the strongest and most uninformed support has emerged from indices related to social isolation" (Boardman et al., 1999, p. 30). The connection between lacking a sense of belongingness and high risk for suicide has been recognized for a few diverse populations, including young adolescents, college students, elderly individuals, and patients (Joiner, 2009). Furthermore, the rate of suicide decreases during periods of celebration (when people pull together to celebrate) (Joiner et al., 2006) and during periods of adversity or tragedy (when people pull together to commiserate). For example, there was a decrease rate of suicides in the United States surrounding September 11, 2001 and after President John F. Kennedy's assassination (Biller, 1977).

The Adult Learning Theory – Andragogy

Malcolm Shepherd Knowles (1913 – 1997) was an American educator well known for using andragogy as synonymous with adult education (Pappas, 2013). According to Malcolm Knowles, andragogy is the art and science of teaching or educating adults; therefore, andragogy represents any form of adult learning. (Pappas,

2013). The term andragogy can be purportedly the same as the term pedagogy (Knowles, 1950). The word andragogy derives from Greek. Its term is homogenous with man-leading, versus, and once again, coming from Greek, the word pedagogy derives from the understanding and conceptualization of child-leading. However, it should be highlighted that the phrasing of the term pedagogy has been recycled since the Ancient Greek period. At the same time, Alexander Kapp, a German educator, first used the term andragogy in 1833 (Kappas, 2013).

Assumptions

In the early portion of the 1980s, Knowles completed four assumptions about the characteristics and key elements of adult learners (andragogy) that are dissimilar from the traits and critical aspects of child learners (pedagogy) (Knowles, 1984b). In 1984, Knowles added the fifth assumption. The five assumptions are as follows: First, the assumption of self-concept. This assumption postulates that as an individual (adult) matures and perceives the world more realistically, their self-concept interchanges from having or being a dependent temperament toward being a self-directed human being. Being able to think or make conclusions on their own motivates the individual to engage in learning (Knowles, 1984b).

Adult Learner Experience. This assumption of adult learner experience holds as its nucleus the concept of maturity. As the individual matures, he or she amasses a growing reservoir of experiences. These experiences are acquired and assumed as the individual goes through the day-to-day encounters that contribute to an increased resource for learning (Knowles, 1984b). Also, the daily life experiences contribute to the individual's maturing, which is the framework of this assumption.

Readiness to Learn. The third assumption is readiness to learn and once again, the framework to understand this assumption is maturity. As individuals mature, their readiness to learn becomes increasingly oriented to the evolving tasks of their social roles (Knowles, 1984b). The part of the individual they want to espouse is expanding their knowledge base to interrelate within society. This knowledge base is acquired in many fashions, including education. It is this precise level of maturity and the desire to interrelate and inter-connect with members of society, which leads to the desire, willingness, and readiness to learn (Knowles, 1984b).

Orientation to Learning. The fourth assumption in Knowles, theory of andragogy, is orientation to learning. As an individual matures, his or her time point of view fluctuates from the deferred application of knowledge to the imminence of application (Knowles, 1984b). As a result, their orientation toward learning shifts from one of the subjects of centeredness to one of problem-centeredness (Knowles, 1984b). In other words, through education and learning, the individual is seeking to not only understand but also to learn how to solve problems in his or her day-to-day encounters. A dynamic example of this is the healthcare provider who discovers that an individual has tested positive in the suicide assessment tool. The healthcare provider who is problem-centered takes all necessary actions through education to learn how to prevent oneself from self-injury or suicide.

Motivation to Learn. Finally, the fifth assumption is motivation to learn. This assumption rests on the notion that as an individual matures, his or her motivation to learn stems from an internal versus an external calling (Knowles, 1984b). Internal

learning derives from the individual's need to know to satisfy emotions or curiosities, whereas external knowledge is more geared to expanding, or amplifying wisdom.

Methodology

Plan

The purpose of this Quality Improvement (QI) project was threefold. First, it presented a psychiatric mental health nurse practitioner, board certified (PMHNP-BC) led initiative to create and design a suicide algorithm that caters to registered nurses that care for this high-risk veteran population. The suicide algorithm has been developed for standardized nursing approach and intervention for individuals that have screened positive for having suicidal ideation using the Columbia-Suicide Severity Rating Scale (C-SSRS). The algorithm depended on the interpersonal-psychological theory of suicidal behavior (Joiner, 2002).

Secondly, an ongoing suicide algorithm's educational lesson plan was developed whose constructs derived from the adult learning theory – andragogy by Malcolm Knowles (1984). This purpose aimed at educating registered nurses and ancillary healthcare providers in the algorithm's concepts and the logic between each action; and included recognizing suicidal behavior(s) that may lead to a suicide attempt. This purpose was delivered through a sequential, step-by-step pattern of actions to apply in identifying suicidal behavior(s) and actions to disrupt a veteran from a suicide attempt.

Third, the suicidal algorithm's educational lesson plan was assessed to determine its effectiveness as standard protocols and a day-to-day operational tool to successfully achieve advanced clinical practice to disrupt veterans with suicidal behavior(s) from attempting suicide. To measure the utility, the author assessed the algorithm's educational

lesson plan's effectiveness in identifying suicidal behavior(s) that may lead to a suicide attempt in veterans that tested positive for suicidal ideations in the C-SSRS.

Study Design

This Quality Improvement (QI) project utilized a Level I, randomized controlled trial, non-equivalent group pretest-posttest quasi-experimental to assess the effectiveness of the suicide algorithm's educational lesson plan.

PICO Clinical Question

Among registered nurses that care for patients that have tested positive for having suicidal ideation based on the C-SSRS tool, what effect would there be for a PMHNP-BC-led initiative to design and create a suicidal algorithm's educational lesson plan that is tailored specifically to serve RNs, that is supported and guided by a theoretical framework, and is evidence-based to identify suicide behavior(s), compared to not having a suicidal algorithm's educational lesson plan at all, to decrease the registered nurses' patient suicide behavior(s) that may contribute to a suicide attempt?

Setting

The setting of this DNP capstone project was a veteran's hospital in South Florida. The targeted units were the 11AB Medical Surgical-Telemetry, 11 CD Medical-Surgical and Rehab, and 12 CD Medical-Surgical and Oncology.

Sample (Power Analysis)

The sample selection methodology for this DNP Quality Improvement Capstone Project was non-randomized. It included registered nurses, nursing assistants, and unit secretaries in a veteran hospital located in South Florida. Furthermore, to determine the sample size, a power analysis was conducted by the author. It used the software PASS 18,

which showed that a sample size of 50 participants (registered nurses, nursing assistants, and unit secretaries) had more than 95% power to detect an effect size of 0.5 (the difference between pre to post-test) overall score; a power of more than 90% to detect a difference of <0.5 average overall score when comparing the effectiveness of the algorithm; and a power greater than 95% to detect an interaction between the pre/post-test of at least 0.75 on the average overall score. The above assumptions for the minimal difference to be detected are based on applying the prospective and retrospective algorithm suicidal behavior results.

The probability of Type I error was kept below 5% by choosing $\alpha = 0.05$. The probability of Type II was estimated to be less than 10%. The power analysis showed that with at least 50 participants, the power to detect a difference of at least 0.5 between the pre/post-test scores is more than 90%, and the power to detect the effectiveness of the algorithm utilizing a prospective and retrospective design was greater than 95%.

Inclusion Criteria

- Employed for the veteran's hospital in South Florida as a full-time registered nurse, nursing assistant, or unit secretary
- Employed in 11AB Medical Surgical-Telemetry, 11 CD Medical-Surgical and Rehab, and 12 CD Medical-Surgical and Oncology units
- The employee/participant must be 18 years or older

Exclusion Criteria

- Not employed by the Veteran's Hospital in South Florida
- Not a registered nurse, nursing assistant, or unit secretary
- Work in the emergency department or psychiatric ward

- The individual/participant is less than 18 years of age

Intervention

The intervention for this Quality Improvement (QI) Project was as follows. First, the non-randomized participants that were interested in knowing more about this QI project received a statement letter. The statement letter included the details of this QI project such as that the participant could end his or her involvement in the project early without having negative repercussions in his or her employment in this veteran's institution located in South Florida. Ample time was given to the participant to read the statement letter, ask questions, and voice comments or concerns, and he or she was encouraged to make a freely chosen decision to either participate or not participate. Once receiving the statement letter and agreeing to participate in this project, the participant received a demographic questionnaire and pretest. The demographic questionnaire was created in ordinal form. Secondly, before the participant attended the suicide algorithm's educational lesson plan, he or she received a pretest consisting of no more than five questions. After the educational lesson plan, the participant received a posttest. The author compared the pretest and posttest to determine if learning occurred. The educational lesson plan was ongoing, and it was strategized and planned to be offered to the day and night shift nurses and ancillary healthcare providers via Zoom video.

Measures/Instrument

Upon receiving the statement letter, the participant received a demographic questionnaire. This questionnaire was created by the author and was used to collect differential statistics of the participant. Also, to assess if learning had occurred, the

participant received a pretest before the educational lesson plan. After the educational lesson plan, the participant received a posttest.

