ADDRESSING STUDENT DEPRESSION ON CAMPUS: BARRIERS AND ASSETS

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DOCTOR OF NURSING PRACTICE

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ABSTRACT

Prevalence of depression among college students is noted to be approximately 30% per college and university campus with an overall national average for severe psychological problems, including depression, at approximately 86% (Field, Diego, Pelaez, Deeds, & Delgado, (2012). Outcomes of undiagnosed depression lead to heightened levels of stress and dangerous behavior patterns, such as drug and alcohol consumption, poor academic achievement, high rates of college dropout, chronic and progressive mental illness, and suicide (Deckro et al., 2010). Depression prevention is important for college student health because of the chronic, recurrent and progressive nature of the disease along with student academic success, college retention, and overall quality of life (Buchanan, 2013).

Purpose of this practice improvement project was to impact student health at North Dakota State University (NDSU). The project was accomplished by investigating students' depression-prevention practices, current practices for universities, and evidence-based practice. Several NDSU departments participated in the interviewing of staff members' investigation process for information gathering.

Depression prevention is imperative for emerging adults within the college and university system. Providing depression prevention strategies would not only benefit the student, but also the university with improved student retention. Recommendations for depression prevention are to employ a nurse practitioner specialized in mental-health, as this would fulfill the overall student mental-health care needs by utilizing a depression prevention model such as the Peden cognitive behavioral group intervention, depression education for students either individualized or classroom by adding a chapter regarding depression to University Studies 189, and provide mental-health care services.

Strategies for college and university student depression prevention practices were investigated at public university websites and published articles. Existing research was available through library access. Through this investigative research process, the Peden Cognitive Behavioral Group Intervention (CBGI) was determined to be a valid, evidence-based depression prevention model for college students.

Results and recommendations from this practice-improvement project were presented to NDSU stakeholders to advocate for a student depression model among university students. This practice improvement project examines the importance of being proactive with depression prevention along with evidence-based recommendations leading to healthier student populations, more student safety, and improved student retention.

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DEDICATION

This dissertation is dedicated to my sons, Samuel and Gabriel, who lost their lives together on December 24, 2008. Samuel, you always said, I should become some kind of a doctor, someday. It was not until your death that I truly listened to your sincere words. I never dreamt that I would become a nurse practitioner with a doctorate degree, much less have my graduation when it would have been your college graduation year. As bittersweet as this is, it truly should have been your turn. Thank you for giving me your turn. I will honor this gift of love for the rest of my days on earth and into eternity.

Although you boys physically departed from my presence, you are forever with me in spirit. Our forever bond of a mother and sons love, connected between heaven and earth, is the lifeline for me to live among the living and see this journey to its end. Even though I deeply miss you both every day of my life, thank you for being my precious, beloved angels. I could never have accomplished this degree without you two. I love you, Samuel and Gabriel.

Love,

Mom

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CHAPTER ONE. INTRODUCTION

First-Year College Student Adjustments and Stressors

According to the World Health Organization (WHO), depression is among the most burdensome diseases in the world (Katon & Ciechanowski, 2013). In the United States (U.S.), combined clinical and environmental depression prevalence is 3-5% among males and 8-10% among females. Economic impact is also enormous, with U.S. estimates for annual costs attributable to depression exceeding $12 billion for treatment, $8 billion for associated morbidity, and $33 billion for lost earnings and work-related productivity (Lyness, 2012). In conjunction with depression, anxiety is a contributing factor in the development of depression (Mahmoud, Staten, Hall, & Lennie, 2012). Overall, an estimated 40 million American adults struggle with anxiety, and 75% experience their first episode of depression by age 22 (Mahmoud et al., 2012).

Another population at risk for depression and experiencing such staggering statistics is college students. National dropout rates for college freshman continue to climb and approach the 30% mark (Thompson & Mazer, 2009). Field, Diego, Pelaez, Deeds, and Delgado (2012) found, in a 2005 national survey of college counseling centers, that 86% of colleges reported an increase in severe psychological problems including depression. Major Depressive Disorder (MDD) first surfaces in late adolescence or early adulthood, and often increases the challenges of first-year students and college student retention (Field et al., 2012). Research among college student populations supports findings that indicate a relationship between heightened levels of stress and behavior patterns may compromise health and well-being (Deckro et al., 2010). For college students, increases with stressful life events have demonstrated association with depression and

anxiety. In turn, depression and anxiety are significant predictors of suicidal ideation and hopelessness among stressed college and university students (Deckro et al., 2010).

Depression

Depression is defined as a low mood marked by a loss of interest or pleasure in living (Venes et al., 2013). Deeley and Love (2012) further define depression as a tendency for low emotion and self-confidence, thereby forming the primary foundation of suicide processes. Depression is a significant perennial problem among college students; other mental disorders, such as anxiety, also present common, significant health and educational risk factors on college and university campuses (Chung et al., 2011). Chung et al. (2011) indicate that the rates of college students who reported receiving a diagnosis of depression within the past 12 months increased from 10% in Spring 2000 to 15% in Spring 2008. Findings from the Spring 2008 National College Health Association Survey indicated that 9% of students seriously considered ending their lives during the preceding 12 months (Chung et al., 2011). Other studies suggest that the number of college students diagnosed with depression increased from 10% to 15% between 2000 and 2006 and report that suicide is the second leading cause of death among college students, resulting in 1,100 lives lost each year (Mahmoud et al., 2012).

Suicide and attempted suicide remain global issues (Dilli, Dallar, & Cakir, 2010). Although the overall U.S. population size has remained relatively stable since the 1950s, the suicide rate has more than tripled. In the United States, one youth dies as a result of suicide every two hours and three minutes (King, Strunk, & Sorter, 2011). According to the World Health Organization, suicide claims the lives of nearly one million people worldwide. This statistic roughly corresponds to one death every 40 seconds ("WHO," 2013). Kokkevi, Rotsika, Arapaki, and Richardson (2011) report that suicide rates among U.S. adolescents rose fourfold

from the 1950s to the 1980s, from 2.7 (per 100,000) in 1950 to 11.3 in 1988. This statistic was followed by a decline between 1990 and 2003, from 9.5 to 6.8 in the 10-24 age group. A new increase of 8%, from 6.8 to 7.3, was reported in 2004 noted especially among 10-19 year-old girls. As stated by the WHO, "all predictions show that a dramatic increase in suicidal behavior is to be expected in the coming decades unless effective preventive measures are put in place" (Kokkevi et al., 2011, p. 231).

Known comorbidities with depression include psychiatric disorders, such as substance abuse, and past suicide ideation and behavior; family factors and other life stressors of adolescence compound the challenges for at-risk youth (Skinner & McFaull, 2012). Life stressors involve frequent experiences of adolescent bullying behaviors, social media, and mental healthcare availability (Katz et al., 2011). Transitioning into independent life among this population is another component of stress.

From a developmental perspective, typical first year college students are between the ages of 18 and 24 years and have been described as "emerging adults" (Mahmoud et al., 2012, p. 149). Emerging adulthood is a developmental stage that is characterized by the transition from late adolescence to adulthood. According to Mahmoud et al. (2012) this transitional stage is considered stress arousing and anxiety provoking because the transition requires the development of new skills for maintaining independence and self-sufficiency, managing new tasks, along with developing and maintaining intimate relationships. Pillay and Ngcobo (2010) further indicate that young college and university students' developmental levels are also associated with vulnerabilities related to the various challenges that are associated by their inadequate ways of dealing with stress and social situations. Unfortunately, failure to

accomplish these developmental tasks may result in life dissatisfaction as an emerging adult during the first year of college, leading to depression and college dropout.

Anxiety

Anxiety is defined as an uneasy feeling of discomfort or dread accompanied by an autonomic response such as apprehension (Venes et al., 2013). Copstead and Banasik (2010) provide additional clarity by defining anxiety as having irrational fears that promote great potential to cause disabilities for affected individuals. Anxiety can be debilitating for college students, especially during the transitions that accompany the first year of college. Because anxiety is the most common comorbid diagnosis with depression (Judah et al., 2013), both depressed mood and anxiety can develop into comorbid pathological outcomes. Comorbidities between anxiety and depression among college and university students are as common as they are among the general adult population. The incidence of depression in university students is 27%, and 47% of those students also have high anxiety ratings (Field et al., 2012). Furthermore, first-year college students experience high levels depression, anxiety, and stress that predict higher levels of subsequent physical illness and lower academic success (Park, Edmondson, & Lee, 2012).

Stress

Stress is defined as any physical, physiological, or psychological force that disturbs equilibrium (Venes et al., 2013). Stressors may include perceptions; emotions; anxieties; and interpersonal, social, or economic events that are considered to threaten one's physical health, personal safety, or well-being. Stress among first-year college students is a major issue because freshman students are challenged with a variety of academic, social, and personal endeavors (Oman, Shapiro, Thoresen, Plante, & Flinders, 2008). Deckro et al. (2010) found that stress is a

significant contributor for psychological issues among college students as they sort through a variety of academic, personal, and social pressures. Furthermore, heightened stress levels compromise physical and mental health (Deckro et al., 2010).

Transitional stages of life are thought to be the gateway into adulthood. This phenomenon may very well be the case. However, during college and university transitions, freshman students are faced with adjustments of challenging course work beyond their experienced high-school level, making new friends and attending classes with all new students, developing new social networks, and meeting higher goals and expectations for academic grades. Through this newfound transitional process, many college students also struggle with loneliness and homesickness (Park et al., 2012).

Homesickness

Distress and functional impairment caused by an actual or anticipated separation from home and attachment objects, such as parents and friends, are known as homesickness (Thurber & Walton, 2013). Homesickness is a significant source of distress and impairment for college and university students (Thurber & Walton, 2013). Adjustment encountered by freshman students leads to homesickness and parallels the development of stress, anxiety, and depression. The components of homesickness may segue into behavioral, emotional, cognitive, and physical problems that warrant clinical attention to prevent depression (Park et al., 2012).

Taskforce

The United States Preventative Services Task Force (USPSTF) has recognized the critical need for early detection of adolescent depression (Williams, O'Connor, Eder, & Whitlock, 2009). Williams et al. (2009) discuss Major Depressive Disorder (MDD) as a debilitating condition with increasing prevalence among youth, particularly adolescents. The prevalence of

depression among adolescents is 6% with a lifetime prevalence of adolescent MDD as high as 20%. Adolescent-onset MDD is associated with an increased risk of death by suicide, suicide attempts, and the recurrence of major depression by young adulthood. Therefore, mass screening in primary healthcare settings could help primary-care providers identify missed cases, initiate appropriate treatment, and make mental healthcare referrals (Williams et al., 2009). In addition, coping with stress has been identified as a high priority for the Healthy Campus initiatives of the American College Health Association (Oman et al., 2008). Initiatives focus on the need to improve access to quality mental-health services and also to increase primary-care structured screening and treatment for mental disorders. These recommendations are relevant for first-year college students at a time when rising needs for clinical intervention are apparent with immediate mental healthcare efforts requiring to be maximized (Chung et al., 2011).

Problem

Despite increased awareness about the harmful effects of untreated depression, many first-year college students are being inadequately treated or untreated. Inadequately treated depression, unfortunately, results in college dropout and worsening overall health outcomes such as suicide. According to Chung et al. (2011), inadequate treatment and a lack of coordination among health and counseling services on college campuses increase the risk of violent or suicidal episodes. Students receiving varied forms of treatment for clinical depression or other mood disorders remain low, with only 34% reporting any form of treatment in a recent national survey (Chung et al., 2011). High-quality mental-health services are a readily apparent need, yet many campuses experience challenges providing this coordinated mental-health service. These challenges include the lack of awareness, available healthcare providers who are skilled in mental-health treatment, and funding.

Purpose

The purpose of this practice-improvement project is to evaluate inconsistencies between current practice and evidence-based knowledge for North Dakota State University (NDSU). The intended outcome of the project is to improve students' mental-health and to improve student retention. In addition, Healthy Campus 2020 cited the need for improving access to quality mental-health services, structured screening, and treatment for mental-health disorders (Chung et al., 2011).

Adolescence through young adulthood is a proliferous growth period. Adolescents encounter role changes and expectations in all domains of their youth or state of young adulthood. At this point in one's life span, sensitivity and the fear of rejection when acknowledging the symptoms of mental-health can be intimidating. Thus, refusal to discuss and seek help explains the development of internalized disorders and stressors such as depression, school dropout, and suicidal behaviors (Marston, Hare, & Allen, 2010). "Researchers have found a robust link between a lack of social support and poor mental-health outcomes"(Marston et al., 2010, p. 961).

Project Aim

The project is guided by the following aim:

1. To evaluate inconsistencies between current practice and evidence-based knowledge, and to provide recommendations in order to improve student outcomes.

