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Assessment of Mature Rural Adults Experiencing Depression

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ASSESSMENT OF MATURE RURAL ADULTS EXPERIENCING DEPRESSION

By

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TABLE OF CONTENTS

Abstract

Depression is well recognized worldwide as a leading cause of disability which reduces quality of life, particularly among mature adults. The purpose of this paper is to disseminate the findings of a graduate project which explored depression in mature adults, with a focus on how to improve healthcare for this population in rural communities in North Dakota. A literature review was performed in order to compare rural versus urban practices in the assessment, diagnosis, and treatment of depression in mature adults. Medical professionals working in the fields of clinic, hospital, and emergency department healthcare were surveyed as to their current practices when assessing, diagnosing, and treating potentially depressed patients. As a result, the Five by Five assessment card was formulated to facilitate discussion between patient, nurse, and healthcare provider on the topic of depression, whereupon the tool was again taken to medical professionals in the aforementioned fields for their opinion of its worth and validity for assessing depression in mature adults. The potential benefit of this project is to improve healthcare professionals' ability to recognize common signs and symptoms of depression in the mature adult population and improve the delivery of appropriate treatment for this demographic.

Assessment of Mature Rural Adults Experiencing Depression

Depression is well recognized worldwide as a leading cause of disability; it is one of the common sequelae of chronic illness, poverty, and social isolation, as well as a significant risk factor for injury in older adults (Tiesman, Peek-Asa, Whitten, Sprince, Stromquist, & Zwerling, 2007). Depression in mature adults is associated with substantially reduced quality of life, increased mortality, and increased use of all healthcare and social services (Licht-Strunk, van der Kooij, van Schaik, van Marwijk, van Hout, de Haan et al., 2005). Depression has been referred to as an "invisible health problem" (National Institute of Mental Health, as cited in Clark, Deaton, & Dunbar, 2003) as it is not always apparent to healthcare providers as the underlying cause of physical ailments.

Clinical depression is considered "the fourth leading contributor to the global burden of disease by disability adjusted life years" (Fleischer, Fernald, & Hubbard, 2007; World Health Organization, as cited in Rhodes, Kushner, Bisgaier, & Prenoveau, 2007). By the year 2020, World Health Organization officials estimate that "depressive disorders will be the leading cause of disability in low income regions of the world" (Bass, Neugebauer, Clougherty, Verdlei, Wickramaratene, Ndogoni et al., 2006), "second only to heart disease" (WHO World Mental Health Survey Consortium, as cited in McCrone, Cotton, Jones, Hawkins, Costante, & Nuss, 2007), and "injuries will be the third leading cause of death and disability worldwide" (Murray, 1996, as cited in Tiesman et al., 2007). With an estimated 5% prevalence rate in the general public, depression is a serious concern for the welfare of society as a whole (Clark et al., 2003). However, current studies show that depression is significantly more prevalent in older people; on average,

12% of all patients over the age of 60 experience depressive symptoms (Givens, Datto, Ruckdeschel, Knott, Zubritsky, Oslin et al., 2006) and an estimated 46.2% of all nursing home residents suffer from depression (Santulli & Daiello, 2007). Yet only about 50% of all patients presenting to their primary care physicians with obvious symptoms are recognized as being depressed (Goldman, Neilsen, & Champion et al., 1999). In addition, the perception of what constitutes depression is not always in concordance between patient and healthcare provider (Johnston, Reid, Wilson, Levesque, & Driver, 2007).

Clinical Problem

Mature adults are a particularly vulnerable population; depressed white males are at an extremely high risk for suicide (Bramesfeld, Grobe, & Schwartz, 2007; Sahyoun, Lentzner, Hoyert, & Robinson, as cited in Clarke, 2007). Older women are also at risk, and they are more than twice as likely to suffer from depression as males (Bramesfeld et al., 2007). One out of every eight women worldwide will experience depression during their lifetime (Fleischer et al., 2007). Depression is common in mature adults who have multiple health problems such as heart disease, Parkinson's and Alzheimer's disease, stroke, cancer, rheumatoid arthritis, diabetes, renal disease, and chronic pain (Givens et al., 2006; Goldman et al., 1999). Depression is rarely considered a co-factor for injuries or illness when mature adults present to emergency departments, and yet depression and the use of antidepressant medication in this cohort are both highly associated with falls; alcohol abuse secondary to depression is also widely recognized as a risk factor for injury (Tiesman et al., 2007). These are disconcerting facts and statistics, given the rapidly aging "Baby Boomers"; the number of mature adults is projected to double within the next 20 years (Knickman & Snell, 2007). By the year 2030, there will be an estimated 61

million "young old", aged 66 to 84, and an estimated additional nine million of the "oldest old", aged 85 and above (Knickman & Snell, 2007).

Clinical Questions

My personal experience as an Emergency Medical Technician has been that mature adults suffering from depression utilize emergency services at a disproportionate rate, often presenting with somatic complaints which are unsubstantiated by physical assessment or testing. I am also a Registered Nurse currently working in a rural community in North Dakota in the field of long-term healthcare; previously I worked in the emergency department of a small, rural hospital. As a result of my combined experiences with mature adults in rural communities, I am convinced that there is room for improvement in the assessment, diagnosis, and treatment of mature adults suffering from depression. The first clinical question which drove this project was as follows: When presenting to a clinic or emergency room, are mature adult patients living in rural settings assessed, diagnosed, and treated for depression the same as the their counterparts living in urban settings? The second question was as follows: Is there a current screening tool for depression which could be quickly used by nurses to facilitate diagnosis and treatment for mature adults in rural settings when they present to a clinic, hospital, or emergency room?