Data Collection

The author worked closely with the RNs and ancillary healthcare providers of 11AB Medical Surgical-Telemetry, 11 CD Medical-Surgical, Rehab, and 12 CD Medical-Surgical and Oncology units. To prevent coercion, the author selected a non-random unit secretary to introduce the QI project to these health care providers, following a script written by the author. All those participants that agreed to partake in this project were given the statement letter, a demographics questionnaire, and a pretest. The completed demographic questionnaire received a consecutive participant number as they turned them in. The pretest and the posttest received the same participant letter and a consecutive number for the sake of confidentiality as the participants turned them in.

Data Analysis

Upon freely agreeing to participate in this project, all participants received a demographic questionnaire to decipher the characteristic of the sample. The author applied differential statistics. The differential statistic included mean, standard deviation, minimum, median, and maximum. Frequency of percentage was used for those questions that are nominal in sequence. At the beginning of the educational session plan, the participants completed a pretest. At the end of the educational session plan, the participants completed a posttest. The author used a paired *t*-test to compare the pretest and posttest. The paired *t*-test allowed the author to compare the percentage of subjects who correctly answered more questions on the posttest rather than in the pretest.

Protection of Human Subjects

The author received the approval letter from both Florida International University (FIU) and the VA Hospital in South Florida's IRBs. The participants were recruited by dispersing flyers throughout the 11AB Medical Surgical-Telemetry, 11 CD Medical-Surgical and Rehab, and 12 CD Medical-Surgical and Oncology units. To prevent a breach in identity, the author selected a letter and a number for each participant. An encrypted password-protected database was used by the author and continues to be kept in the institution's nursing department whose door is always locked, with accessibility by the lead professor and the author only.

Ethical considerations and the protection of human subjects consisted of several steps. First, the author submitted to the Institutional Review Boards (IRBs) of both FIU and the VA Hospital in South Florida, where the Quality Improvement project was implemented. Secondly, after receiving permission from both IRBs to conduct the project, the statement letter, demographic questionnaire, and a pretest were given to the participant before the commencement of the educational lesson plan by a unit secretary selected by the author. Since the author worked closely with the healthcare providers of all the units included in this project, and to prevent coercion, the author chose a random unit secretary to give the participant the statement letter, demographic questionnaire, and a pretest.

The statement letter included a thorough description of the purpose of the QI Project, procedures, risk, benefits, and confidentiality. The participant was made aware that whether he or she selected to participate in the QI project or not, his or her decision did not infringe on their employment with the VA Hospital located in South Florida. The

unit secretary explained to the participant that he or she would receive a pretest and posttest consisting of five questions related to the educational lesson plan. The unit secretary left the training room/space to provide ample time (approximately 5-10 minutes) for the participant to decide whether to participate in the project. The participant was informed that he or she may choose to withdraw from the project at any point without jeopardizing their employment with the VA Hospital located in South Florida. The participant was informed that confidentiality was always maintained. The demographic questionnaire and the pretest and posttest results continue to be kept in the institution's nursing department, where the door is always locked, with accessibility by the lead professor and the author only.

Results

The aim of this Quality Improvement Project was to create and develop a suicide algorithm's educational lesson plan that will be statistically significant in its effectiveness. As a result, the algorithm's educational lesson plan was used as standard of protocols to guide the day-to-day advanced clinical practices for those veterans that have tested positive in having suicidal ideation in the Columbia-Suicide Severity Rating Scale (C-SSRS).

The purpose of this Quality Improvement (QI) project was threefold. First, it presents a Psychiatric Mental Health Nurse Practitioner, Board Certified (PMHNP-BC) led initiative to design and develop a suicidal algorithm that caters to other registered nurses that care for this veteran population. The suicidal algorithm has been developed for standardized nursing approach and intervention for individuals that have screened positive for suicidal ideation using the Columbia-Suicide Severity Rating Scale (C-

SSRS). The algorithm depended on the interpersonal-psychological theory of suicidal behavior (Joiner, 2002). Secondly, an ongoing educational lesson plan was developed whose constructs derived from the adult learning theory – andragogy by Malcolm Knowles (1992). The purpose aims to educate registered nurses and ancillary healthcare providers in the algorithm's concepts and the logic between each action. Third, the algorithm's educational lesson plan was assessed to determine its effectiveness as standard protocols and a day-to-day operational tool to successfully achieve advanced clinical practice to disrupt veterans with suicidal behavior(s) from attempting suicide. The algorithm included recognizing suicidal behaviors that may lead to suicide attempts and provided a step-by-step pattern of actions to apply and implement when caring for these high-risk veterans.

The researcher will provide demographic data findings of the project related to the PICO clinical question. However, first the author will present the results of the demographic data. Upon freely agreeing to participate in this project, all participants received a demographic questionnaire to decipher the characteristic of the sample. The author applied differential statistics. The differential statistic included mean, standard deviation, minimum, median, and maximum. Frequency of percentage was used for those questions that are nominal in sequence.

Inferential statistics is a branch of statistics that evaluates characteristic of a population from a sample dataset. A sample of 48 data points were selected. Two of the values were considered as duplicate and eliminated from the sample. The total sample size was 46 after the elimination of the duplicate cases. From the sample given, inference was made that the mean of gender was 1.8 with a mode of 2 and a median score of 2. The

maximum value from gender was 2 (female) and a minimum of 1 (male). The standard deviation was 0.40, respectively. On the other hand, the mean score for discipline was 1.3, with a median score of 1 and a mode score of 1. The standard deviation was 0.64. The maximum value was 3 (unit secretary) and the minimum value was 1 (registered nurse) with a 2 representing the nursing assistant. The mean level of education was 1.8, with a median score of 2 and a mode score of 2 (bachelor's in nursing). The standard deviation was 0.64. The maximum value was 3 (master's in nursing) and the minimum value was 1 (associate in nursing). Finally, the population mean for ethnicity was 1.5 with a median score of 2 and a mode score of 2. The standard deviation of ethnicity was 0.49. The minimum value was 1 (Latino/Hispanic) and the maximum value was 2 (Non-Latino/Hispanic).

Table 1

Inferential Statistics Summary Results

Gender		Discipline		Level of Education		Ethnicity	
Mean	1.804348	Mean	1.347826	Mean	1.891304	Mean	1.586957
Median	2	Median	1	Median	2	Median	2
Mode	2	Mode	1	Mode	2	Mode	2
Standard Deviation	0.401085	Standard Deviation	0.640048	Standard Deviation	0.640426	Standard Deviation	0.497821
Count	46	Count	46	Count	46	Count	46
Confidence Level (95.0%)	0.119108	Confidence Level (95.0%)	0.190071	Confidence Level (95.0%)	0.190183	Confidence Level (95.0%)	0.147835

PICO Clinical Question

The PICO clinical question that the author selected was a follows: Among registered nurses that care for patients that have tested positive for having suicidal ideation based on the C-SSRS tool, what effect would there be for an RN-led initiative to design and create a suicide algorithm, with an educational lesson plan that is tailored specifically to serve other RNs, that is supported and guided by a theoretical framework, and is evidence-based to identify suicide behavior(s), compared to not having a suicide algorithm at all, to decrease the registered nurses' patient suicide behavior(s) that may contribute to a suicide attempt?

The author used a paired *t*-test to compare the pretest and posttest. The paired *t*-test allowed the author to compare the percentage of subjects who correctly answered more questions on the posttest rather than in the pretest. The paired sample *t*-test results

also permitted the author to identify which of the three disciplines understood the content of the educational lesson plan.

A paired sample *t*-test was used to assess the effectiveness of the educational lesson plan. Pretest and posttest were believed to establish any underlying differences. The mean for the pretest was 1.7, while the mean for the posttest was 4.0. This indicates an increase in score from the posttest to the pretest. The *p*-value was less than 0.05 inferring that the postulated difference of $n = 46$ was not equal to zero and thus the pretest and posttest scores had a statistically significant difference. This concludes that the suicide algorithm's educational lesson plan created was effective since at posttest the mean score was significantly higher as compared to pretest. The variance of the pretest was 0.50, while the variance for posttest was 0.84. The posttest had more variability as compared to the pretest.

Table 2

t-test *Statistics Summary Results*

	Pretest Correct	**Posttest Correct**
Mean	1.708333333	4.041666667
Variance	0.508865248	0.84929078
Observations	46	46
Pearson Correlation	-0.013485321	
p = value	0.02	
t-test statistic	-13.78180483	

The various disciplines were assessed for their performance and examined prior to and after the educational lesson plan. A pivot tables that offers a great way of summarizing data was applied to compare the effectiveness of the educational lesson plan in the three disciplines. This table indicates that all the pretest averages of the three groups were lower than the posttest. This indicates that the algorithm's educational lesson plan increased the average scores of the post-test evaluation. The category of registered nurses (RNs) had the highest posttest and pretest scores of 4.28 and 1.82 respectively followed by the unit secretary (UNs) that had a pretest and posttest scores of 3.5 and 1.75 respectively. The nursing assistants (NAs) had a posttest and pretest scores of 3.33 and 1.22. This comparison indicates that the registered nurses were the best category followed by unit secretaries and finally the nursing assistants in comprehending the content of the educational lesson plan.