CHAPTER TWO. REVIEW OF LITERATURE

Clinical depression is the primary foundation for suicidal processes, making this condition a hallmark indicator of suicidal behavior (Bhui, Dinos, & McKenzie, 2012). Along with depression being a leading contender for the foundation of suicide, complex developmental processes and related risk factors further feed into depression. Clinical depression creates low emotion and self-confidence, often leading to hopelessness and despair. Other risk factors for suicide include substance abuse, conduct disorder, aggression, and previous suicide attempts (King, Hill, Wynne, & Cunningham, 2012). Thus, suicidal processes are set forth within the youthful cognitive mind (Deeley & Love, 2012). Research has indicated that the early detection of depression among children and adolescents is an effective suicide prevention strategy (Dilli et al., 2010).

Pathophysiology

To compound all the challenges faced by adolescents and young adults, there are also the growth changes that are occurring in this population. Adolescence is a challenging period of cognitive, biological, and physiological transition, occurring between 10 and 19 years of age (Pompili et al., 2012). Cognitive development with brain maturity remains to be studied. Brain chemistry, circuitry and maturation continue to develop well into the early 20s (Forbes & Dahl, 2011). Forbes and Dahl's (2011) research indicates that adolescents with depression exhibit reduced reactivity in the striatum in response to decision-making, anticipation, and futuristic thought-process outcomes. Therefore, this transition into adolescence and early adulthood leads to needs for independence, identity formation, and acceptance by peers. Desired independence, identity establishment, and peer acceptance all contribute to risk-taking behaviors, school and college dropout, suicidal ideation, and suicidal behavior.

Prevalence of Depression Among College Freshmen

Approximately 5-7% of the U.S. population is diagnosed with serious mental illness involving major depression, bipolar disorder, and schizophrenia spectrum disorders. College enrollment for persons with various mental illnesses continues to increasingly occur due to this population's high interest in obtaining higher education (Salzer, 2012). Mental illness, including depression, initially manifests in early adulthood, presenting during or shortly before college age (Field et al., 2012).

According to Field et al. (2012), in a 2005 national survey of college counseling center directors, 86% reported an increase in mental-health issues, including depression and anxiety. Salzer (2012) indicated that 86% of students with mental illness withdraw from college prior to completion of their 4-year degree, compared nationally to a 45% withdrawal rate for the general student population. With such high rates of mental-health student withdrawal, colleges and universities are concerned about how to address the needs of these students and college retention (Salzer, 2012).

Causes of Depression Among College Freshmen

Adjustment to new academic expectations, social pressures, and personal challenges leads to increased stress. Freshman students are, for the first time, living apart from their parents (Oman et al., 2008). According to Park et al., (2012), new college students struggle with homesickness and loneliness. Lenz (2010) discusses that the greatest percentage of college students with significant depressive symptoms are first-year students who are stressed due to separation from home and the new demands faced as college students. Research provided by Deckro et al. (2010) indicates that the causes of mental-health disease conditions are a complex interaction between genetic and behavioral factors as well as stress.

Consequences of Depression Among College Freshmen

Oman et al. (2008) report that, in 2004, stress was the most commonly identified impediment to academic performance by one-third (32%) of nearly 50,000 students surveyed at 74 U.S. campuses. Among college freshmen, high levels of distress have been associated with multiple adverse outcomes, such as depression, anxiety, suicidal ideation, hopelessness, poor health behaviors, increased headaches, sleep disturbances, increased rates of athletic injury, viral illnesses, and staggering college dropout rates. An ultimate consequence of depression, especially if undetected, is suicide (Weitzman, 2004). Given these findings, attention is directed toward the development of effective approaches to manage stress in college populations (Deckro et al., 2010).

Risk Factors

Primary risk factors for depression include overall stress along with the preexistence and/or existence of mental illness. An estimated 26% of Americans aged 18 and older, or approximately 1 in 4 adults, experience symptoms associated with a diagnosable mental illness in any given year (Salzer, 2012). Mental illness clearly affects academic success and leads to poor retention in higher-education settings that is largely attributed to a lack of mental illness detection. According to Salzer (2012), fewer than half the students with mental illnesses seek mental-health services.

Theoretical Framework

The Health Belief Model (HBM) originated during the 1950s as a framework for determining why certain individuals or populations take initiatives towards their health and well-being while others do not take active measures. The HBM was derived from cognitive theory conceptualizing the belief that reinforcements and consequences for behavior are important

within the life space of certain individuals or populations. This value expectant theory relays the following interpretations: "(1) The desire to avoid illness or to get well (value) and (2) the belief that a specific health action available to a person would prevent (or ameliorate) illness (expectation)" (Janz, Champion, & Strecher, 2002, p. 47).

The lack of early standardized mental-illness services is believed to be largely due, in part, to the absence of a preventative depression intervention. A preventative model provides the steps for coordinated mental-health services and early treatment. Implementing a depression prevention model for mental-health promotion and disease prevention for coordinated mental healthcare identifies students' mental-health disparities yet supports their specific level of treatment need. Healthcare providers who detect and start early treatment strengthen the health and well-being of students while demonstrating support for the HBM initiatives of health and healing.

This practice-improvement project focuses primarily upon three variables for the prevention of untreated depression. However, structured within the HBM are seven variables. Three variables from the Health Belief Model provide a primary role, honing into the core of the depression-prevention action plan. They are perceived benefits of action, perceived barriers to action, and perceived threat of a disease. Linkages to these three variables result in the sum of all seven variables and determine the individual's course of action or, perhaps, the lack thereof.

The changing nature of the developmental stage for an emerging adult likely places this population within an array of the seven variables. Acknowledging susceptibility to illness comes with growth and maturity. Transitional stages make it difficult to identify direct awareness of phase level or variable involvement in the HBM. Depending upon individual maturity and life experiences, a first-year college student could fall anywhere among the seven variables.

Coordinated mental healthcare can bridge the gap between these variables during stages of transition.

Perceived susceptibility

The first variable refers to one's belief regarding the chance or likelihood of getting a disease (Janz et al., 2002). Emerging adults may or may not have an understanding of their susceptibility. Examples of perceived susceptibility would include a personal understanding of adjustments and possible difficulties, awareness of stress and additional symptoms, realizing one's ineffective coping skills, and accepting this possible challenge as a first-year college student.

Perceived severity

Perceived threat of disease is the second variable. This variable has important components involving perceived susceptibility to the disease and the students perceived seriousness of the disease and the potential negative collegiate outcome (Janz et al., 2002). Examples of perceived severity include concerns about developing depression, developing anxiety, and recognizing stress and adverse effects of stress such as unhealthy behaviors.

Modifying factors can have an influential impact regarding the likelihood of an action through perceived benefits and perceived barriers. Modifying factors are those individualized features of each person or population, such as demographic variables (age, sex, race, and ethnicity), psychosocial variables (personality, social class, peers, and peer pressures), and structural variables (knowledge and prior contact with the disease). Modifying factors also influence the perceived severity (Janz et al., 2002).

Perceived benefits

Perceived benefits of action describe or explain why an individual engages in an activity or behavior (Janz et al., 2002). Examples of perceived benefits include seeking healthcare for symptoms of mental or physical illness to protect a person from disease; participating in healthcare treatment regimens to alleviate negative outcomes, such as poor health and college dropout; maintaining a healthy mental outlook and physical well-being to promote increased self-esteem; and wellness to provide increased quality of life. Determining the beliefs and practices of college students and healthcare providers at student health and counseling services utilizing a depression prevention model can provide proactive mental-health services for transitioning freshman students, thus reducing college dropout.

Perceived barriers

Perceived barriers to action are affect intentions for engaging in a particular healthcare activity (Janz et al., 2002). Barriers that could lead to adverse outcomes include not gaining departmental approval to implement the depression prevention model at the college or university's student health department, resistance to change by staff personnel, resistance by students, and the stigma of ill mental-health. There is an increased likelihood for the student to participate in the recommended preventive-health action if the perceived benefits outweigh the perceived barriers.

Cues to action

Indicators, or cues, to action are the external stimuli that prompt an awareness and influence one's perception about the pending threat of disease (Janz et al., 2002). Examples of indicators and cues include poor scores and grades, risky behaviors, advice from others, experience from family and friends, and media advertisements. The realization of potential

adverse health and poor academic outcomes is a strong cue perpetuating motivation to take action.

Self-Efficacy

This final variable involves the motivation within one's self to successfully take the necessary steps and behavior changes to produce positive outcomes (Janz et al., 2002). Examples of self-efficacy are seeking healthcare assistance; seeking counseling; being involved with a support group; and avoiding unhealthy, dangerous, or risky behaviors. Results of positive outcomes would be passing grades, school retention, healthy students, and an improved quality of life.

Congruence of the Project to the Organization's Strategic Plan/Goal

A meeting was held on July 11, 2013, between the NDSU Departments of Student Health Services and Counseling Center to discuss first-year college student retention. I, the writer for this project, attended the meeting, too. During the meeting it was reported that North Dakota State University experienced a 35.04% overall dropout rate with a 64.96% retention rate. The financial loss to NDSU for the academic year of 2011/2012 equaled the sum of $250,935.50. Appendix E provides these statistic details. A concern regarding mental-health access and care was discussed. Depression was the main concern regarding first-year college retention. Each NDSU department expressed its willingness to coordinate mental healthcare shared between clinics, focusing primarily upon depression symptoms. The director of NDSU's Student Health Services was open to a practice- improvement project for determining evidence-based mental healthcare practices that could be utilized between departments to provide preventive streamlined care for first-year college students.

CHAPTER THREE. PRELIMINARY COMMUNITY NEEDS ASSESSMENT

In order to fully understand depression and foster individual mental-health behaviors, the policies, systems, and environments that promote and encourage healthy choices need to be evaluated. Guided and encouraged by the vast research knowledge of Dr. Molly Secor-Turner, Ph.D., RN, the purpose of this assessment is to provide an awareness regarding depression with beneficial outcomes for prevention recommendations. An executive summary is written with the overall completion of this needs assessment and practice improvement project.

Methods

Nursing 715: Advanced Community Assessment, a graduate course, involved an assignment to conduct a preliminary community needs assessment of interest. My selected area of interest was depression and suicide prevention. Although this course was taken during Fall 2012, continued passion for learning more about depression allowed further study of my chosen area of interest. Three methods were selected: key informant interviews, focus group(s), and secondary data. Focus-group participants were comprised of a local adolescent support group.

Key-informant interviews were comprised of professionals directly involved with the targeted population. Key informants provided a unique knowledge base. The informants who were interviewed were a pediatric psychiatrist and child social worker from Southeast Human Services, a pediatric oncologist from Sanford Health, a pediatric registered nurse and child social worker from Fargo Cass Public Health, and one adult acquaintance of a teenage suicide victim who is also the father of the adolescent who founded and coordinated the Walk-A-Thon: "Hope. Save. Ignite." in 2012. The questions presented to these key informants were of an open-ended design, allowing for elaboration of experiences, either professional or personal, which led to further questions and conversation.

The second method used was a focus group at "Hope. Save. Ignite." This focus group was a planned walk-a-thon that was orchestrated by a student who lost a friend as a result of a suicide in September of 2012. Total attendance for this group was approximately 20 to 25 adolescents. "Hope. Save. Ignite." was held at Lindenwood Park in Fargo, North Dakota. Of the approximated total walk-a-thon attendees, five adolescents, including three females and two males, were interested in participating in the discussion about suicide prevention. These teenagers walked and freely spoke about their perspectives of teenage issues; challenges; stress; coping strategies; emotional growing pains; support systems or the lack thereof; suicidal thoughts and ideation; self-harm behaviors, such as cutting; and perceived barriers to seeking help during a time of crisis. Due to the nature of the event and flow of conversation, no taped recording or direct writing of statements was documented to prevent inhibitions or intimidations. The focus group was casual and comfortable for the purpose of ease with free-flow conversation and time spent remembering a beloved friend.

The third method was secondary data review. Secondary data analysis was by state records and documents for North Dakota and Minnesota vital statistics. State records are public domain.

Results

Key-informant interviews and focus-group discussions were of benefit for learning about the targeted population. The informants had similar information with some differing data perspectives. Various views enhanced the overall perspectives to consider additional needs and the causes of barriers. The adolescent focus group provided an adolescent lens. Viewing adolescent struggles and suicidal perspectives through the eyes and voices of teenagers, spoke volumes.

Areas of needs were identified. The main findings, or contributing factors, included a lack of primary healthcare provider awareness and education, a lack of a treatment tool for primary healthcare providers, a lack of community awareness and education, a lack of adolescent and peer awareness and education, and inadequate mental-health care insurance coverage for both the private and public sectors. Issues among primary healthcare providers, families or caregivers, and the community at large include the lack of an understanding about suicide prevention. Key informants indicated a need for all healthcare providers to initiate early assessment for the detection of depression or the beginning symptoms of mental illness incorporated during every healthcare encounter.