Table 3

Category Comparison Based on Means of Posttest and Pretest Scores

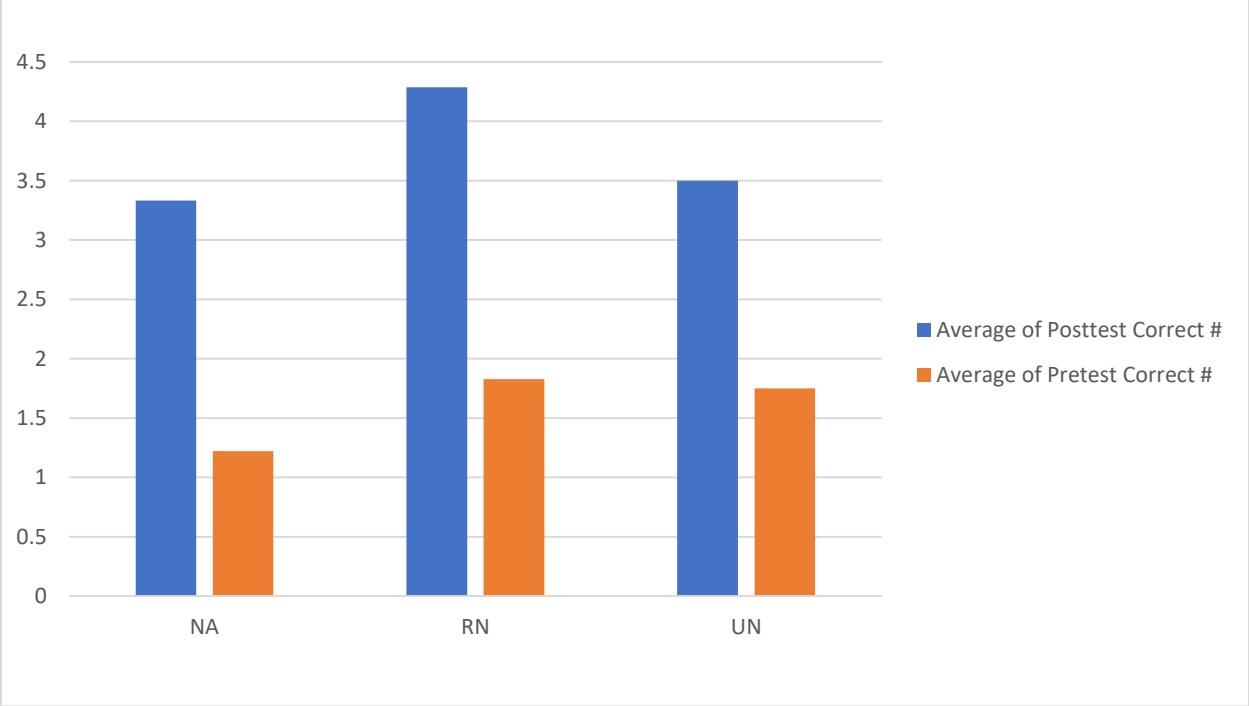
Row Labels	Average of Pretest Correct	Average of Posttest Correct
NA	1.222222222	3.333333333
RN	1.828571429	4.285714286
UN	1.75	3.5
Grand Total	**1.708333333**	**4.041666667**

The diverse disciplines that participated in this project, and their performances was investigated before and after the educational lesson plan. A methodological table that

offers an excellent way of summarizing data was utilized to compare the effectiveness of the algorithm's educational lesson plan in the three diverse disciplines. The table indicates that all the pretest averages of the three groups were lower than the posttest. This indicates that the educational lesson plan had an expanded average score on the posttest. The category of registered nurses (RNs) had the highest posttest and pretest scores of 4.3 and 1.8, followed by the unit secretaries (UNs) that had a posttest and pretest scores of 3.5 and 1.7. The nursing assistants (NAs) had a posttest and pretest scores of 3.3 and 1.2, respectively. This comparison indicates that the registered nurses were the top category, followed by unit secretaries, and finally, the nursing assistants in their comprehension of the content in the educational lesson plan.

Figure 1

A Bar Graph for Categories Based on Pretest and Posttest Scores



Summary and Discussion

The aims of this Quality Improvement Project were to create and develop a suicide algorithm's educational lesson plan that was statistically significant in its effectiveness. As a result, the educational lesson plan will be used as standard of protocols to guide the day-to-day advanced clinical practices for those veterans that have tested positive for suicidal ideation in the Columbia-Suicide Severity Rating Scale (C-SSRS).

The purpose of this Quality Improvement (QI) project was threefold. First, it presents a PMHNP-BC-led initiative to design and develop a suicidal algorithm that caters to registered nurses that care for this high-risk veteran population. The suicidal algorithm has been developed for standardized nursing approach and intervention for individuals that have screened positive for suicidal ideation using the Columbia-Suicide Severity Rating Scale (C-SSRS). Secondly, an ongoing educational lesson plan was developed whose constructs derived from the adult learning theory – andragogy by Malcolm Knowles (1992). This purpose aims to educate registered nurses and ancillary healthcare providers in the algorithm's concepts and logic between each action. Third, the algorithm's educational lesson plan was assessed to determine its effectiveness as standard protocols and a day-to-day operational tool to successfully achieve advanced clinical practice to disrupt veterans with suicidal behavior(s) from attempting suicide. The educational lesson plan included recognizing suicidal behaviors that may lead to a suicide attempt and a step-by-step pattern of actions to apply and implement when caring for these high-risk veterans.

This Quality Improvement (QI) project utilized a Level I, randomized controlled trial, non-equivalent group pretest-posttest quasi-experimental design to assess the effectiveness of the educational lesson plan. The sample selection methodology for this DNP Quality Improvement Capstone Project was non-randomized. It included registered nurses, nursing assistants, and unit secretaries in a veteran hospital located in South Florida. Furthermore, to determine the sample size, a power analysis was conducted by the author. It used the software PASS 18, which showed that a sample size of 50 participants had more than 95% power to detect an effect size of 0.5 (the difference between pretest to posttest) overall score; a power of more than 90% to detect a difference of <0.5 average overall score when comparing the effectiveness of the algorithm; and a power greater than 95% to detect an interaction between the pretest and posttest of at least 0.75 on the average overall score.

The probability of Type I error was kept below 5% by choosing $\alpha = 0.05$. The probability of Type II was estimated to be less than 10%. The power analysis showed that with at least 50 participants, the power to detect a difference of at least 0.5 between the pretest and posttest scores is more than 90%, and the power to detect the effectiveness of the educational lesson plan. The QI project consisted of 46.

The original demographic questionnaire consisted of gender, race, ethnicity, and age. The author modified the questionnaire to remove age, and add in addition, discipline, and level of education. The aims of these modifications were focused on which of the three disciplines that were included in this project: registered nurses, certified nursing assistant, and unit secretary learned most in the educational lesson plan. Moreover, the level of education would correlate with the discipline. Also, before and after the

educational lesson plan, all participants received a pretest and posttest. The original pretest consisted of 10 questions that were predominantly focused only on the RN. The author made modifications consisting of five questions that included all three disciplines equally.

Since the author worked closely with the healthcare providers of all the units included in this project and to prevent coercion, the author chose a random unit secretary to give the participants the statement letter, demographic questionnaire, and a pretest to those participants who freely chose to be included in this project. The participants were recruited by dispersing flyers throughout the 11AB Medical Surgical-Telemetry, 11 CD Medical-Surgical and Rehab, and 12 CD Medical-Surgical and Oncology units. The data was collected through Qualtrics. Then, the author placed all that information into an Excel spreadsheet, and utilized IBM, SPSS Version 25. This section will additionally discuss implications for advanced practice nursing, limitations of the project, recommendations, and conclusions and compare the current literature.

Healthcare institutions and hospitals that include a mental health unit utilize either one or several suicide screening assessment tools as standard protocol. These tools are used in many types of mental health illnesses but predominantly in depression. Although the literature has failed to demonstrate a suicidal algorithm's educational lesson plan that is a PMHNP-BC led initiative designed and created for registered nurses (RNs) who care for veterans that have tested positive for suicidal ideation has not yet been created. The design of an algorithm's educational lesson plan may become a standard protocol to guide the day-to-day advanced clinical practices. It is postulated that the creation and implementation of a suicidal algorithm of standardized nursing care based on evidence-

based practices will reduce suicide attempt in this population (Turecki & Brent, 2016). The standardized management or approach in the form of a suicidal algorithm will be initiated when a veteran has tested positive for having suicidal ideation in any of the many suicide assessment tools out in the market.

A comparison and contrast with the literature review was achieved by the author of this QI project that similar results in the following three articles. Aslan et al. (2020) compared male and female American veterans with schizophrenia or bipolar disorder regarding clinical risks for suicidal characteristics related to multiple suicidal ideations and behaviors. The researchers also examined suicide deaths.