An evidence-based depression-prevention model would help guide the healthcare providers and counselors in the coordinated care for depression treatment. This model would be valuable within the college, university, and healthcare systems.

Prioritization

Prioritization of potential needs for intervention and development was based upon collaborative input from key informants and the focus group. The key informants emphasized the need for early detection of the warning signs and risk factors through the primary care provider so mental healthcare can be provided during the early recognition time. The focus group seemed to emphasize this need as well since the teens were not aware of their deceased friend's depression and suicidal decision prior to the death. A second priority would be primary-healthcare provider education and training to promote ease of conversation for family history obtainment and suicide education. The third priority was community awareness and education to lift the stigmatization of suicidal behaviors and self-harm, thus endorsing the message that it is appropriate and healthy to openly talk about suicide with all healthcare providers, family,

caregivers, friends, teachers, coaches, and peers. Following healthcare provider and community awareness education would be adolescent and peer education so that positive support and encouragement to seek mental-health care can be initiated through peer interaction. This overall education and awareness would, hopefully, reduce, if not eliminate, the fear of rejection, secrecy, and death.

The information learned during the preliminary community needs assessment inspired the opportunity for a doctoral practice-improvement project. As a future healthcare provider, I pondered the impact of depression and the importance for suicide prevention in future clinical practice. Being a graduate student and having had the student nurse practitioner role for the NDSU Student Health Services Department, I discovered a connectedness between the needs assessment and challenges incurred by first-year college students as emerging adults. Enlightened information and experiences encountered as a student nurse practitioner launched the desire to conduct a practice-improvement project to evaluate the inconsistencies between current practice and evidence-based knowledge. Once this evaluation has been thoroughly completed, recommendations will be provided to improve student outcomes.

Evidence-Based Practice-Improvement Project Plan

Because this policy-related scholarly project is to improve college and university awareness proficiency for the early recognition of depression and because suicidal ideation was, therefore, considered the priority need, the recommendation for initiating the process would be to develop an evidence-based policy regarding depression for university awareness, understanding, and education purposes. Addressing student depression on campus by determining barriers, assets, university mental-health services, and current evidence-based practices is the primary action plan for this project.

Project design

The project utilizes the Iowa Model of Evidence-Based Practice. This model guides the practice-improvement project through the awareness of a knowledge trigger from research findings when developing improved university student policy. The Iowa Model is a three-step process.

Step one: Identification of a knowledge focused trigger through research findings.

Step two: Review and critique relevant literature.

Step three: Identify research evidence that supports change.

Setting

Stakeholders serving North Dakota State University in Fargo, North Dakota, will consider the evidence-based depression-prevention model and recommendations on behalf of their academic course requirements, student health clinic practices, and counseling services. The student population at this university consists primarily of Caucasian and various international college students with a mean age of 19 years for first-year students. Approximately 12,000 students are registered for the 2013/2014 academic year.

Project outcomes

The report will be used by stakeholders who serve students, student advocacy at the institutional level, and state funding for mental healthcare. This practice-improvement project is to, overall, support students in their university adjustments and mental-health needs, strengthen academic endeavors, and improve student retention.

Implementation

The findings and recommendations will be disseminated through a university-stakeholder meeting and a written document.

Project Timeline

The timeline dates for my practice-improvement project were the following:

November-December 2013: Identify the problem (need for improved college-student depression treatment and care: Depression care policy for NDSU). Write the proposal.

January 2014*:* Have the proposal meeting.

February 2014: Obtain approval.

March 2014: Evaluate the current practices and evidence-based knowledge.

May 2014*:* Write recommendations.

June-August 2014*:* Present and provide recommendations to the stakeholders.

September-October 2014: Completion of chapters 4-6 of dissertation paper.

November-December 2014*:* Submit dissertation to committee members.

January 2015*:* Final defense of dissertation

Protection of Human Subjects

Prior to implementation of this practice-improvement project, exemption status for NDSU IRB was established. An NDSU IRB meeting was held on February 11, 2014 to discuss this project. It was determined at this meeting that since this project only involved public information as part of the requested research, there was no need for IRB processing.

The second exemption category indicated criteria pertaining to research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior for which subjects cannot be identified directly or through coded identifiers, or, if they can be identified, disclosure of their information/responses outside of the research project would not reasonably place the subjects at risk of criminal or civil

liability, or be damaging to their financial standing, employability, or reputation. Research involving the use of survey procedures or interview procedures or observation of public behavior for which subjects cannot be identified, or release of the information would not be harmful to the subject (Institutional Review Board, 2013, p.3). Data collection will [not] include any information which may directly or indirectly identify participants (Institutional Review Board, 2013, p. 3).

CHAPTER FOUR. EVALUATION

Data collection to evaluate NDSU assets and barriers involved an eight-step process. This process began with including areas of information gathering from public-university websites; volunteer student discussions; and individually scheduled key informants who worked in the areas of Student Health Services, the Counseling Center, Student Affairs and Faculty Development, Student Success, and Enrollment Management. The steps were as follows:

Step One: Project-planning meeting

Step Two: NDSU internet search

Step Three: Key-informant interviews

Step Four: Student discussions

Step Five: Search prevention models and evidence-based practice

Step Six: Summarize the findings with a pamphlet

Step Seven: Stakeholder meetings to disseminate findings

Step Eight: Revisions resulting from the stakeholders' feedback

Project-Planning meeting

This process began with a project-planning meeting with individuals from the student health clinic and Counseling Center. The meeting's purpose was to shape the project with the people who work within mental-health. People present at the meeting were Donna Morrison, M.M., LRD, Director of Student Health Services and her successor, Patricia Dirk, MBA; Donna Lipetzky, RN, BSN, Lead Registered Nurse for Student Health Services; Anne Bodensteiner, M.S., Health Promotion Specialist for Student Health Services; and William Burns, Ph.D., the Director of the Counseling Center. The meeting was held in the Wallman Wellness Center's boardroom. NDSU Health Promotion Specialist Anne Bodensteiner presented the main meeting

topic regarding an understanding of and targeting the concerning decreased NDSU student-retention rates. The meeting consisted of a brainstorming session to determine what kind of help or services could be considered and eventually initiated to improve retention for students who are struggling with mental illnesses. Various options were presented for a mental healthcare project. Investigating student depression on campus, assets and barriers, was discussed to determine options for recommended mental healthcare programs.

NDSU internet search

To gain an understanding of the services related to student depression and mental illness that are available on the NDSU campus, a comprehensive review of the university website was conducted. Using this publicly available information, data specifically addressing information pertaining to depression education and awareness, available help and services, methods of early detection, collaborative support, and preventative depression measures were collected. Data were recorded on paper ledgers and then entered into a computer file for further evaluation.

Key-Informant interviews

Key-informant interviews were arranged by sending separate email invitations to each key individual. Of the 12 invitations, 10 key informants participated in interviews. Meetings were scheduled at the convenience of the key informant. Interview meetings were held at each informant's university office location and had a casual style with open conversation and questions between the key informant and myself. The interviews followed a semi-structured interview guide that is included as an appendix (Appendix A). The interviews lasted approximately 30 to 45 minutes, and written notes were recorded (Table 1). Data collection was written down on a paper ledger and then typed into a Word document for filing and future analysis.

Table 1. Interview Schedule

Key Informant	Department	Date
Project -planning meeting	Student Health Services and Counseling Center	07-11-13
Anne Bodensteiner, M.S.	NDSU Student Health: Health Promotion Specialist	10-03-2013
JoAnna Solhjem, FNP-C	NDSU Student Health: Nurse Practitioner	10-08-2013
Tracie Mallberg, M.D.	NDSU Student Health: Clinic Physician	10-15-2013
Daniel Friesner, Ph.D.	Associate Dean for Student Affairs and Faculty Development, College of Pharmacy, Nursing, and Allied Sciences Faculty Development and Professor for University Studies 189	02-19-14
Napoleon Espejo, M.D.	Family HealthCare Center: Medical Director	03-27-2014
NDSU undergraduate students	DNP poster presentation	04-07-2014
Carol E. Buchholz-Holland, Ph.D., NCC	Professor of NDSU Community Counseling Services	04-11-2014
Casey Peterson	Director of Student Success Programs	04-17-2014
Amber Bach-Gorman, M.S., NCC, LPC	Counseling Center: Counselor	04-24-2014
William Burns, Ph.D.	Director of NDSU Counseling Services	04-29-2014
Laura Oster-Aaland	Dean of Enrollment Management	05-02-2014

Student Discussions

As a part of the DNP graduate program, I, the writer for this project, presented a student poster on April 7, 2014, at the NDSU Memorial Union. The poster was titled "Addressing Student Depression on Campus: Barriers and Assets." Several undergraduate students viewed this poster, and five participated in informal discussions, resulting in field data. Each student

volunteered information regarding how he or she appreciated this project. We discussed their personal struggles with first-year stress and the symptoms of depression. Notes from these unstructured and informal field interviews were written on a paper ledger and entered into a Word document for filed for project evaluation purposes.

Prevention Models and Evidence-Based Practice

Assessing and identifying the available campus resources and programs to determine current practice among other colleges and universities were assessed. Investigation about current collegiate mental-health care practices was split into a two-prong approach by direct and indirect searches. From the project's literature review, substantial information existed to acknowledge the national prevalence of college-student depression. The literature also indicated that the United States Preventative Services Task Force (USPSTF) has recognized the critical need for early detection of adolescent depression. Therefore, the first part was a direct approach, searching the World Wide Web for college and university websites about the current practices related to early detection of depression on campus. A secondary review of the literature was also conducted by searching the Cochrane Library and NDSU Libraries to identify evidence-based depression- prevention models. Premier search engines such as CINAHL and EBSCO, were chosen to provide access to the scholarly data collection.

Summarize Findings

The next approach for the evaluation process was the summarization of findings. A pamphlet was made to summarize and disseminate findings, to disseminate the overall findings at stakeholder meetings, and to receive stakeholder feedback. The layout was designed and carefully chosen to capture the findings in a concise format for easy current and future reference.

Stakeholder Meetings

To disseminate the summary of project findings to key stakeholders, an invitation to receive a summary of the project findings was extended to each person who participated in a key- informant interview. Of the 9 invitations offered, 6 people responded and agreed to schedule meetings. Each meeting was scheduled at the convenience of the stakeholder and held at his or her NDSU department office. The meetings had a casual style with a discussion of the findings, an opportunity to answer stakeholder questions, and provide recommendations. A pamphlet was given to every stakeholder.

An invitation was provided to the Director of Student Health Services who opted to schedule a group meeting for an extended gathering of stakeholders. Marit Hordvik, M.D., newly acquired physician for the student health clinic and William Burns, Ph.D., Director of Counseling Center, accepted the invitation to attend the group meeting. The initial health promotion specialist who participated had resigned and had not been replaced at the time of the audience stakeholder meeting.

The group stakeholder meeting was held at the Wallman Wellness Center. A review of project findings was presented, and each stakeholder was given an opportunity to ask questions; however, there were not any questions at that time. Pamphlets were distributed to all of the stakeholders. Dr. Hordvik was unable to attend due to patient caseload, however, a pamphlet was given to her.

Revisions Resulting from Stakeholder Feedback

Following the dissemination to stakeholders, feedback was used to revise the pamphlet. Completion of revisions were upheld and provided closure to the findings of the practice-

improvement project.

CHAPTER FIVE. RESULTS

This chapter focuses on outcomes for the Addressing Student Depression on Campus: Barriers and Assets practice-improvement project's findings and the dissemination of the findings. Results from the practice-improvement project's presentation of findings are listed according to the eight step evaluation process approach. In addition, details from stakeholder interviews are discussed.

Presentation of Findings

Project-Planning meeting

Data collection initially began with the project-planning meeting on July 11, 2013. Individuals present for the meeting were Donna Morrison, M.M., LRD, Director of Student Health Services, and her successor, Patricia Dirk, MBA; Anne Bodensteiner, M.S., Health Promotion Specialist for Student Health Services; Donna Lipetzky, RN, BSN, Lead Registered Nurse for Student Health Services; and William Burns, Ph.D., Director of the Counseling Center. The main meeting topic was presented by Anne Bodensteiner and regarded understanding and targeting the concerning decreased NDSU student-retention rates. Anne Bodensteiner presented the 2011/2012 NDSU student dropout rate as 35.04% equaling a financial loss of $250,935.50. The handout that provided these statistics are provided in Appendix E. The meeting consisted of a brainstorming session to determine what kind of help or services could be considered and eventually initiated to improve retention for students who are struggling with various mental illnesses.

NDSU internet search

Assessing and identifying available campus resources and programs on the university website offered information from NDSU Student Health Services, the Counseling Center, the

Office of Institutional Research and Analysis, and Campus Connection. NDSU offers an array of voluntary mental-health programs and basic student-health services with mental-health counseling upon an intake and referral process prior to scheduling an appointment. Anonymous online counseling is available.

The university has orientation for first-year students. Information is provided by the counseling department and addresses access to mental-health services through the campus' student health clinic, calling the counseling service for intake and then an appointment, an online mental-health intake through the website and counseling services, First Link hotline for student suicidal crisis intervention, campus police, and local hospital emergency departments. Students are informed about these services during the first day of orientation and reassured that this information remains on the NDSU website for their future reference.

Voluntary depression-awareness programs are offered to students, faculty, and staff at various times throughout the year. These programs include, but are not limited to, the following entities: New Student Orientation, Mental Health First Aid, Behavioral Interventional Team (BIT) involving threat assessments, NDSU Cares (suicide prevention), federal outreach and support programs for students of disadvantaged backgrounds and behavioral high risk needing a series of support and assistance, student email depression screening tool (emails through the counseling department and may be anonymous), sexual assault prevention, and Wellness Exercise Education. Each program has its own specific awareness and wellness area of emphasis that contribute to stress release, student support, and adjustment.

Student Health Services is the campus health clinic. General medical care for health issues encompasses the main service line, such as throat cultures, x-rays, basic blood panel laboratory diagnostics, and immunizations. Mental-health primary care is provided along with

screening students utilizing the PHQ-9, PHQ-15, and GAD-7 depression-screening tools. Students with high screening scores are referred to the Counseling Center for further psychological assessment and support unless they are at risk for suicide in which case would be transferred to the nearest emergency department. Prescription refills are provided by the four nurse practitioners along with the one medical doctor on staff. The Student Health Services healthcare providers may initiate prescribing of psychiatric medication, however, initial prescribing is encouraged through the psychiatrist at the campus Counseling Center.

Student Counseling Center is the campus-counseling clinic. This service line offers several counselors and one psychiatrist for students, faculty, and staff. Referrals receive an intake assessment through a scheduled appointment prior to receiving a scheduled counseling or psychiatry service. Once the assessment is completed, an appointment is made with a counselor or psychiatrist. Counselors have anonymous NDSU website counseling and varied appointment-scheduling options during Monday through Friday business hours. Additional mental healthcare involving psychiatric 15-minute time-slot appointments are available with a board certified psychiatrists 3 days each month during the academic school year.

The Counseling Center also encourages exercise at the Wallman Wellness Center for students' stress reduction. Several mental-health workshops and trainings, such as Mental Health First -Aid, NDSU Cares, The Gatekeeper, Mental Health Week, and American Foundation for Suicide Prevention anonymous questionnaires for mental-health intervention and depression detection, are provided through the Counseling Center. Residence hall assistants in the dormitories are trained about depression awareness. Faculty and staff are trained on a voluntary basis.

Key-Informant interviews

An interview with Anne Bodensteiner on October 3, 2013, involved a discussion about NDSU's collective student dropout rate during the 2011/2012 academic year (35.04%) with an overall financial loss of $250,935.50 to the university. She indicated that a preventative intervention needed to be considered to detect struggling students. She was concerned that depression and anxiety played a role in this dropout rate. She was not aware of any depression-prevention model being available or utilized.

When interviewing nurse practitioner JoAnna Solhjem, FNP-C, we discussed, the depression-screening tools used for students at the clinic. Depression-screening tools PHQ-9, PHQ-15, and GAD-7 are implemented at the discretion of the nurse rooming the patient and are additionally offered by the healthcare provider upon further assessment. Mental-health treatment is referred to the Counseling Center unless an immediate refill of existing medications is necessary.

The interview with Tracie Mallberg, M.D., on September 15, 2013, was brief. Dr. Mallberg indicated that the patients (students) are initially screened on an as-needed basis by the nursing staff but can receive a screening questionnaire that is prompted by the nurse practitioners if necessary. Newly diagnosed, unstable patients or complicated, existing-diagnosis students were encouraged to be managed through psychiatry because the nurse practitioner staff was not specialized in mental health. However, the staff could refill existing prescriptions. Medication changes or initiating medications were referred to her or to the counseling center's psychiatrist. During this time frame, I was able to have part of my family practice practicum at the student health center with two of the nurse practitioners along with the clinic's lead nurse. This experience was congruent with the information provided by Dr. Mallberg. The overall theme of

Dr. Mallberg's interview message was that education is key to disease prevention and health promotion. She was not aware of any evidence-based depression-prevention model being implemented at NDSU.

Professor Daniel Friesner, Ph.D., teaches the University Studies 189 course to freshmen students. Dr. Friesner is also the NDSU Associate Dean for Student Affairs and Faculty Development for the College of Pharmacy, Nursing, and Allied Sciences. We met on February 19, 2014, to discuss this course and what it had to offer students in mental-health awareness specifically pertaining to depression. This course takes place during the first semester. Basic skills about how to succeed as a college student are taught. There are 13 chapters in the textbook. Managing time and stress are discussed; however, the textbook is lacking education about basic mental-health information, such as depression awareness, during the transition to college life.

Napoleon Espejo, M.D., is the medical director of the Family Healthcare Center located in downtown Fargo, North Dakota. Dr. Espejo is a family physician who provides affordable, multifaceted, comprehensive care to patients of all age groups, cultures, and income levels. He teaches nurse practitioner and medical students from both NDSU and the University of North Dakota. The Family Healthcare Center is strongly affiliated with the NDSU pharmacy department, supporting pharmacy students' education. Dr. Espejo's main message regarding mental-health is that it is an important component within primary care. He further indicates that healthcare providers specifically trained to care for mental illness are lacking in most healthcare communities and that nurse practitioners who take an interest with specialized training are qualified to meet the mental-health needs in primary care settings.

Professor Carol E. Buchholz-Holland, Ph.D., NCC, met to discuss mental-health services on April 11, 2014. Dr. Buchholz-Holland's department educates graduate students for either a master's or doctoral degree, along with the clinical training for future roles in counseling. The clinical training primarily involves community-counseling services. The counseling service is mainly focused in family counseling versus single, college-student counseling. However, an overflow of college students requesting counseling does occasionally occur. They are referred and encouraged to seek counseling on campus with student counseling. This department does not have a college-student depression prevention model.

Casey Peterson, Director of Student Success Programs, provided an informative meeting on April 17, 2014. Casey Peterson's department is focused on student-success programming, including group sessions for various student issues, such as Alcohol and Other Drug Abuse (AODA) prevention programs and conduct violence. Behavioral Interventional Team (BIT) is a group program involving threat assessments with therapeutic intervention. TRIO is a federal academic-support program for low-income, first-generation students; the program came from the War on Poverty. Although these important groups provide tools for success, Casey was not aware of a depression- prevention model within the university.

Licensed counselor Amber Bach-Gorman met for an interview on April 24, 2014. A counselor provides counseling services to all NDSU students and faculty. Counselors are involved with the NDSU Cares and Gatekeeper Training. Gatekeeper training is offered throughout campus to all residence hall assistants, faculty, and staff. Gatekeepers are trained to notice students who are stressed, struggling, or having indications of difficulty. Gatekeepers can help direct students to services such as counseling. Counselors are involved with all the campus mental-health awareness and workshops offered at NDSU.

The American Foundation for Suicide Prevention organization is an online, independent anonymous questionnaire that is utilized through the counseling department. Counselors review the questionnaires; however, if the student is not forthcoming with self-identification, nothing can be done to implement treatment. Although several mental-health awareness events and workshops are available on campus, Amber Bach-Gorman was not aware of any specific depression-prevention model being utilized at NDSU.

The meeting with William Burns, Ph.D., took place on April 29, 2014. The discussion involved the student-access process to receive counseling services. This process first involves an intake appointment that is reviewed by the staff counselors. Once this step has taken place, an appointment with either a licensed counselor or the psychiatrist is made. Appointments for the initial intake can be made by Student Health Services or directly by students. There is an emergency triage intake to determine crisis intervention during regular business hours. Otherwise, local emergency departments are available within the community.

Jackson Lind, M.D., is the psychiatrist who provides all psychiatric care for students and faculty 2 days each month with 15-minute appointments. William Burns indicated that Dr. Lind is very busy and that appointments are booked well in advance. There are 8 licensed counselors on staff who provide psychological care but do not have prescriptive authority.

Several mental-health awareness campus events and workshops are provided through the counseling department. These opportunities begin with the freshman student, one-day orientation when a counselor speaks to the general orientation crowd regarding new student stress, counseling, campus website mental-health information, and where the counseling department is located. Encouragement to enroll in voluntary events through the counseling department is advised during orientation with reminder emails to all students. These events and

workshops include, but not limited to, the following: Campus Awareness, Referral and Education for Suicide Prevention; De-Stress Fest; Mental Health NDSU; and Mental Health First-Aid. Online information providing links for anonymous screening with access to a counselor is available to all students.

NDSU's Dean of Enrollment Management, Laura Oster-Aaland, met me on May 2, 2014, for an interview regarding student depression and the consideration of a depression- prevention model. She was very receptive to the discussion and indicated that prevention is a national concern and a rising priority. She confirmed that, although there are many services available to students once depression is detected, there is not a depression-prevention model in place at NDSU as a health promotion depression-prevention strategy and would seriously consider an evidence-based prevention model for the university should a recommendation come forward.

Student discussions

Of the students who commented on their personal challenges with depression as first-year college students, five female students were willing to discuss the specific issues leading to their depression. These five students identified their personal issues and prioritized them as homesickness; relationship stress created from roommates, friends, and sexual partners; academic grades; and financial worries. Of this collection of students, two of the five said that they were not prepared for this difficult adjustment, further stating that, when they entered their freshman year, they believed they were mature enough to handle their independence but later learned that they were not as mature as originally thought.

Summary of Key-Informant Interview Results

Key-informant interview results indicated inconsistencies between current university practice and evidence-based practice recommendations. Gaps existed among departments

regarding mental-health services. Required student-depression education and a university-student depression-prevention model were lacking.

Once the key-informant interview step was completed, compiled findings were sorted into separate categories, distinguishing between identified assets and known barriers. Table 2 demonstrates the assets and barriers.

Table 2. Barriers and Assets

NDSU Services	Barriers	Assets
Student Health Clinic	• Seen by appointment only • Closed on weekends • Part-time medical doctor • Complicated mental-health cases referred to psychiatry • No depression-prevention model	• Open Mon.-Fri. 8:00-5:00 • Four nurse practitioners • Treat uncomplicated mental illnesses and prescribe medication refills • Depression screening tools: PHQ-9, PHQ-15, GAD-7
Counseling Center	• Limited psychiatry appointments: 3 days per month with referral • Seen by appointment only • Must have intake appointment before being able to schedule an appointment with a counselor • Appointments difficult to schedule • Cannot help anonymous students who reveal a need for help • No depression-prevention model	• Limited Psychiatric care available • Eight licensed counselors • Anonymous online counseling • Informative website about depression with referral information • Workshops available for students, staff and faculty regarding mental-health awareness and care
Student Success Programs	• No depression-prevention model	• Student focused programs: AODA, BIT, federal programs, and violence group interventions
Enrollment Management	• No depression-prevention model	• Student-success programming
University Studies 189 Course	• No depression-prevention model	• Required course for all first-year students during the first semester • Teaches topics on stress relief

Search for Prevention Models and Evidence-Based Practice

Continuation followed with investigating other university websites for information regarding student-depression healthcare practices. A similarity exists between current practices among other universities and NDSU's student-depression care. Depression awareness information is available without actual depression-prevention model support.

The pursuance of the indirect investigative approach utilizing EBSCO led me to the scholarly works of Jenna L. Buchanan. She is an advanced practice nurse who translated the existing research of Ann R. Peden. By doing so, she verified the Peden-Cognitive Behavioral Group Intervention (CBGI) as evidence-based research and a therapeutic model for depression-prevention among college students at the University of Kentucky.

With the discovery of the scholarly article describing Buchanan's work and Peden's depression model, I set out to contact each individual. The approach to this evaluation portion was initially by emailing to the author's contact information as found in the article. This proved successful, and contact was made. It was then discovered that Ann R. Peden was a professor at Capital University in Columbus, Ohio, leading me to initially telephoning and speaking with her. Ms. Peden provided immediate permission to introduce her depression model to NDSU. As indicated in Appendix B and C, she then submitted an email with written permission and gratitude for considering her work to be introduced at NDSU.

Summarize Findings with Pamphlet

Findings were synthesized into a four-page brochure and provided to key stakeholders. Stakeholder meetings took place as five individual meetings and one open-invitation audience meeting that resulted in an additional follow-up meeting scheduled by Director of Student Health Services Patricia Dirk, MBA. In addition to stakeholder dissemination, a poster presentation was

given at the North Dakota Nurse Practitioner Association Pharmacology Conference held in Fargo, ND.

Presentation of Findings

Details regarding the project findings were displayed on a colorful four-page layout for summarization and quick reference. This pamphlet was given to all individual stakeholders and attendees of the audience meeting. The purpose of the communications, both written and verbal, was to provide useful information about this practice-improvement project, and overall results and recommendations resulting from this practice-improvement project.