The research methodology that was used a Level II, Cohort design that included the researchers utilizing data from developed questionnaires and, also, face-to-face interviews. The data collection process spanned a period between the years of 2011–2014. The size consisted of non-randomized sample of 8,049 male and 1,290 female veterans with schizophrenia or bipolar disorder, and it used a mix methodology design. Moreover, "to compare male-female characteristics, Cox regression models—adjusted for demographic information, medical-psychiatric comorbidities, and self-reported suicidal ideation and behavior—were used to examine gender differences in associations of putative risk factors with suicide-specific and all-cause mortality during up to six years of follow-up" (Aslan et al., 2020, p. 147).

Women were much younger than the male participants; they were more likely to disseminate a history of suicidal behaviors (Aslan et al., 2020). Furthermore, the female participants in this study were also less likely to be substance abusers and had a decreased mortality rate during the study's follow-up period. Among both men and

women, suicide-specific mortality was related to fewer events. Still, crude rates were an order of magnitude higher than in the US general and overall veteran populations (Aslan et al., 2020). The authors concluded that female veterans with severe mental illness (SMI) contrasted with females in the general population by having an elevated risk of suicide attempts (Aslan et al., 2020). With the same diagnosis, men and women were compared, and the study revealed that women had higher suicide risks throughout their life span than male veterans.

The design of this quantitative study was a Level II, non-randomized control trial, prospective, with predetermined eligibility criteria, and outcome measures provided the MARIS tool to 618 psychiatric patients (167 in-patients, 451 outpatients) and their clinicians (n = 115) (Rafaella et al., 2020). “Patients were assessed with a battery including the Columbia-Suicide Severity Rating Scale. Four outcomes were considered: lifetime and past month suicidal thoughts and behaviors (STB) (0–10-point scale) and suicidal behaviors (SB) (0–5 point scale). Reliability and concurrent, convergent/divergent and incremental validity were assessed” (Rafaella et al., 2020, p. 123).

The results demonstrated excellent internal consistency for modules one and four (Cronbach's α: 0.87 and 0.86, respectively) but not for the others (Rafaella et al., 2020). The authors reported some limitations. First, there was a lack of prospective assessment. Secondly, in-patients were evaluated at discharge, whereas outpatients at intake (Rafaella et al., 2020). However, Rafaella et al. (2020) concluded that this study's findings reinforced the need for various datasets to categorize patients at imminent suicide risk, and in particular, clinicians' emotional responses.

The suicide ratio for veterans is 1.5 times higher than that of the general population (US Department of Veterans Affair, 2018). Comparing and contrasting the ratio of suicide in the female veterans to non-veteran adult women, the ratio is 2.5 times higher (US Department of Veterans Affair, 2017). From 2001 to 2014, the U.S. Department of Veterans Affairs (2017), reported that there was a drastic and unexpected rise in suicide rate among women using VA health services from 14.4 per 100,000 to 17.3 per 100,000. Suicide rates are extremely elevated among older U.S. veterans.; as a result, based on the U.S. Department of Veterans Affairs (2018), in the year of 2016, approximately 58% of every veteran that completed suicide were over the age of 55.

Sinyor et al. (2020) conducted a Level I, single-blind, randomized controlled trial that assessed the efficacy of a brief cognitive-behavioral therapy (BCBT) methodology, mainly aimed at suicide prevention versus minimally-directive supportive psychotherapy in a younger population between the ages of 16–26 that were hospitalized as a result of SH. Patients in both therapy groups were exposed to 10 acute sessions over 15 weeks and included three booster sessions at 3-month intervals (Sinyor, 2020). “The primary feasibility outcome was ≥70% retention at study endpoint. Efficacy measures, including repeat SH, were secondary outcomes” (Sinyor, 2020, p. 690).

The results of this single-blind, pilot randomized controlled trial revealed that 24 participants were enrolled (12 per group) with one BCBT subject and two controls dropping out before the first therapy session (Sinyor et al., 2020). Five (45%) of the remaining BCBT participants, as well as seven (70%) control subjects, completed all 10 acute therapy sessions (Sinyor et al. 2020). All participants in this study that concluded at least five sessions move on to complete 10 sessions. There were significantly lower

occurrences of repeated SH in BCBT participants "(7 of 62 weeks of acute follow-up; 11%) compared to control subjects (24 of 79 weeks; 30%) or (0.34, 95%CI: 0.13–0.92)" (Sinyor et al., 2020, p. 671). All in the control condition, three subjects made a total of five suicide attempts during the study.

The authors concluded that the study was unsuccessful in acquiring its definitive viability retention goal for BCBT; however, it did articulate that commissary adherence to follow-up predicted study completion (Sinyor et al., 2020). Despite small numbers, it also found a significant reduction in repeated SH in the BCBT group, a finding which Sinyor et al. (2020) merit further investigation in the future.

Limitations

The demographic questionnaire methodology prompted participant responses that the exactness and reliability of these responses were unable to be fully measured. In addition, a reduced sample size of $n = 46$ of registered nurses and ancillary healthcare providers presented as a challenge for the author, since the expected sample size was calculated to be $n = 50$. However, the Quality Improvement Project yielded statistically significant results to support the effectiveness of the educational lesson plan.

These constraints were offset by several assets inherent to the IOWA Model, which reflects the entire QI project participants, advanced healthcare providers, and the institution itself. The IOWA model centers around a healthcare system and works collaboratively with it. Since its foundation approximately in the early part of 1990, it has been repeatedly referenced in peer-reviewed nursing journal articles and comprehensively has been applied in research and QI projects. This model permitted the author to dedicate time to concentrate on the understanding and problem-focused prompts

(i.e., suicide behavior(s)), providing a platform to lead registered nurses to doubt or question current clinical practice for veterans that test positive for suicidal ideation.

Convenience Sampling Method Does Not Involve Randomization

Disdain their destitute generalizability comparative to probability samples, "non-probability convenience samples are the standard within developmental science" (Jager et al., 2017, p. 18). They will likely continue to be as such because of their probability samples are unaffordable and the samples are ill-suited to examine developmental questions (Jager et al., 2017). Instead of concentrating on which manner to reduce dependency of convenience samples, in the areas of discipline such as social and developmental sciences, Jager et al. (2017) "proposes how to augment their advantages when it comes to understanding population effects as well as sub-population differences" (p. 19). Even though convenience sampling has a reduced chance of making inference "more than probability samples, we argue that homogeneous convenience samples have clearer generalizability relative to conventional convenience samples" (Jager et al., 2017, p. 15). Therefore, when academics are restricted to convenience samples, they should consider standardized convenience samples as a probability of an alternative to conventional or disparate convenience samples.

Low Number of Participants Decrease Generalizability

The author of this QI Project intentionally selected to include a convenience sample for the participants. The aim of this notion is the result of doing a thorough investigation on sampling which when implemented facilitate making inference, considered that it is impossible to examine the entire population (Kukull & Ganguli, 2012). To contribute to making generalizability of the author's Capstone Project, there

must be the implementation of a reasonable estimate of the population characteristics being studied. This concept, a convenience sample, is justified because it is required to be implemented as a day-to-day practice to include all person, or all similar cases (Kukull & Ganguli, 2012). The choice of setting limits (inclusion and exclusion criteria) had a positive effect on both internal and external validity. This finding was not replicated in a subsequent study based on prospective data from a comprehensive population-based record-linkage system.

Implications for Practice

Plan for Quality Improvement Next Steps

Suicide, regardless of whether it is completed, presents itself as a highly intricate and complex public health and global issue. Pre-suicidal behaviors are displayed in various manners depending on gender, age, geographical location, and socio-political status. The author's plan as the next steps of this QI project were to first, by interpreting the data results and concluding with statistically significant values, the effectiveness of the algorithm's educational lesson plan, presented these findings and strategically correlated them with the administrative leadership of the organizational future goal that changed and enhanced the delivery of advanced clinical practices for a high-risk veteran population. Secondly, in the author's achieving this first step, the effectiveness of the educational lesson plans whose aim was focused on teaching registered nurses and ancillary healthcare providers how to identify suicide behavior(s) revealed that it is sustainable as standard protocols to guide the day-to-day advanced clinical practices. Third, the strategical correlation with the organizational future goal that changed and enhanced the delivery of advanced clinical practice led to have a very influential and

positive effect on the organization's adoption of creating a new system-wide healthcare policy.

Sustainability for Practice Changes

The determination by the author of the effectiveness of the suicide algorithm's educational lesson plan had an influential and positive effect of sustaining practice changes in the following area:

Organizational Health Policy. The author's presentation as well as the strategic correlation set in motion the sustainability for practice changes by supporting the organizational administrative leadership team's future goal of enhancing and making positive modifications in delivering advanced clinical practices for a high-risk veteran population. The statistically significant determination by the author of the effectiveness of the educational lesson plan, supported the organizational leadership team to announce a new introduction as standard protocol to guide the day-to-day advanced clinical practices, to facilitate the registered nurses that served, as well as cared, for a community of veterans who have tested positive in suicidal ideation. Thus, slowly, patiently, and in a very discreet manner announce to all RNs and ancillary healthcare providers the rigor of implementing this algorithm and comply with institutional policy. Introducing changes to the advanced clinical practice, influenced and had a positive effect on the organizational adoption by creating a new system-wide healthcare policy, where all registered nurses, and healthcare providers were very compliant.