Stakeholder Meetings to Disseminate Findings

The first presentation of findings commenced with Napoleon Espejo, M.D., at Family Healthcare Center on September 2, 2014. Dr. Espejo listened intently to my presented findings and reviewed the pamphlet. He was very impressed and curious about the recommended Peden-CBGI model. Detailed questions were asked and thoroughly answered. His interest in the depression model was in the possibility that the clinic's newly hired mental-health certified nurse specialist might consider this therapy for the students cared for at the Family Healthcare Center.

Daniel Friesner, Ph.D., was the second individual stakeholder meeting on September 19, 2014. Dr. Friesner carefully listened and reviewed the handout. He found the handout especially useful and suggested making an even more condensed version, such as bookmarks, to give to students. He cordially asked my permission to display a pamphlet on his office desk for students to view during meetings or encounters. Permission was instantly granted and appreciated.

Third, findings were presented individually to Carol E. Buchholtz-Holland, Ph.D., NCC, on September 19, 2014. Dr. Buchholtz-Holland found the findings very useful and appreciated the work involved to complete the project. As my former professor for CNED 731: Counseling

Children and Adolescents, she was especially appreciative of including her with the outcomes of this practice-improvement project. She asked permission to show her master's and doctoral counseling students my synthesized material within the colorful handout. Permission was granted for the further benefit of counseling students.

Laura Oster-Aaland, Dean of Enrollment Management, met with me on September 19, 2014. She welcomed me into her office. Dissemination of findings was appreciated throughout this stakeholder meeting. Sharing the findings was quite rewarding. Questions about how the depression model works were asked and thoroughly answered. A recommendation about depression education for first-year students in University Studies 189 was discussed. She confirmed that the evidence-based depression model with required student-depression education is, indeed, useful and will be taken under advisement. She shook my hand and cordially thanked me for the dedication to this practice-improvement project for the benefit of future NDSU students.

Casey Peterson, Director of Student Success Programs, was the fifth individual meeting for the project. The meeting was held on September 19, 2014. Mr. Peterson was very interested in the recommended-depression prevention model. Discussion took place regarding the negative-thought intervention therapy involved within the model, focusing on negative-thought reversal and, therefore, depression prevention with therapeutic measures. He was very receptive to the findings and recommendations. An appreciation of the work was kindly expressed.

An invitation via email was sent to Tracie Mallberg, M.D., but was returned due to her resignation status with the university. Upon following up on this information, it was discovered that another physician, Dr. Black, had taken the clinic position and had resigned one month later. Marit Hordvik, M.D., who accepted the clinic physician position early this academic year was

invited for an individual stakeholder meeting to explain my practice-improvement project, findings, and recommendations.

Other email invitations were sent to previously interviewed stakeholders. An email invitation was sent to William Burns, Ph.D., Director of the Counseling Center, with a return on this email indicating that he was out of the office but would respond upon return. Amber Bach-Gorman M.S, NCC, LPC, was sent an email invitation to schedule a meeting, however, no response was received.

An email invitation was provided to the Director of Student Health Services Patricia Dirk, MBA, who responded by requesting an open-audience meeting to be scheduled. This meeting was agreed upon and scheduled for Friday, October 3, 2014, at NDSU's Wallman Wellness Center. Following this scheduling, I received an email decline from William Burns for an individual meeting, however, he indicated that he would attend the group meeting. Dr. Marit Hordvik agreed to attend the group meeting as well.

Final stakeholder-group meeting attendees were Patricia Dirk, MBA; William Burns, Ph.D.; Disability Services Director Bunnie Johnson-Messelt, M.S.; and Dean for Student Wellness Barbara Lonbaken, Ph.D., R.N. Marit Hordvik, M.D., was unable to attend due to patient caseload at the NDSU Student Health Services clinic. Participants listened intently as findings were disseminated. Each attendee received a practice-improvement project pamphlet.

On Friday, October 3, 2014, Patricia Dirk wrote an email indicating that a follow-up meeting was necessary because of concerns regarding the information handout. A reply was sent upon receiving the initial email, reassuring her that the concerns were very important. Later contact the following week provided a follow-up meeting on Friday, October 10, 2014.

The follow-up meeting occurred as scheduled. Bunnie Johnson-Messelt was also present during this meeting. Patricia Dirk, asked if I had any questions or concerns, first opened the follow-up meeting. This was cordially declined and reassured Patricia Dirk of this opportunity for her to address the concerns made in her email.

Patricia Dirk offered Bunnie Johnson-Messelt to speak on behalf of Student Health Services, Disability Services, and the Wallman Wellness Center. Regarding the Student Health Services clinic, depression-screening tools are being implemented with every student who has an appointment at the clinic. The screening tools are the PHQ-9, PHQ-15, and GAD-7. All providers are capable of diagnosing and treating mental illness if they feel comfortable doing so.

Depression awareness is offered through campus services from the Counseling Center, Wallman Wellness Center, and Disability Services. Awareness events and workshops are new-student orientation information; Mental Health Week; various mental health workshops; student online, anonymous depression screening and counseling; American Foundation for Suicide Prevention; Mental Health First-Aid; Behavioral Interventional Team; NDSU Cares, NDSU Gatekeeper Training, and TRIO. An innovative exercise program to relieve student stress is being developed through the efforts of William Burns and the Wallman Wellness Center.

Bunnie Johnson-Messelt indicated that NDSU has 24/7 mental-health services. When asked for clarification regarding around-the-clock, 7-days-per-week coverage, the answer provided involved the First Link suicide hotline, NDSU campus police, or city police and local emergency department coverage. There was reference in that the campus police are very helpful with the mental-health needs of students.

When asked whether the students who are indicating stress or challenges with first-year student adjustments are initially identified. Bunnie Johnson-Messelt's reply was that it is the

students' responsibility to identify their needs. However, in the disability department, if there is a struggling, disabled student, for example, with Attention Deficit Disorder, he or she could be assigned a tutor. When asked if there was a depression-prevention model available to assist with student college life adjustment, the answer was none other than the awareness events and workshops.

When asking Patricia Dirk what her main concern was, she replied that it regarded the pamphlet. She stated that, if a parent read the pamphlet, it might portray a lack of mental-health service at NDSU. She then asked what the intentions of the project and pamphlet were. With much gentle reassurance, it was relayed to her that the practice-improvement project was to only be of help, nothing else. Therefore, addressing the current-practice assets and existing barriers identifies the gaps, leading to important identification for known areas of needed improvements utilizing evidence-based research.

The question regarding the intentions of the pamphlet was addressed. Reassurance was again provided that the pamphlet was only meant as a project summary and was only intended for the stakeholders.

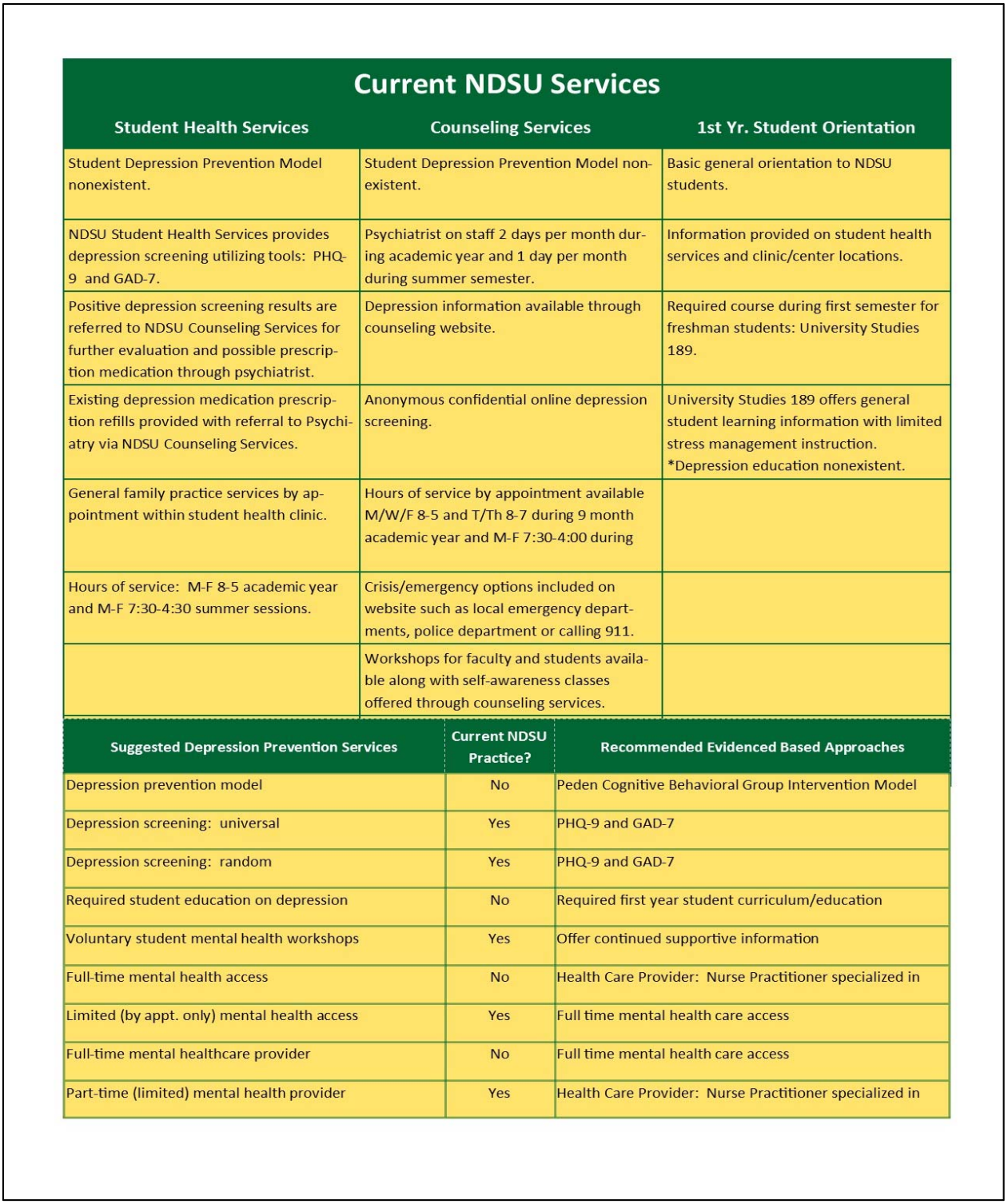
The theme of this follow-up meeting was one regarding the Student Health Services and Counseling Center's image as a result of the gaps found in the practice-improvement project. I did all I could to reassure how the literature review illustrates that most colleges and universities in the nation have very similar findings, colleges and universities are implementing depression-prevention models. Suggesting evidence-based research to improve practice was only meant in good faith to be a benefit to NDSU's mental healthcare practices. Whether the university chooses to use the model is purely the stakeholders' choice. Following the dismissal of the follow-up meeting, key informants expressed no further concerns regarding the project.

Revisions Resulting from Stakeholder Feedback

Revisions were made to the summary of findings. The pamphlet was updated with the new revisions. This effort provided completion to this practice-improvement project. The following Figure 1 indicates the completion of revisions.

Although NDSU has made a concerted effort to educate about the importance of depression awareness, there are inconsistencies between university practice and evidence-based practice. As identified throughout the literature review, inconsistencies are a national commonality among colleges and universities, thus spotlighting the importance of mental-health prevention specifically addressing depression among emerging adults.

The suggested preventative services for depression prevention advise using a valid depression-screening tool, such as the PHQ-9 and GAD-7, for every healthcare encounter. These measures are implemented at Student Health Services. Required mental-health education for college and university students is the current recommendation. Voluntary mental-health awareness events, workshops, and NDSU website information are offered to all students; however, there is not any required curriculum addressing mental-health or, specifically, depression.



Current NDSU Services

Student Health Services	Counseling Services	1st Yr. Student Orientation
Student Depression Prevention Model nonexistent.	Student Depression Prevention Model non-existent.	Basic general orientation to NDSU students.
NDSU Student Health Services provides depression screening utilizing tools: PHQ-9 and GAD-7.	Psychiatrist on staff 2 days per month during academic year and 1 day per month during summer semester.	Information provided on student health services and clinic/center locations.
Positive depression screening results are referred to NDSU Counseling Services for further evaluation and possible prescription medication through psychiatrist.	Depression information available through counseling website.	Required course during first semester for freshman students: University Studies 189.
Existing depression medication prescription refills provided with referral to Psychiatry via NDSU Counseling Services.	Anonymous confidential online depression screening.	University Studies 189 offers general student learning information with limited stress management instruction. *Depression education nonexistent.
General family practice services by appointment within student health clinic.	Hours of service by appointment available M/W/F 8-5 and T/Th 8-7 during 9 month academic year and M-F 7:30-4:00 during	
Hours of service: M-F 8-5 academic year and M-F 7:30-4:30 summer sessions.	Crisis/emergency options included on website such as local emergency departments, police department or calling 911.	
	Workshops for faculty and students available along with self-awareness classes offered through counseling services.	