Implications for Advanced Practice Nursing

One of the three goals of this QI project was to create and assess the effectiveness of a PMHNP-BC-led initiative that was designed and developed to create a suicide

algorithm's educational lesson plan that specifically catered to registered nurses that was well-organized and provided a sequential, step-by-step methodology pattern of actions, and that assisted the RN in identifying the suicidal behavior(s) that ultimately disrupted a suicide attempt in the veterans that had tested positive for suicidal ideation.

Nursing Education

The creation of an algorithm's educational lesson plan that has statistically significant results, for veterans that had tested positive for suicidal ideation, may be added in a nursing curriculum. Registered nurses (RNs) are viewed as the frontline healthcare providers in suicide behavior(s) or suicide prevention, at both primary and secondary levels, because of their constant patient encounters/interactions (Cleveland Clinic, 2021). Nursing education does not emphasize identifying an individual viewed as high risk for suicide because these patients are rarely recognized as at-risk without proper resource utilization (Bolster et al., 2015). This is because suicide is the second leading sentinel event in hospitals (Brazier, 2020). In the National Patient Safety Goals for 2014, "The Joint Commission, a national organization which provides accreditation to healthcare institutions, has called for hospitals to conduct an assessment in those patients at high-risk for attempting suicide" (Joint Commission, 2014, p. 28). For these reasons and more, advanced (graduate level) nursing education may be better prepared to teach a graduate nursing student how to identify suicide behavior(s) and risk factors that may lead to a suicide attempt.

Nursing Practice

Identifying the suicide behavior(s) that may lead to a suicide attempt, yet disrupting that attempt during advanced clinical practices, is supported by a theoretical

framework, and is evidence-based, in an urgent situation and day-to-day advanced nursing care. Registered nurses who care for these high-risk veterans need evidence-based advanced clinical care practices and standards, such as those developed by the Joint Commission for suicide risk assessment (Joint Commission, 2014). Healthcare institutions are recommended to implement and create algorithms and develop on-going education that incorporates the guidelines of an algorithm. Pronouncement support tools that help nurses comprehend their roles and rejoinders, such as the McKesson InterQual® Behavioral Health Decision Support Tool (Ashad, 2020), will permit nurses that frequently encounter individuals contemplating suicide to be better equipped to handle such emergencies. Annual competency assessments with proper, ongoing education on implementing a suicide algorithm for individuals that test positive for having suicidal ideation would continue to provide nurses with updated skills in the same manner as cardiopulmonary resuscitation reviews and practices (Bolter et al., 2015).

Organizational and Health Policy

The effectiveness of a suicide algorithm's educational lesson plan contributes positively to benefiting the implications for advance nursing practice. Under the patronage as well as the support of advanced clinical practices, a diversified as well as specialized in suicide detection and prevention, the registered nurses can partake in a well-rounded tactic proposal of the delivering of evidence-based practices in an inclusive variability of situations to a host of many susceptible and underserved psychiatric or non-psychiatric veterans at high-risk of attempting suicide (Ricard et al., 2014). The RNs will be affiliated with committees that faces or discusses this unique and socially unacceptable topic linking and advocating for this veteran population (Puskar & Bernardo, 2017).

New specialized legislation and restructuring of mental health services have a substantial influence on mental health advanced clinical nursing practices. Many RNs have proven clinical guidance tailored to the needs of high-risk veteran population (Puskar & Bernardo, 2017). Nevertheless, many consider that the advocacies of RNs are not sufficiently, adequately, and optimally applied in mental health services (Ricard et al., 2014). In addition, a different and interesting modernization that was created by RNs contributed to an increase in efficiency and timely accessibility to patients with suicidal ideation, and at high-risk for a suicide attempt (Ricard et al., 2014). Documentation from psychiatric and non-psychiatric patients has greatly benefited by these innovative ideas by RNs decreasing the anxiety in either suicidal ideation or attempt in suicide (Ricard et al., 2014). Also, in few countries, the restructuring of mental health service sector has been a good time to acknowledge these potentials (Ricard et al., 2014). Moreover, roughly six countries have transposed the role of the RNs and endorsed the expansion of new models of nursing practices in mental health (Ricard et al., 2014). These advances have been remarkably substantial in the United States and Australia (Ricard et al., 2014). Australia who, through its various journals, has given attention to RNs who have been able to acquire proficiency in detecting suicidal behaviors and prevention has been recognized nationally. Moreover, research findings have demonstrated the impact of psychiatric nursing care and has profoundly affected the Canadian Healthcare System as well (O'Brien et al., 2006). "The implementation of nursing practice in mental health is part of best practices required to improve care and mental health services and should be taken into account in future Action Plan 2014-2020" (O'Brien et al., 2006, p. 148).

One of the three goals of this QI project was to create and assess the effectiveness of an PMHNP-BC-led initiative that was designed and developed to create a suicide algorithm's educational lesson plan that specifically catered to RN using a step-by-step pattern of actions that assisted the RN in identifying the suicidal behavior(s) that ultimately disrupted a suicide attempt in the veterans that had tested positive for suicidal ideation.

Recommendations

Recommendations for future study are aimed at expanding the educational lesson plan to be offered to other healthcare providers. This QI project was led by a Psychiatric Mental Health Nurse Practitioner, Board Certified (PMHNP-BC) for registered nurses who care and serve this vulnerable veteran population. The author recommends that future QI projects to be created by advanced practice nurse(s) for advanced practice nurses. There may be a possibility that a nursing assistant-led educational lesson plan to adhere to a preventive suicide protocol may be successfully effective in its endeavor. Also, a suicide algorithm should be tested to determine its effectiveness as a day-to-day guide for advanced clinical practice.

Conclusions

The characteristics based on the data collected from the demographic questionnaire revealed that there were more female than male healthcare providers. The predominant discipline that scored the highest in understanding the content of the educational lesson plan was the registered nurse. The highest level of education among the sample was a Bachelor of Science in nursing. These combined results demonstrated that RNs who are expected to spearhead the algorithm have true comprehension of its

processes. In addition, the effectiveness of the educational lesson plan revealed with a paired sample *t*-test, statistically significant results. In the future, nurses and healthcare providers should create a QI project to be led by an advanced practice nurse(s) for advanced practice nurses. In addition, other healthcare provider disciplines can create an educational lesson plan that will cater to that discipline to prevent suicide attempts in this vulnerable veteran population.

References

Ashad, M.A. 2020. InterQual® 2020: What's New? Retrieved from: https://mms.businesswire.com/media/20200519005675/en/792601/1/InterQual_2020_Annual_Update.pdf?download=1.

Aslan, M., Radhakrishnan, K., Rajeevan, N., Sueiro, M., Goulet, J. L., Li, Y., Depp, C., Concato, J., & Harvey, P. D. 2020. Suicidal ideation, behavior, and mortality in male and female US veterans with severe mental illness. *Journal of Affective Disorders, 267*, 144–152 doi:10.1016/j.jad.2020.02.022

Bachmann, S. (2018). Epidemiology of suicide and the psychiatric perspective. *International Journal of Environmental Research and Public Health, 8*(5), 22–25 doi:114429/esui1334690

Biller, O. A. (1977). Suicide-related to the assassination of President John F. Kennedy. *Suicide and Life-Threatening Behavior,* 7(1). doi:10.1111/j.1943-278X.1977.tb00888.x

Bliokas, V. V., Hains, A. R., Allan, J. A., Lago, L., & Sing, R. 2019. Community-based after-care following an emergency department presentation of attempt suicide or high risk of suicide: Study protocol for a non-randomized controlled trial. *BMC Public Health,* 19, 1380–1386. doi:10.1186/s12889-019-7751-8

Bolster, C., Holliday, C., O'Neal, G., & Shaw, S. 2015. *Suicide assessment and nurses: What does the evidence show?* American Nurses Association. http://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-20 doi:10.3912/OJIN

Boardman, A. P, Grimbaldeston, A. H., Handley, C., Jones, P. W., & Willmott, S. (1999). The North Staffordshire Suicide Study: A case-control study of suicide in one health district *Psychological Medicine,* (1), 27–33. doi:10.1017/s0033291798007430

Brazier, Y. (2020). What are suicidal thoughts? *Medical News Today*. https://www.medical newstoday.com/articles/193026.

Brent, D. A., Bridge, J., Johnson, B.A., & Connolly, J. 1996. Suicidal behavior runs in families. A controlled family study of adolescent suicide victims. *Archives of General Psychiatry*, 53, 1145–1149, doi:11.1232/0000-118C.72.4.371

Clayton, A. M. (2019). Prescription opioid misuse associated with risk behaviors among adolescents. *American Journal of Preventive Medicine,* 57(4), 533–539. doi.org/10.1016/j.amepre.2019.05.017

Cleveland Clinic. (2021). *Recognizing suicidal behavior*. https://my.clevelandclinic .org/health/articles/11352-recognizing-suicidal-behavior.