Suggested Depression Prevention Services	Current NDSU Practice?	Recommended Evidenced Based Approaches
Depression prevention model	No	Peden Cognitive Behavioral Group Intervention Model
Depression screening: universal	Yes	PHQ-9 and GAD-7
Depression screening: random	Yes	PHQ-9 and GAD-7
Required student education on depression	No	Required first year student curriculum/education
Voluntary student mental health workshops	Yes	Offer continued supportive information
Full-time mental health access	No	Health Care Provider: Nurse Practitioner specialized in
Limited (by appt. only) mental health access	Yes	Full time mental health care access
Full-time mental healthcare provider	No	Full time mental health care access
Part-time (limited) mental health provider	Yes	Health Care Provider: Nurse Practitioner specialized in

Figure 1. Evaluation of Inconsistencies between Current Practice and Evidence-Based Practice.

Increased access to quality mental healthcare is suggested for college and university students (Buchanan, 2013). Student Health Services has one part-time family practice medical

doctor treating more complex mental-health cases with four family practice nurse practitioners doing basic assessments, refills of existing medications, and referrals to counseling services. Counseling referral is synonymous with a psychiatry referral and is clarified through the patient, or students, intake appointment that is scheduled upon a referral request. Counseling and psychology appointments are available with a full-time staff. However, appointments are well booked in advance. These counseling services are somewhat more accessible versus psychiatric appointments because of the part-time status of the one individual psychiatrist on staff at NDSU.

The depression-prevention model is suggested for use among colleges and universities, especially during the first year of college entry. Nationally, colleges and universities are seeking successful models to implement in order to secure their students' success and overall retention. Currently, NDSU does not have a prevention model in place. Key stakeholders, Laura Oster-Aaland, Dean of Enrollment Management; Casey Peterson, Director of Student Success Programs; and Daniel Friesner, Ph.D., Associate Dean for Student Affairs and Faculty Development, College of Pharmacy, Nursing, and Allied Sciences Faculty Development and Professor for University Studies 189, have embraced the opportunity to support the acceptance and implementation of a depression-prevention model for NDSU students.

Provide Recommendations to Improve Student Outcomes

Depression-prevention and care are imperative for the emerging adult within the college and university system. Providing this service would not only benefit the student, but would also benefit the university's student retention. Evaluation of the current practice compared to the evidence-based practice recommendations demonstrates the gaps in NDSU student mental healthcare services.

Recommendations for depression-prevention and early detection are to develop a primary mental-health team for NDSU. This collaborative team would be comprised of healthcare providers such as nurse practitioners and physicians, counselors, psychologists, psychiatrists, nurses, and faculty who have been trained in mental-health. An example of such trained staff would be dormitory residence hall staff personnel. A collaborative and supportive team with members who can facilitate the Peden Cognitive Behavioral Group Intervention provides an umbrella of student support for preventative action.

Depression educations for students, either individualized or in the classroom by adding a chapter regarding depression to the required University Studies 189 course would further solidify depression awareness among students and would promote peer support, as well. One chapter could be added to the current text by any of the many qualified healthcare providers, counselors, and faculty within the university with the added support of the text editor. Having this required education would teach the first-year student population the importance of their personal mental-health and the proactive measures available to them on campus.

The administrative support embracing this recommendation would provide a universal team-approach for the primary mental-health team, faculty, and students. This strategic plan would integrate both supportive mental and physical health education and intervention. Outcomes from such support strengthen the primary mental-health team thus, leading to positive student outcomes for improved quality of life and student retention.

CHAPTER SIX. DISCUSSION AND RECOMMENDATIONS

In order to foster mental-health prevention of disease and the promotion of healthy choices, policies, systems, and the campus environment must have congruency with a team approach, thus bridging gaps between systems. Creating a healthier college-student population in the realms of mental illness provides benefit, first and foremost, to the quality of life and academic success for the students and, then, to improved student retention for the university. Overall, this effort is a full circle of student, community, and societal benefit. Accepting and embracing evidence-based practice by translating existing research into current practice provides a proven opportunity for practice improvement and, therefore, positive outcomes.

Interpretation of Results

Gaps have been determined among the project findings between current practice and the recommended evidence-based practice. The Wallman Wellness Center's Student Health Services provides general family practice healthcare with capabilities of diagnosing and treating mental illness amidst healthcare provider comfort level. Referrals are made to provide mental-health care through the Counseling Center for both the counseling-therapy component and medication management with psychiatry. Student Health Services are available Monday through Friday during regular business hours. The student health clinic is closed on weekends and holidays.

The Counseling Center accepts patients and referrals by intake appointment first, with a therapist scheduled following the intake. Counseling services have been known to be very busy with appointments booking in advance. A call-back wait list is available if a cancellation occurs in the full schedule. Given that the psychiatrist is only available 2 days each month, the schedule

has historically been maxed to its fullest far in advance. Counseling is also available as an online, anonymous service to students.

Student support is also accommodated through other departments, such as Student Success Programs, Enrollment Management, Disability Services, Student Wellness, and NDSU Community Counseling. The Family Healthcare Center along with emergency departments at Sanford Health and Essentia Hospital are available. First Link suicide hotline, and both NDSU campus and Fargo city police are additionally available for students in need of crisis intervention.

Although many well-intentioned depression-awareness events, voluntary workshops, counseling, and valid depression-screening tools exist and are utilized on campus, there is not a student depression-prevention model being used. Limited mental-health education for the University Studies 189 course has been noted in the findings. As indicated in the literature review, colleges and universities are discovering these parallel gaps in student mental healthcare and formulating options of preventive mental healthcare, primarily depression prevention and early detection. Proactive measures are being looked at more seriously now than in the recent past.

Limitations

Several limitations were realized in this practice-improvement project. The project was undertaken in a time of initial role transition and transfer between the director and successor of Student Health Services, namely Donna Morrison, M.S., LRD, and Patricia Dirk, MBA. During this transition, the succeeding director referred my request to meet due to her project commitments at that time. Referral was through the Assessment Division of Student Affairs which recommended NDSU website reference access information. Although research was done

through campus website references, this limitation may have had the largest impact on the initial, detailed project findings for Student Health Services.

Recommendations

The Peden-Cognitive Behavioral Group Intervention (CBGI) is an evidence-based depression-prevention model. Ann Peden developed the CBGI program specifically for the prevention of depression, targeting negative thinking as a modifiable risk factor and combining two theories into one working model (Peden, 2000). These two theories formulated into one model are cognitive behavioral theory and theory of interpersonal relationships.

The work of Aaron Beck, formally known as cognitive behavioral theory (CBT), is one of the Peden-CBGI program model components. The core elements of CBT are focusing upon an individual's affect, physical arousal, cognition to gain greater self-awareness, and identify target for change. The therapeutic behavioral technique elicits self-awareness of dysfunctional thoughts with cognitive restructuring to promote balanced healthy thinking (Beck, 1967). The fundamental foundation of this theory recognizes that individuals are not affected by events but by the perceptions of them (Fourali, 2009).

The nursing theory of interpersonal relationships by Hildegard Peplau is the other coupled component that solidifies the process of practice-based theory development within the Peden-CBGI program model. The theory of interpersonal relationships is a conceptual framework derived, in large part, from empirical study of human interactions (Peplau, 1989). This theory is known for aiding nurses in enlarging their understanding of what transpires during nurse and patient-student relationships. Thus, it assists nurses in helping patient-students make sense of and learn from their responses to experiences related to health and illness (Peplau, 1997).

The prevention model was designed with the focal premise of redirecting negative thoughts. Peden developed the CBGI program specifically for the prevention of depression, targeting negative thinking as a modifiable risk factor using theory from Aaron Beck's seminal work, *Depression* (1967), and Peplau's process of practice-based theory development Peden, 2000). Applied research conducted by Buchanan (2013) at the University of Kentucky's College of Nursing found that this translational research study supported the hypothesis that Peden's evidence-based CBGI is efficacious within the clinical setting in the reduction of depressive symptoms and negative thinking, and in the improvement of self-esteem. The ability to provide the intervention in a group setting also makes the prevention model economically practical for colleges and universities. Furthermore, evidence from this study also suggests that the Peden-CBGI depression prevention model may also be efficacious in the acute reduction of suicidality in the college-student population (Buchanan, 2013).

The Peden-CBGI depression-prevention is a group intervention for students who indicate early signs of risk for depression. One way of detecting NDSU students at risk would be through the current use of the PHQ-9 screening tool by capturing those scoring between results of 5 and 10. Follow-up care at that point would be recommending the Peden-CBGI intervention. This group therapeutic intervention would assist in treating modifiable risk behaviors such as negative thoughts thus prevents depression development.

Components of the Peden-CBGI model involve a six-step process however; the intervention can be condensed into a 4-step session. Group sessions last 60 to 90 minutes depending upon the 4 or 6-week sessions, which meets one time per week consecutively. The group sessions focus on modifying risk factors for the development of depression, such as negative thinking. A basic six-week group therapy session outline would include a weekly

structure of week one: Getting acquainted and understanding the effect thinking has on mood. The second week begins the implementation of cognitive-behavioral techniques to manage negative thinking thoughts. Week three instructs on the use of relaxation and affirmations. Week four involves the participants creating their own affirmations. Week five focuses on changing the negative behavior. Then lastly, week six reviews all learned techniques with closure (Buchanan, 2013).

The Peden-CBGI has been evaluated in several clinical groups. These groups were comprised of clinically depressed women (Peden, 1998), college women (Peden, Hall, Rayens, & Beebe, 2000; Peden, Rayens, Hall, & Beebe 20001), and low-income single mothers (Peden, Rayens, & Hall, 2005; Peden, Rayens, Hall, & Grant, 2005). In all aforementioned studies, Peden-CBGI proved to significantly reduce depressive symptoms in the treatment group when compared to the control group. The depressive symptoms were not only significantly reduced on a short-term basis, but also up to 12-months (Peden, et al., 2001) and 18-months (Peden, Raynes, & Hall, 2005) post intervention.

Further confirmation of the Peden-CBGI depression-prevention model as being a valid evidence-based research guideline was made possible through the Buchanan (2013) study at the University of Kentucky. Results of the Buchanan study indicated reduced negativity, improved self-esteem, and reduction in acute passive suicidality with the college student population (Buchanan, 2013). This translation of nursing research into practice supports the clinical usefulness and efficacy of the Peden-CBGI model in depression prevention among college men and women (Buchnan, 2013).

Implications for Practice

Advanced practice nurses (APNs) are in an important position to make positive impacts and changes with today's ever-changing healthcare initiatives. The APN leadership role is a significant advocate for policy change in college-student health and is particularly important with healthcare initiatives because most mental-health disorders reveal their first onset by the age of 24. Mental disorders early in life are significant predictors of educational attainment, employment and productivity, social relationships, and mortality. Therefore, mental disorders account for more disability-adjusted life years than any other class of conditions among late adolescents and young adults in the United States (Eisenberg, Hunt, & Speer, 2012).

As noted previously in the literature review, college students have been identified as an at-risk group for the development of depressive symptoms as well as diagnosable depression. Therefore, the National Institute of Mental Health recommends that interventions be developed and implemented for at-risk groups, such as college students (Hollon et al., 2002). Additionally, the Institute of Medicine (IOM) has called upon the nation's healthcare and political leaders to adopt mental-health prevention efforts as a major health concern in the young adult population (IOM, 2009).

By doing this practice-improvement project, I have learned the challenges posed by university departments' conceptualized views and notions, as well as the benefit of participating in the creation of a potential mental-health policy movement for incorporating an evidence-based depression-prevention model. The reason I chose this project was of my interest in depression, prevention, and early detection with appropriate care. The findings of this project have reinforced my belief that depression prevention can be achieved by implementing a depression-prevention model at colleges and universities.

This practice-improvement project has taught me the importance to not only be knowledgeable about mental-health among emerging adults and first-year college students, but also to use the knowledge as empowerment to become involved in change to improve the quality of life among at-risk populations. Future outreach for patient advocacy will always be part of my nursing practice. I believe that, once we see a need, the best way to accomplish change for the betterment and to meet that need is to be a catalyst for that change.

Implications for Future Research

As evidenced throughout the current literature, depression among college students is prevalent nationwide. Because of the widespread effects of depression among this high-risk population, priority needs to be given when providing evidence-based mental healthcare at all colleges and universities. A lack of standardized prevention strategies and interventions is a research need for the college student-population.