Cornette, M. M., Terri, A., deRoon-Cassini, G. M., Fosco, R. L., Holloway, D. C., & Joiner, T. E. (2009). Application of an interpersonal psychological model of suicidal behavior to physicians and medical trainees. *Archives of Suicide Research, 13,* 1–14, doi:10.1080/ 1381111080257180

Crosby, P., Ortega, R., & Melanson, B.C. 2019. Relational-level factors influencing suicidal behaviors among Korean adolescents. *Nursing Scholarship, 51*(6), 634–641 doi.org/10.1016/j.genhosppsych

De Catanzaro, D. (1995). Reproductive status, family interactions, and suicidal ideation: Surveys of the general public and high-risk groups. *Ethology and Sociobiology, 16*(5), 385–394 doi.org/10.1016/0162-3095(95)00055-0

Gilissen, R., De Beurs, D., Mokkenstorm, J., Mérelle, S., Donker, G., Terpstra, S., & Derijck, C. 2017. Improving suicide prevention in Dutch Regions by creating local suicide prevention action networks (SUPRANET): A study protocol. *Environmental Research & Public Health*, *14*(4), 1–9. doi:10.3390/ijerph14040349

Hong, M., Gang, M., & Lee, J. (2020). Effects of the Life-Love Program on depression, perceived burdensomeness, and suicidal ideation. *Collegian*, *27*(1), 102–108. https://doi.org /10.1016/j.colegn.2019.04.003

Jager, J., Putnick, D.L., & Bornstein, M.H. (2017). More than just convenient: The scientific merit of homogeneous convenience sample. *Monogr Soc Res Child Dev,* 82(2), 3-30. doi: 10.1111/mono.12296.

Joiner, T., Pettit, J. W., Walker, R. L., Voelz, Z. R., Cruz, J., & Rudd, M. D. (2002). Perceived burdensomeness and suicidality: Two studies on the suicide notes of those attempting and those completing suicide. *Journal of Social & Clinical Psychology*, 21, 531–545. doi:10.1521/jscp.21.5.531.22624

Joiner, T. Pettit, J., Walker, R., Voelz, Z., Cruz, J., Rudd, M., & Lester, D. (2002). Perceived burdensomeness and suicidality: Two studies on the suicide notes of those attempting and those completing suicide. *Journal of Social and Clinical Psychology*, 21, 531–545, doi:10.1521/ jscp.21.5.531.22624

Joint Commission National Patient Safety Goals, (2014). Retrieved from: 2014 NPSG

Poster Letter (va.gov).

Knowles, M. S. (1950). *Informal adult education*. Guide for educators based on the writer's experience as a programmed organizer in the YMCA. Association Press.

Knowles, M. (1984b). *The adult learner: A neglected species* (3rd ed.). Gulf Publishing.

Kukull, W.A., & Ganguli (2012). Generalizability: the trees, the forest, and the low-hanging. *Neurology,* 78(23), doi: 10.1212/WNL.0b013e318258f812.

Malik, S., Kanwar, A., Sim, L.A. (2014). The association between sleep disturbances and suicidal behaviors in patients with psychiatric diagnoses: A systematic review and meta-analysis. *Systematic Reviews, 3,* 18. doi.org/10.1186/2046-4053-3-18

National Institute of Mental Health. (2021). *Suicide.* https://www.nimh.nih.gov/health/statistics/suicide.

O'Brien, A. J., Hughes, F. A., and Kidd, J. D. (2006). Mental health nursing in New Zealand primary health care. *Contemporary Nurse,* 21, (1), 142-152. doi:10.5172/conu.2006.21.1.142

Pappas, C. (2013). *The adult learning theory - andragogy - of Malcolm Knowles*. eLearning Industry. https://elearningindustry.com/the-adult-learning-theory-andragogy-of-malcolm-knowles.

Pérez, V., Elices, M., Prat, B., Vieta, E., Blanch, J., Alonso, J., Pifarré, J., Mortier, P., Cebrià, A.I., Campillo, M. T., Vila-Abad, M., Colom, F., Dolz, M., & Palao, D. J. (2020). The Catalonia Suicide Risk Code: A secondary prevention program for individuals at risk of suicide. *Journal of Affective Disorders*, 05(01), 201–205. doi.org/10 .1016/j.jad .2020.03.009

Puskar, K. R., & Bernardo, L. (2002). Trends in mental health: implications for advanced practice nurses. *Journal of the American Academy of Nurse Practitioners,* 14, (5), 214–218. doi:10.1111/j.1745 7599.2002.tb00 116.x

Rafaella, C., Cohen, L. J., Schuck, L., Levy, D., Bloch-Elkouby, S., Barzilay, C., Rosenfield, P. J., & Galynker, I. 2020. The Modular Assessment of Risk for Imminent Suicide (MARIS): A validation study of a novel tool for suicide risk assessment. *Journal of Affective Disorders, 263,* 121–128.

Ream, G. L. (2020). An investigation of the LGBTQ youth suicide disparity using national violent death reporting system narrative data. *Journal of Adolescent Health*, *66*(4), 470–477. doi:10.1016/j.jadohealth.2019.10.027

Ricard, N., Page, C., & Laflamme, F. (2014). Advanced nursing practice: a must for the quality of care and mental health services *Sante Ment Que, 39*(1), 137–157. PMID: 25120119.

Simonetti, J. A., & Brenner, L.A. (2020). Promoting firearm safety as a suicide prevention strategy within healthcare systems: Challenges and recommendations. *Psychiatric Services*, *71*(3), 298–305. doi:10.1176/appi.ps.201900286

Sinyor, M., Williams, M., Mitchell, M., Zaheer, S., Bryan, C. J., Schaffer, A., Westreich, N., Ellis, J., Goldstein, B. I., Cheung, A. H., Selchen, S., Kiss, A., & Tien, H. (2020). Cognitive-behavioral therapy for suicide prevention in youth admitted to hospital following an episode of self-harm: A pilot randomized controlled trial. *Journal of Affective Disorders,* 266, 686–694. doi:10.1016/j.jad.2020.01.178

Turecki, G., & Meaney, M. J. (2016) Effects of the social environment and stress on

Glucocorticoid receptor gene methylation: A systematic review. *Biological Psychiatry*, doi:0.1016/j.biopsych.2014.11.022.

Us Department Veterans Affair, 2017. Retrieved from: https://www.mentalhealth.va.gov/docs/data-sheets/2017/New_York_Veteran_Suicide_Data_Sheet_2017.pdf.

Wilson, L. S. (2005). *A test of andragogy in a post-secondary educational setting*. LSU Doctoral Dissertations. 3916. https://digitalcommons.lsu.edu/gradschool_dissertations/3916.

World Health Organization. (2018). *Figure: Age-standardized suicide rates: male: female ratio (per 100,000).* http://www.who.int/gho/mental_health /suicide rates_male_female/en.

Van Orden, K. A., Lynam, M. E., Hollar, D., & Joiner, T. E., Jr. (2006). Perceived burdensomeness as an indicator of suicidal symptoms. *Cognitive Therapy and Research, 30*(4), 457–467. doi.org/10.1007/s10608-006-9057-2

Van Orden, K., Bender, T. W., & Witte, T. (2008). Suicidal desire and the capability for suicide: tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology.* doi:10.1037/0022-006X.76.1.72

Appendix A

Florida International University

Institutional Review Board Approval Letter

FIU | FLORIDA INTERNATIONAL UNIVERSITY

MEMORANDUM

To: CC:

From:

Date:
Protocol Title:

Dr. Monica Scaccianoce Ernesto Sarduy

Maria Melendez-Vargas, MIBA, IRB Coordinator

August 3, 2021

"The Development and Assessment of the Effectiveness of an Algorithm Designed for Patients that Test Positive for Suicidal Ideations in The Columbia-Suicide Severity Rating Scale to Decrease Suicidal Behaviors that Lead to Suicide Attempts. A Quality Improvement Project."

Office of Research Integrity Research Compliance, MARC 414

The Florida International University Office of Research Integrity has reviewed your research study for the use of human subjects and deemed it Exempt via the **Exempt Review** process.

IRB Protocol Exemption #: IRB-21-0348 **IRB Exemption Date:** 08/03/21 **TOPAZ Reference #:** 110530

As a requirement of IRB Exemption, you are required to:

1. Submit an IRB Exempt Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved prior to implementation.
2. Promptly submit an IRB Exempt Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
3. Submit an IRB Exempt Project Completion Report Form when the study is finished or discontinued.

Special Conditions: N/A

For further information, you may visit the IRB website at http://research.fiu.edu/irb.
MMV/em

Appendix B

Veteran Affairs Healthcare System

Institutional Review Board Approval Letter

MVAHS
MIAMI VA HEALTHCARE SYSTEM
PROUD TO SERVE VETERANS

Miami VA Healthcare System Human Studies Subcommittee

1201 Northwest 16th Miami, FL 33125-1693 305-575-3179 Fax: 305-575-3126

NOT RESEARCH

DATE: FROM To:

PROJECT TITLE: REFERENCE #:

SUBMISSION TYPE: REVIEW TYPE: ACTION:

February 10, 2021
Miami VA Healthcare System Human Studies Subcommittee Ernesto Sarduy, MSN, PMHNP-BC

Development for an Algorithm for Positive Suicide Screening based on current VA Columbia-Suicide Severity Rating Scale (CSSRS)

1601013-1

Other - Quality Improvement Administrative Review
NOT RESEARCH

The following items were administratively reviewed on 02/10/2021.

After review of the submitted documents, a determination was made that the activity described does not constitute research and no further research regulatory review is required. This review will be reported to the fully convened Human Studies Subcommittee (IRB) on 03/04/2021.

• VA - Project Cover Sheet - Development for an Algorithm for Positive Suicide Screening based on current VA Columbia-Suicide Severity Rating Scale (CSSRS) (UPDATED: 12/22/2020).

To ensure appropriateness of any poster/presentation or publication that may result from this activity, you must submit a copy of the materials to the Research Service IRB Office for approval prior to submission to the society/journal.

Considering recent events regarding data security, I take this opportunity to impress upon you the requirements of maintaining all information containing sensitive information behind the VA firewall and on VA servers. This should be standard practice for all VA employees, regardless of whether the activity is related to clinical duties, program evaluation or any other related activities.

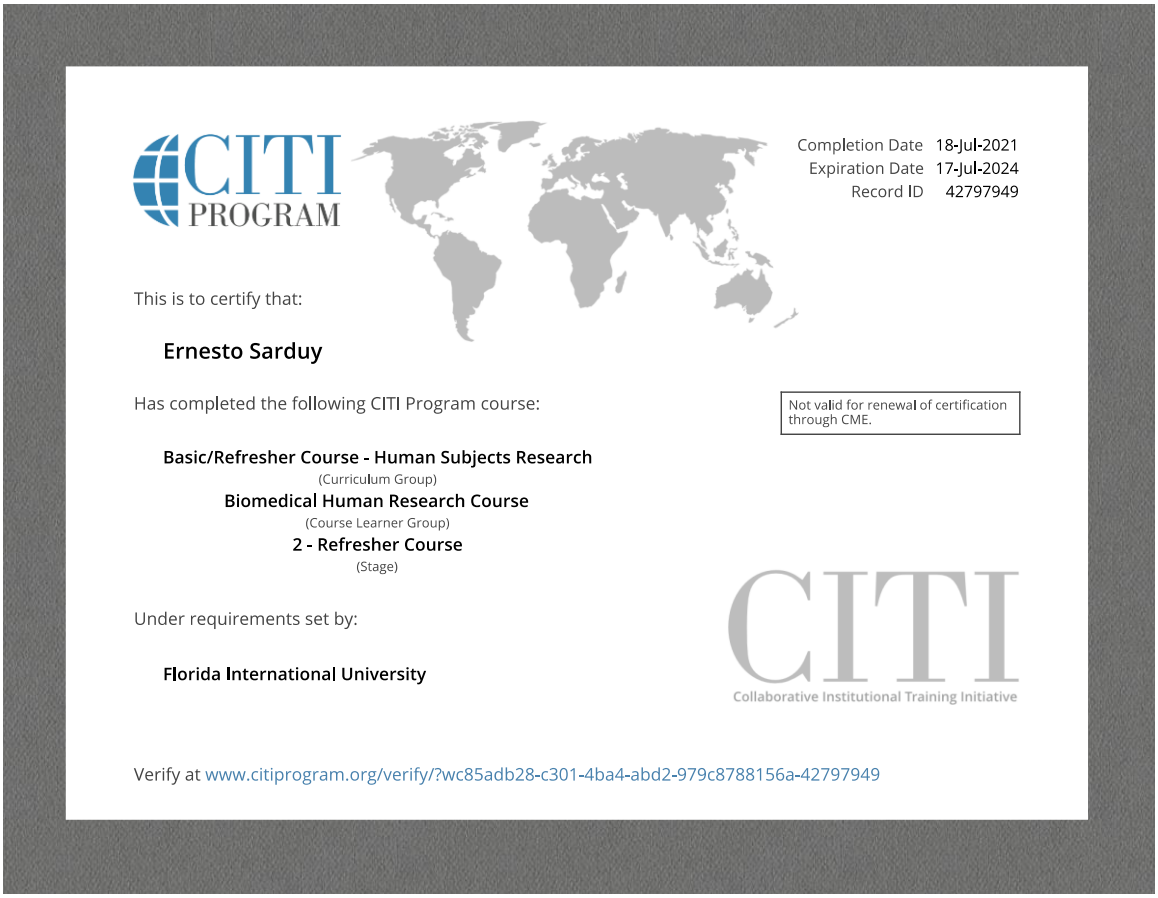
If you have any questions, please contact Eida Gomez at 305-575-7000, Ext 4278 or eida.gomez@va.gov. Please include your project title and reference number in all correspondence with this committee.

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Miami VA Healthcare System Human Studies Subcommittee's records.

Appendix C

Florida International University

CITI Certification



CITI PROGRAM

Completion Date 18-Jul-2021
Expiration Date 17-Jul-2024
Record ID 42797949

This is to certify that:

Ernesto Sarduy

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Basic/Refresher Course - Human Subjects Research
(Curriculum Group)
Biomedical Human Research Course
(Course Learner Group)
2 - Refresher Course
(Stage)

Under requirements set by:

Florida International University

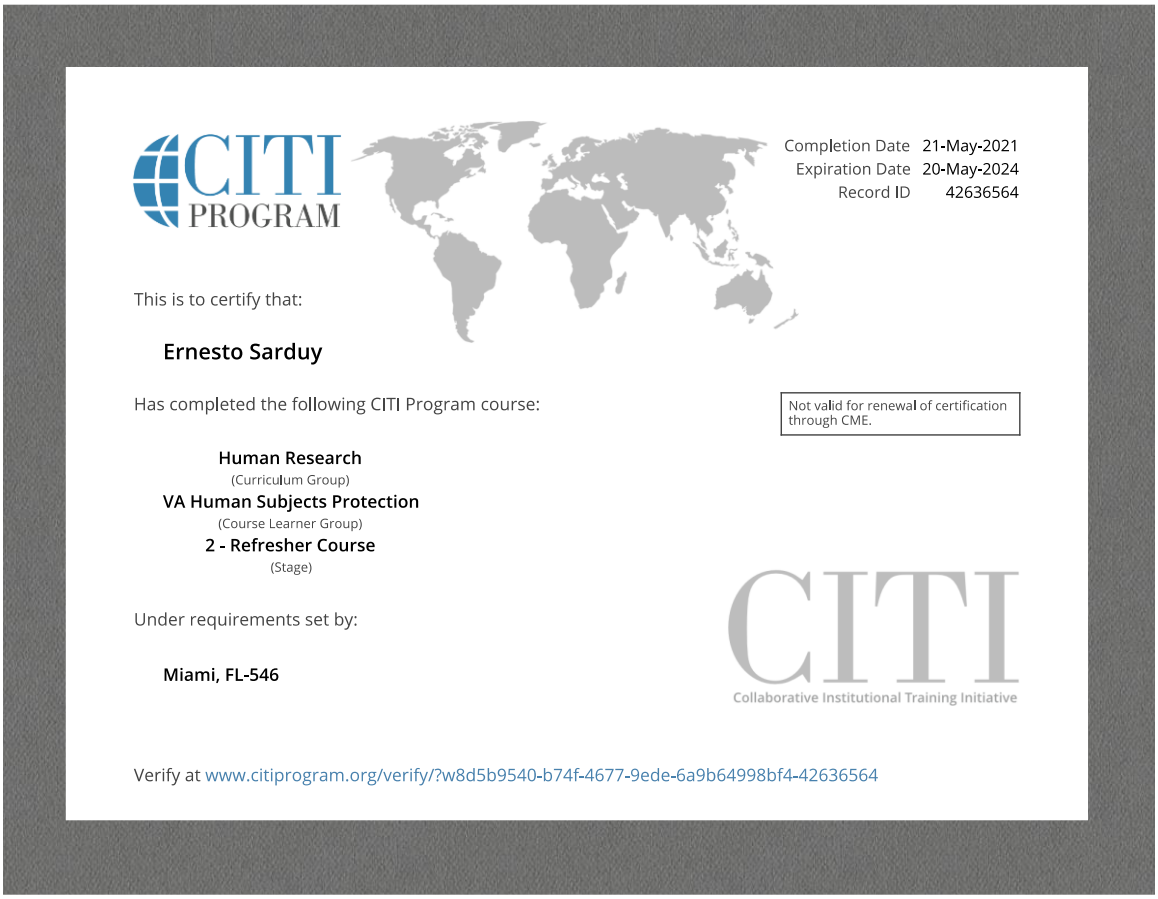
CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wc85adb28-c301-4ba4-abd2-979c8788156a-42797949

Appendix D

Veteran Affairs Healthcare System

CITI Certification



CITI PROGRAM

Completion Date 21-May-2021
Expiration Date 20-May-2024
Record ID 42636564

This is to certify that:

Ernesto Sarduy

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Human Research
(Curriculum Group)
VA Human Subjects Protection
(Course Learner Group)
2 - Refresher Course
(Stage)

Under requirements set by:

Miami, FL-546

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w8d5b9540-b74f-4677-9ede-6a9b64998bf4-42636564