Future nursing research is needed to form specific guidelines for standardized depression-prevention care at colleges and universities. Formulating such specific prevention guidelines from evidence-based research will then close the gap between varied college departments' mental-health activities and will standardize streamline care across NDSU and all colleges and universities at large. Based on this practice-improvement project and the recommendation to implement the Peden-CBGI, it is reasonable to provide further applied research, targeting negative thinking among students, with the application of the suggested model. If nursing practice implemented the Peden-CBGI, it would assist with national efforts to provide standardized depression-prevention guidelines for this at-risk population.

Application to Other DNP Roles

This practice-improvement project addressing student depression on campus, as well as barriers and assets, meets the curriculum standards for the eight essentials of doctoral education for advanced nursing practice. Meeting these essentials segues into other branches for doctor of nursing practice roles. The Plan of Study and practice-improvement project are designed to meet the eight essentials. Accomplishing such higher-level education fully prepares the graduate for the expectations of this terminal degree.

Doctor of nursing practice graduates have the distinct advantage of studying the application of health policy, health promotion and disease prevention, and leadership. These important skills lead the way for advanced-practice roles in treating individual patients using best- prevention practices while collaborating with other health-team members, motivating all within the community to help define and create policy to accommodate and promote population health. Therefore, DNP roles of immediate application are primarily clinical practice as an advanced practice nurse, nurse leadership, or nurse educator as well as advocacy for local, state, and national health initiatives.

Leadership

Doctor of nursing practice scholarship demonstrates value to healthcare and nursing, thus a commitment to sharing and disseminating expert knowledge both within and external to the institutional setting. This dissemination relates to involvement with professional activities as well as activities that promote public involvement and public awareness of specific health related issues (Gardner, Change, & Duffield, 2007). Leadership comes with being an advanced practice nurse, regardless of the actual assumed role of the nurse practitioner (Chism, 2013).

The leadership skills, coupled with the higher preparation of an APN to deliver design and access care needs in collaboration among all NDSU department members and services, such as, the health promotion specialist for Student Health Services, Counseling Center, NDSU Community Counseling Services, Enrollment Management, Student Success Programs, Student Prevention Services, Disability Services, Student Wellness, and Student Education: University Studies 189, are able to employ prevention strategies and empowerment to improve college student mental healthcare services. I thoroughly believe DNP-prepared nurses, whether at a community, local, state, national, or even international level, have an empirical voice in delivering public messages for healthcare policy change. Such leaders have the capability to empower a community to improve health for everyone.

Advocacy

Nurse practitioners can advocate for health policy in many ways. Advocacy is an expectation of the American Nurses' Association Code of Ethics and is, thus, a responsibility of the advanced practice nurse at all levels (Grace, 2014). Areas of APN advocacy are within direct and indirect care of patients and populations, such as workplace involvement, involvement through education, and involvement through research, along with other avenues for involvement, for example, professional organizations or political office. Supported by the DNP degree, the graduate can fulfill advocacy to change and to improve policies and procedures that affect patients as well as nursing practice within places of employment because of the APN's vast knowledge of research and evidence-based practices (Chism, 2013). Nursing has earned the trust of the nation, and this trust comes with added responsibility not only for the profession, but also for overall healthcare (Chism, 2013).

Summary of the Practice-Improvement Project

This final practice-improvement project outlines the campus assets and barriers involved with college and university student life. This study documented the potential adverse outcomes for depression within the college-student population, inconsistencies between current practice and evidence-based practice, and lack of cohesive depression prevention evidence-based strategies among NDSU. Recommendations were made to improve mental-health services.

Years of research has proven the use of cognitive behavioral therapy as an effective treatment for depression as well as Peplau's nursing theory of interpersonal relationships being effective in understanding human interactions. This combined therapy and nursing theory known as the Peden-CBGI depression-prevention model targets negative thinking as a therapeutic measure to prevent depression (Peden, 2001). Adopting and implementing this depression-prevention model is entirely up to the discretion of the NDSU stakeholders and university administration.

Targeting negative thinking as a modifiable risk-factor attributable for depression development among at-risk populations has been verified through applied research with the Peden-CBGI depression-prevention model (Buchanan, 2013). First-year college students are considered to be an at-risk population for depression. Depression prevention has many benefits for student success, quality of life, and student retention.

Overall objective changes are difficult to precisely determine within the limited time span of this practice- improvement project; however, following the stakeholder meetings, several subjective changes have been noticed across campus. These positive subjective changes include mental-health group therapeutic opportunities offered through general student email invitation announcements. These opportunities have been voluntary mood workshops and other

therapeutic workshops targeting negative thought processes facilitated through the Counseling Center. Perhaps through the efforts of this project, increased momentum for student depression prevention has been enhanced.

This practice-improvement project has determined the Peden-CBGI to be a proven intervention that is practical, feasible, and economical (Buchanan, 2103). In order to protect the mental-health of college students, it is imperative to be proactive in mental healthcare strategies by the use of implementing an evidence-based practice depression-prevention model. Bridging the gaps through depression-prevention intervention will prove successful on many student and collegiate levels of academia and care.

NDSU NORTH DAKOTA STATE UNIVERSITY

WHAT DO WE KNOW ABOUT DEPRESSION & STUDENT SUCCESS AT NDSU?

Department of Nursing — September 2014

What is the big deal?

The prevalence of depression development among college students is noted to be 30.4% per each college and university with an overall national campus for severe psychological problems including depression reporting 86% at large.[1]

What can happen with undiagnosed depression?

Outcomes of undetected depression lead to heightened levels of stress and dangerous behavior patterns such as drug and alcohol consumption, poor academic achievement, high rates of college dropout, chronic and progressive mental illness, and suicide.[2]

Q: What makes students stressed?
A: A variety of academic, social, financial, and personal adjustments.

Q: What is the depression problem?
A: First year college students are being inadequately treated or untreated.

Is there something we can do?

Yes, there is something we can do! Depression prevention and early detection is a proactive intervention. Screening is important to implement for college student health because of the chronic, recurrent and progressive nature of the disease along with student academic success, college retention, and overall quality of life.[3]

"The greatest percentage of college students with significant depressive symptoms are first year students who are stressed due to separation from home and the new demands faced as college students...[4]"

Every moment counts

Signs & Symptoms

- Frequent headaches
- Sleep disturbances
- Increased rates of athletic injury
- Viral illnesses
- Poor health behaviors
- Anxiety
- Hopelessness
- Dropout

Figure 2. What do we know about depression and student success at NDSU?

Risk Factors

Primary risk factors for depression include overall stress along with preexistence and or existence of mental illness.

An estimated 26% of Americans aged 18 and older, or approximately one in four adults experience symptoms associated with a diagnosable mental illness in any given year. Mental illness clearly affects academic success and poor retention in higher education settings that is largely attributable to lack of mental illness detection.

Fewer than half the students with mental illnesses seek out mental health services.[5]

College Depression

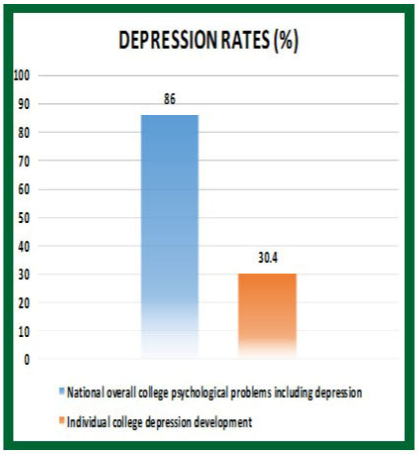
In a 2005 national survey of college counseling center directors, 86% reported an increase in mental health disorders including depression and anxiety.

Research indicates that 86% of students with mental illness withdraw from college prior to completion of their degree compared to 45% withdrawal rate of the general student population.

Due to high rates of college dropout among students with mental health disorders, colleges and universities should be well prepared to address the needs of these students and implement effective strategies for retention.[5]

Inadequate treatment and lack of coordination among health and counseling services on college campuses increases the risk of violent or suicidal episodes on campuses. Students receiving varied forms of treatment for clinical depression or other mood disorders remain low, with only 34% reporting any form of treatment in a recent national survey.[6]

High quality mental health services are a readily apparent need, yet many campuses experience challenges in providing this coordinated mental health service.



A cry for help

First year college students are targeted as a population at risk for new-onset depression.[3] Depression prevention is critically important because undetected depression or untreated depression can lead to depressive episodes becoming increasingly triggered over time leading to complex depressive disorders. Adverse outcomes of college student depression segue into college dropout and poor quality of life.[3]

A call to order

Coping with stress has been identified as a high-priority in the Healthy Campus initiatives of the American College Health Association.[7] Initiatives focus upon the need to improve access to quality mental health services and also increase primary care structured screening and treatment for mental disorders. Clinical intervention and mental healthcare services are critically important for first year college students.[6]

Figure 3. College Depression and Risk Factors.

Current NDSU Services

Student Health Services	Counseling Services	1st Yr. Student Orientation
Student Depression Prevention Model nonexistent.	Student Depression Prevention Model non-existent.	Basic general orientation to NDSU students.
NDSU Student Health Services provides depression screening utilizing tools: PHQ-9 and GAD-7.	Psychiatrist on staff 2 days per month during academic year and 1 day per month during summer semester.	Information provided on student health services and clinic/center locations.
Positive depression screening results are referred to NDSU Counseling Services for further evaluation and possible prescrip-	Depression information available through counseling website.	Required course during first semester for freshman students: University Studies 189.
Existing depression medication prescription refills provided with referral to Psychiatry via NDSU Counseling Services.	Anonymous confidential online depression screening.	University Studies 189 offers general student learning information with limited stress management instruction.
General family practice services by appointment within student health clinic.	Hours of service by appointment available M/W/F 8-5 and T/Th 8-7 during 9 month academic year and M-F 7:30-4:00 during summer sessions.	
Hours of service: M-F 8-5 academic year and M-F 7:30-4:30 summer sessions.	Crisis/emergency options included on website such as local emergency depart-	
	Workshops for faculty and students available along with self-awareness classes	

Suggested Depression Prevention Services	Current NDSU Practice?	Recommended Evidenced Based Approaches
Depression prevention model	No	Peden Cognitive Behavioral Group Intervention Model
Depression screening: universal	Yes	PHQ-9 and GAD-7
Depression screening: random	Yes	PHQ-9 and GAD-7
Required student education on depression	No	Required first year student curriculum/education
Voluntary student mental health workshops	Yes	Offer continued supportive information
Full-time mental health access	No	Health Care Provider: Nurse Practitioner specialized in mental health
Limited (by appt. only) mental health access	Yes	Full time mental health care access
Full-time mental healthcare provider	No	Full time mental health care access
Part-time (limited) mental health provider	Yes	Health Care Provider: Nurse Practitioner specialized in mental health

Figure 4. Current NDSU services.

Dianne KappelmanBeyer
RN, BSN, DNP-3

Recommendations

Depression prevention and care is imperative for the emerging adult within the college and university system. Providing this service would not only benefit the student but would also benefit the university with student retention. Evaluation of the current practice with evidence-based practice indicate definite gaps within the NDSU student mental healthcare service line.

Recommendations for depression prevention and early detection are to employ a nurse practitioner specialized in mental health, as this would fulfill the overall student mental healthcare needs by utilizing a depression prevention model such as the Peden cognitive behavioral group intervention, depression education for students either individualized or classroom by adding a chapter regarding depression to the required course for University Studies 189, and provide mental

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Figure 5. Recommendations.

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APPENDIX A

Key Informant Interview Guide

Tell me about your department and the position that you hold.

What do you find as an important asset to student depression prevention?

What are the barriers that you perceive in student depression services?

Is there a depression prevention model utilized within the university?

What would you like to see implemented for student mental health services?

APPENDIX B

Ann Peden Permission Statement

DNP student from Fargo, ND

Ann R. Peden <apeden@capital.edu>

Fri 5/30/2014 1:24 PM

To:

Dianne KappelmanBeyer;

Dianne – I am very happy to share my intervention materials. I am sending both the 4 and 6-week versions. I am including several different files – if I send duplicate information, just delete it. Best wishes as you complete your DNP project. I will be very interested in your results! Ann Peden

PS – technology has changed since I began this work – most people are now using their cell phones for recording affirmations and STOP technique.

APPENDIX C

Ann Peden Communication

Thank You!!

Ann R. Peden <apeden@capital.edu>

Sun 6/1/2014 10:12 AM

Dianne - glad you are wanting to use this. Ann

Dianne KappelmanBeyer

Fri 5/30/2014 4:48 PM

Sent Items

To:

Ann R. Peden <apeden@capital.edu>;

Dear Professor Peden,

I can't begin to tell you how much I appreciate your information! I had been searching for so long to find a model that has so much to offer. I am so grateful. Thank you very very much and I'll keep in touch.

Sincerely,

Dianne KappelmanBeyer

APPENDIX D

The Iowa Model Permission Statement

Permission to Use and/or Reproduce The Iowa Model

Kimberly Jordan - University of Iowa Hospitals and Clinics <noreply@qemailserver.com>

Sun 10/5/2014 4:48 PM

To:

Dianne KappelmanBeyer;

To help protect your privacy, some content in this message has been blocked. To re-enable the blocked features, click here.