Appendix E

Florida International University

Recruitment Email Letter

Recruitment Email for The Development and Assessment of the Effectiveness of an Algorithm Designed for Patients that Test Positive for Suicidal Ideations in The Columbia-Suicide Severity Rating Scale to Decrease Suicidal Behaviors that Lead to Suicide Attempts: A Quality Improvement Project

Dear Miami VA Healthcare System Nurses, and Ancillary Healthcare providers (Unit Secretaries, Nursing Assistants)

Your participation in a Doctor of Nursing Practice (DNP) Capstone Project is requested. The Capstone Project is being conducted by Ernesto L. Sarduy, MSN, PMHNP-BC, a DNP student at the Florida International University, Nicole Wertheim School of Nursing, and I am seeking information that will be useful in the field of nursing and other health and human services professions. The purpose of this performance improvement, DNP Capstone project is two folds. First, to develop an algorithm after the individual has tested positive for suicide in the C-SSRS tool. Currently, at the Miami VA Hospital in Miami, Florida uses the C-SSRS tool, but has no algorithm in place for healthcare providers to follow. The lack of a systematic, well organized, and designed algorithm for healthcare providers to adhere to for a positive screening for suicide, defeats the purpose of having a suicide screening assessment tool. Secondly, develop an educational lesson plan whose theoretical framework rest on andragogy education. This purpose aims at educating healthcare providers in not only the algorithm, but the logic of each action.

I anticipate the numbers of participants to be at least 62. If you decide to participate in this project, you will be asked to complete the demographic data sheet and sign a statement letter allowing me to collect your pre and posttest survey.

Your consent to participate in this Capstone Project is strictly voluntary. If you choose not to participate in the project, simply return the consent letter. Should you choose not to participate, or you choose to drop-out at any time during the project, there will be no adverse effects on your employment at the Miami VA Healthcare System.

There are no risks to you related to this Capstone Project. There are no direct benefits for you for participating in this Capstone Project. However, it is possible for you to gain knowledge of a positive suicide screening algorithm.

As a project participant, information that you provide will be kept anonymous and confidential, that is, no names or identifiers will be collected from the demographic form. Electronic data will be kept in the primary investigators secured password protected (encrypted) data base computer. Reports will be reported at professional conferences and in professional publications in aggregates (i.e., groups) form only.

If you have any questions or concerns regarding this Capstone Project or your participation in the project, you may contact me, Ernesto L. Sarduy at (305)-680-9798.

Thank you for your participation,

Ernesto L. Sarduy

MSN, PMHNP-BC

Florida International University

Appendix F

Florida International University

Researcher-Developed Demographic Instrument and Pretest/Posttest

PRE-TEST **POST-TEST**

QR CODE **QR CODE**

1. Please write your randomly assigned participant ID number (example: RN1)
2. What sex were you assigned at birth, on your original birth certificate?
   A. Female
   B. Male
3. Please select your ethnicity:
   A. African American
   B. White, Non-African American
   C. Hispanic/Latino
   D. Atlantic Islander
   E. Native American Indian
   F. Pacific Islander

4. Please select your discipline/profession required to attend the Educational Lesson Plan of the Suicide Algorithm
    A. Registered nurse
    B. Unit secretary
    C. Nursing assistant
    D. None of the above
5. Please select your highest level of education
    A. Associate degree
    B. Bachelor's degree
    C. Master's degree
    D. Doctoral degree
    E. Post-Doctoral degree
6. Based on the Suicide Algorithm's design, which of the following team member is responsible for activating the initial Patient Protective Isolation plan?
    A. Registered nurse
    B. Unit secretary
    C. Nursing assistant
    D. None of the above
7. Once the healthcare/non-healthcare provider interprets the result of the CSSRS tool and has confirmed that the patient has tested positive for suicidal ideation, what actions should be completed first?
    A. Call the physician immediately

B. Delegate to the unit secretary to call the attending and psychiatrist if a psychiatrist is on the case

C. Delegate to another registered nurse to call the physicians

D. Activate the suicide algorithm

8. The Registered Nurse will delegate to the Unit Secretary, as a member of the ancillary team, the role of the 1:1 sitter?

   A. True

   B. False

9. Based on the Suicide Algorithm's design, the Registered Nurse must provide the patient with suicide education and a suicide prevention hotline number.

   A. True

   B. False

10. Which of the following Suicide Algorithm team member would be responsible for activating the Protective Isolation protocol?

    A. Registered nurse

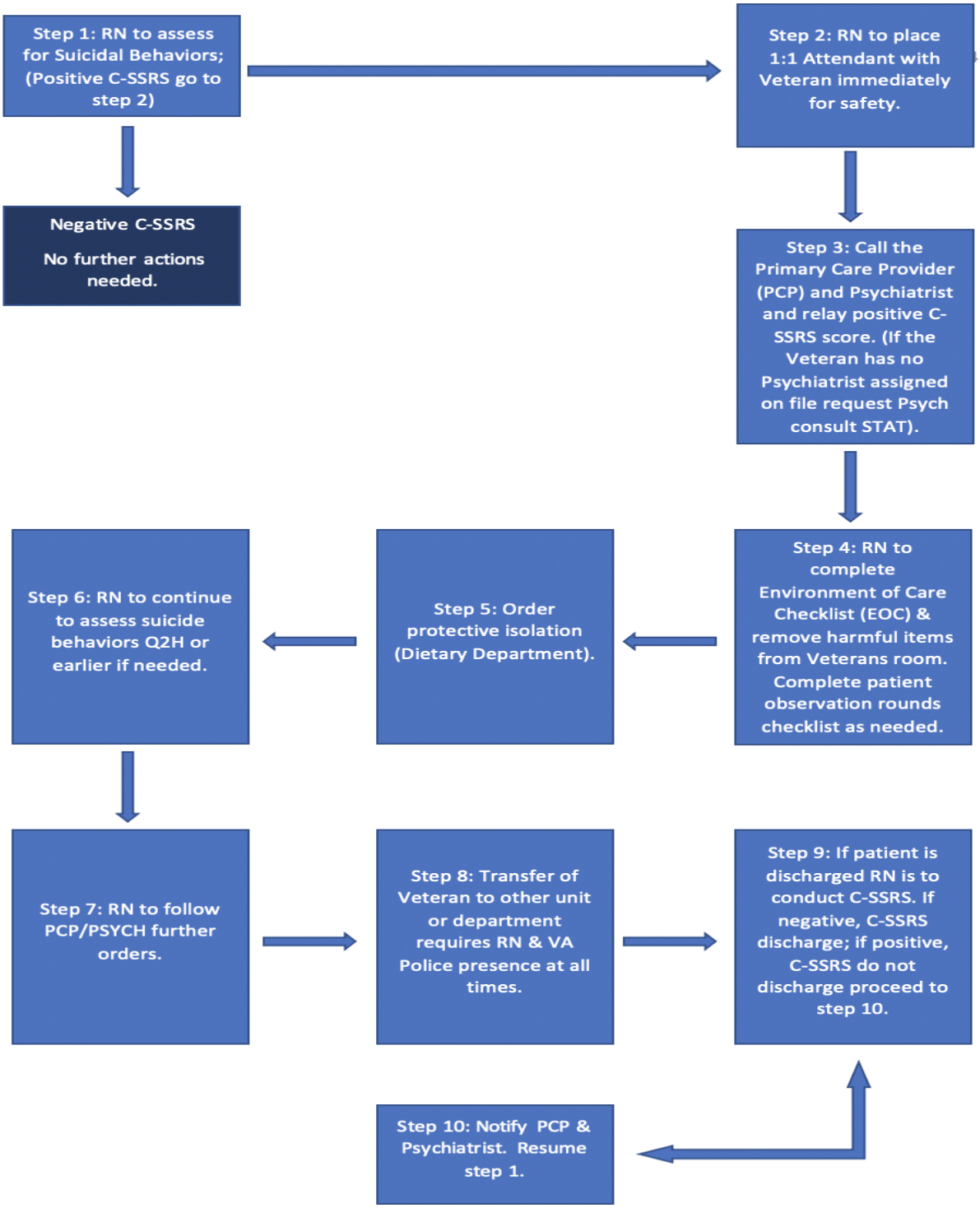
    B. Unit secretary

    C. Nursing assistant

    D. All of the above

Appendix G

Florida International University Algorithm



Appendix H

Florida International University CV

EDUCATIONAL BACKGROUND

Master of Science in Nursing – Florida International University, Miami, FL 2018-2021

Bachelor of Science in Nursing – West Coast University, Doral, FL 2014-2017

Focus Certified Law Enforcement Officer – Miami Dade College, Miami, FL 2013-2014

Associate of Arts – Campbell University, Camp Lejeune, NC 2011-2013

PROFESSIONAL EXPERIENCE

Post-Graduate Psychiatric Mental Health Residency – VA Healthcare System, Miami, FL. 2021

Medical Surgical/Telemetry Nurse – VA Healthcare System, Miami, FL. 2018-2021

Post-Baccalaureate Nursing Residency – VA Healthcare System, Miami, FL. 2017-2018