To always show content from this sender, click here.

Action Items

You have permission, as requested today, to review/use *The Iowa Model of Evidence-Based Practice to Promote Quality Care (Titler et al., 2001).* Click the link below to open the model. Copyright of the Iowa Model of Evidence-Based Practice to Promote Quality Care will be retained by The University of Iowa Hospitals and Clinics.

Permission is not granted for placing the Iowa Model on the internet.

The Iowa Model

In written material, please add the following statement:

- *Used/Reprinted with permission from the University of Iowa Hospitals and Clinics and Marita G. Titler, PhD, RN, FAAN. Copyright 1998. For permission to use or reproduce the model, please contact the University of Iowa Hospitals and Clinics at (319)384-9098*

If you have questions, please contact Kimberly Jordan at 319-384-9098 or kimberly-jordan@uiowa.edu.

APPENDIX E

This is a scanned four page handout from the project-planning meeting provided by Health Promotion Specialist for Student Health services; Anne Bodensteiner, M.S. on 07-11-13.

Lost Tuition

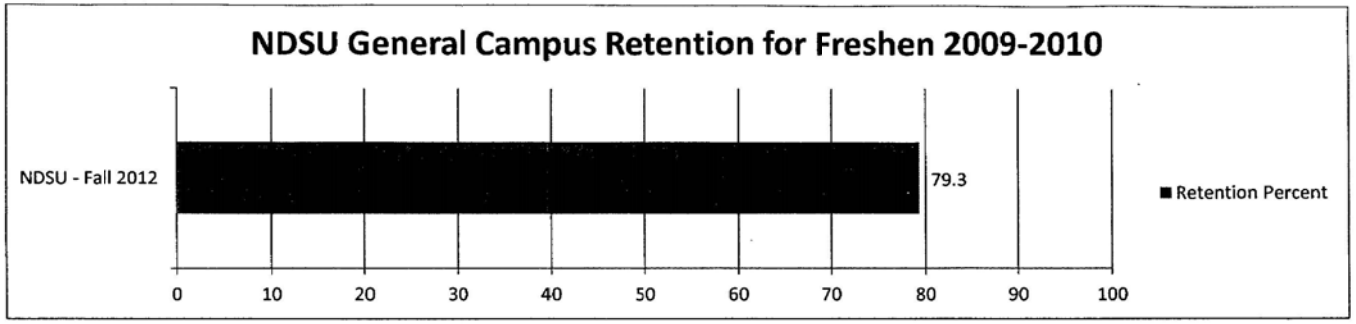
Tuition rates for 2010/2011 = $2819.50/ Semester
*No fees included
*Assume graduation would have been 4 years
*No summer tuition added

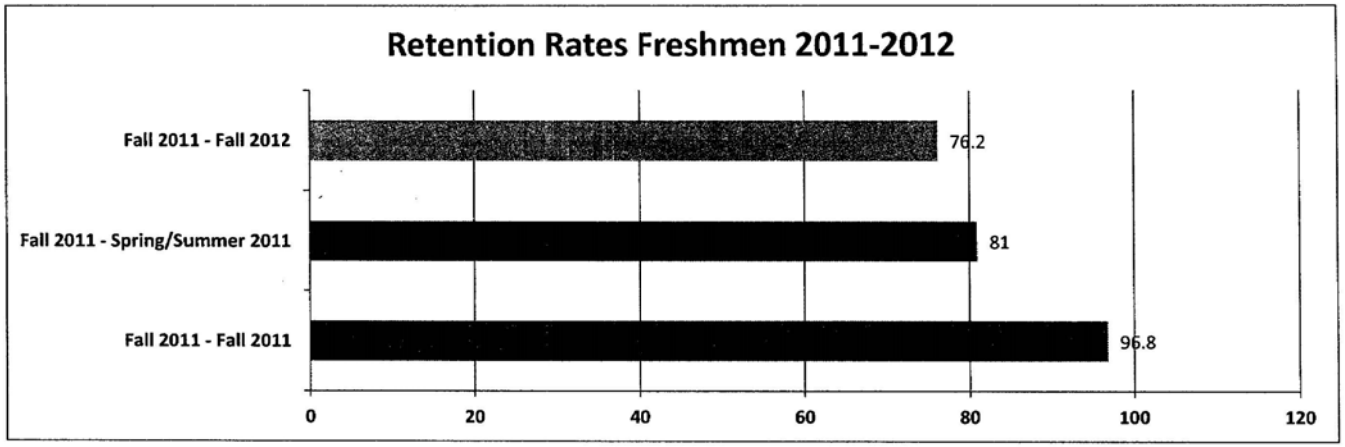
Total lost for freshman 2009/2010
$408,827.50

Total lost for freshman 2010/2011
$656,943.50

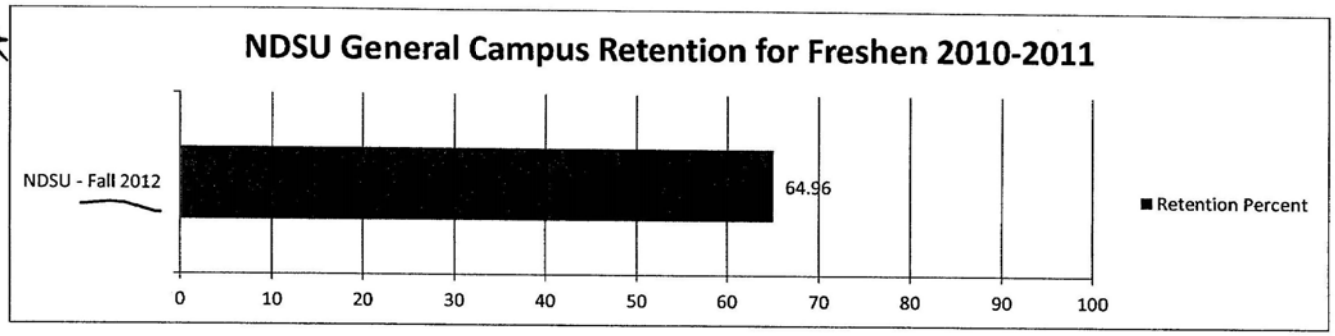
Total lost for freshman 2011/2012
$250,935.50

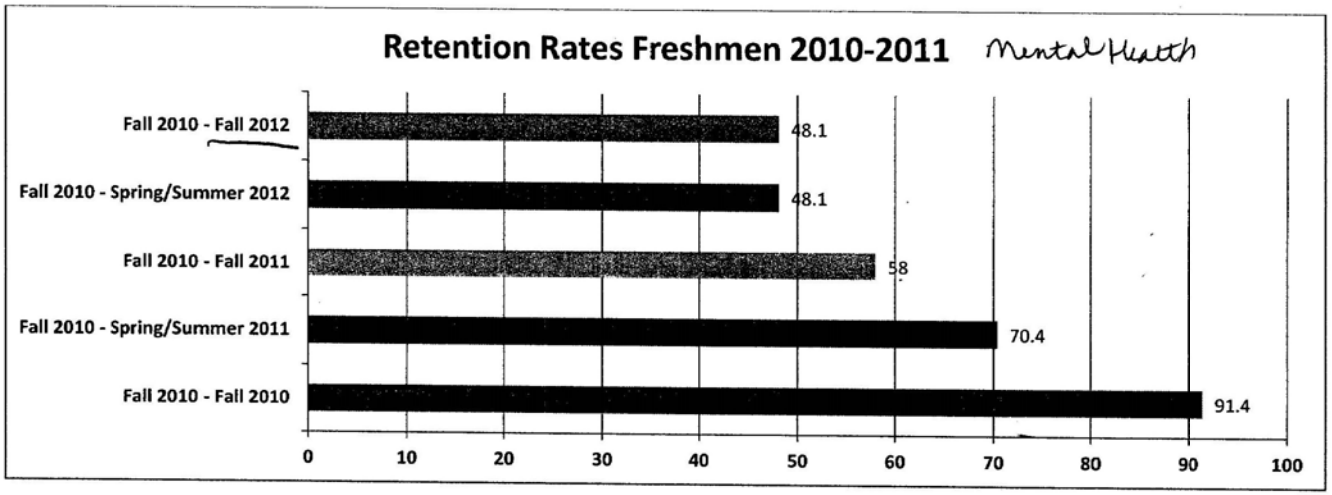
Total for all 3 cohorts: **$1,316,706.50**



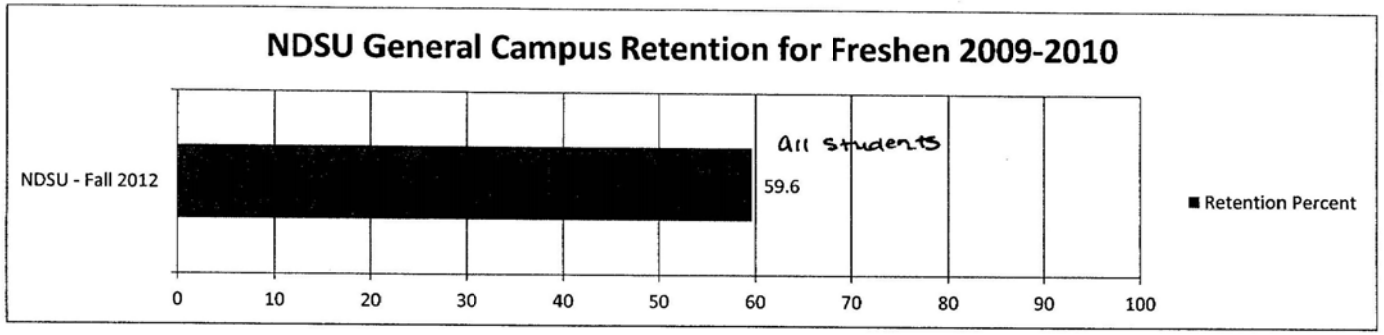


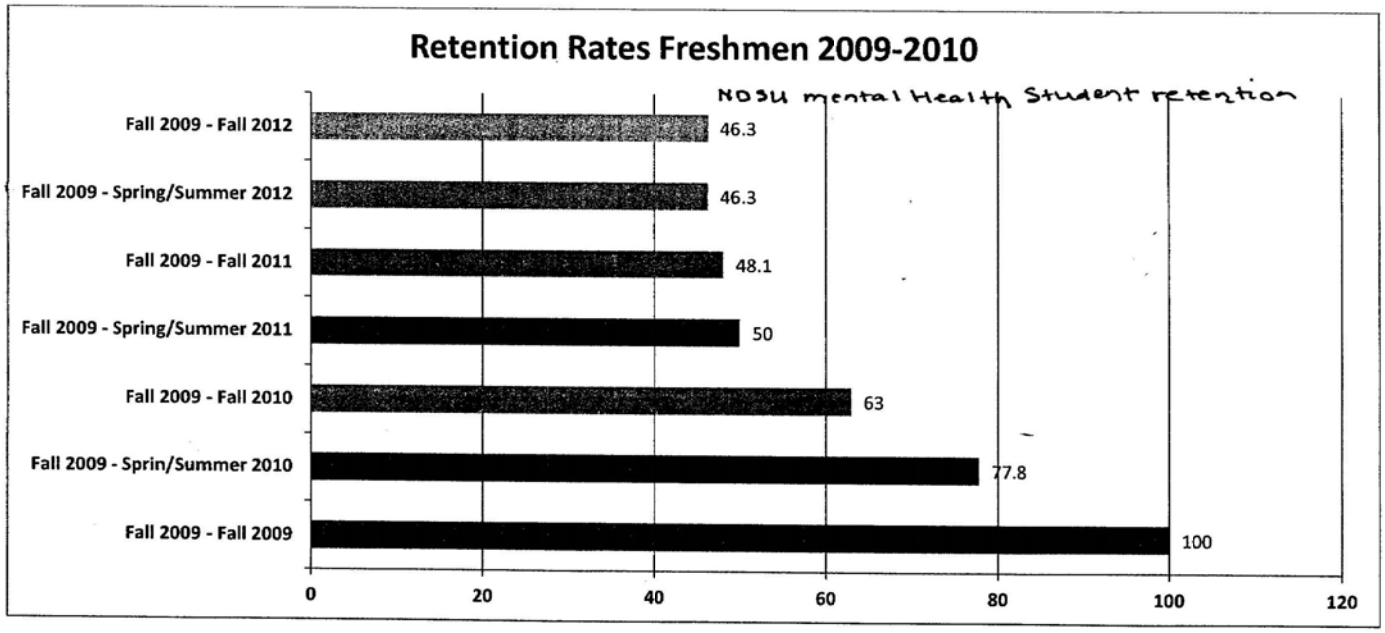
N= 63 students





N= 81 students





N = 43 students

Mental Health Diagnosis = depression, anxiety, ADHD