Purpose of the Project

The primary purpose of this project was to investigate the depth of the problem of depression among mature adults residing in rural versus urban communities. The secondary purpose was to formulate a simple depression assessment card as a means to initiate conversation between potentially depressed patients and their healthcare provider.

As nurses traditionally are the first healthcare professional patients encounter when seeking help, I believe that it is not only the nurse's job but their duty to act as an advocate for timely and appropriate treatment of potentially depressed mature adults. During this initial interaction, nurses are in the unique position to identify specific and nonspecific indicators and behaviors on the part of patients which may suggest that the patient is suffering from depression. Armed with this data nurses can pass on their findings, and in this fashion they can work in conjunction with medical doctors, physician's assistants, and certified nurse practitioners to enhance the delivery of appropriate healthcare to mature adults with depressive symptoms.

Early detection of a potentially depressed patient will facilitate appropriate screening, assessment, diagnosis, and treatment, all of which will more quickly improve the patient's quality of life. Current literature reviews have shown that although there is little difference in the incidence of depression in mature adults based upon urban versus rural living conditions (Clarke et al., 2007; Givens et al., 2006; Kilkkinen et al., 2007), depression still goes undiagnosed more often in this demographic than in younger age brackets, and disparity remains between rural and urban practices in the use of psychotherapy in conjunction with pharmacological treatment methodologies (Sewitch, Blais, Rahme, Galarneau, & Bexton, 2006). The final goal of this project was to attempt to reduce this disparity by formulating a new method of assessment to be used by nurses, and potentially Emergency Medical Technicians and Paramedics when providing care in the pre-hospital setting, to rapidly assess patients aged 65 and older for signs and symptoms of depression and provide this information to medical healthcare providers with the aim of providing timely and appropriate treatment.

Significance of the Project

Analysis of the data collected from a survey of healthcare providers at the North Dakota 11th Annual Trauma Conference indicated that 83.3% of healthcare providers working in the clinic setting routinely screen mature adults for depression. The significance of this project, however, is that the data also showed that currently only 33.3% of North Dakota healthcare providers working in the emergency room setting routinely assess mature adult patients for signs and symptoms of depression. This disparity in assessment indicated to me that there was room for improvement in the emergency care setting. In addition, 70% of those professionals surveyed indicated that they worked in a rural community, with the term "rural" as being defined by United States Census Bureau criteria. The results of the survey indicated that practitioners working in a defined "urban" setting also do not routinely screen mature adults for depression.

Nurses themselves are a rapidly aging population (Buerhaus, Staiger, & Auerbach, 2000b, as cited in Palumbo, McIntosh, Rambur, & Naud, 2009). Nearly 25% of all nurses work in rural settings and as this age group of nurses begins to retire, the resources of these facilities will be further strained (Cramer, Nienaber, Helget, & Agrawal, 2006, as cited in Palumbo et al., 2009). By the year 2030 the healthcare system will be in crisis, not only because of the sheer number of patients over the age of 65, but also because of the estimated shortage of nurses; the nursing profession is going to have to learn to work more efficiently with less staff. Thus, I believe that any tool which can be utilized in order to improve the delivery of evidence-based standards of healthcare to their patients is worthy of further nursing research.

Conceptual Framework and Definitions

For the purpose of this paper, depression is defined as "an illness that involves the body, mood, and thoughts, that affects the way a person eats and sleeps, the way one feels about oneself, and the way one thinks about things" (MedicineNet.com, 2010). Depression is further defined as "a mental state of altered mood characterized by feelings of sadness, despair, and discouragement" (Farlex Inc., 2010). The term "mature adults" is intended to indicate an adult of either sex, aged 65 or older. The terms "urban" and "rural" are defined as follows, in accordance to the following United States Census Bureau definitions; an urban community is one which "generally consists of a large central place and adjacent densely settled census blocks that together have a total population of at least 2,500 for urban clusters, or at least 50,000 for urbanized areas" (US Census Bureau, 2008). The term "rural" is defined as a community containing "territory, population and housing units not classified as urban" (US Census Bureau, 2008). The term "healthcare provider" is inclusive of licensed medical doctors, physician's assistants, and certified nurse practitioners.

Evidence Based Literature Review and Critique

After an exhaustive literature search, involving various search engines from both the University of North Dakota Harley E. French Library and the Internet, I felt I reached the point of saturation after reading approximately 100 articles on the topic of depression in mature adults. Scanning through my sample again, I selected articles which I felt contained the most pertinent information regarding my proposed project. The selected evidence-based literature supported the idea that both psychotherapy and pharmacologic interventions have been proven effective in older patients, yet depression often goes untreated or undertreated

in this population (Givens et al., 2006; Goldman et al., 1999; McCrone et al., 2007). Medication and psychotherapy combined are considered the "gold standard" of treatment for depression (Harmon, Veazie, & Lyness, 2005; Kinkead, 2007). Unfortunately, the research supports the fact that psychotherapy is simply not always available in rural settings (Hillemeier, Weisman, Baker, & Primavera, 2005). As a Registered Nurse who has had encounters with depressed mature adults, my personal observations about depression in the rural population indicate that there is a lack of communication between patient and healthcare provider; they feel a sense of shame having to admit to their doctor that they feel depressed and cannot "fix it" themselves. They also seem very concerned with confidentiality and do not want their neighbors and friends finding out that they are being treated for depression (Givens et al., 2006). In addition, when older adults do seek medical treatment, they are reluctant to express their concerns about antidepressant medications (Givens et al., 2006). According to the Givens et al. study, these fears stem primarily from four themes: fears of addiction; patient resistance to viewing their depression as a medical illness; fears about antidepressants preventing "natural sadness"; and prior negative experiences with medications they may have taken for depression (2006). Whereas newer drugs, such as tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRI's) are more commonly used to treat typical depression, older classes of drugs, such as monoamine oxidase inhibitors (MAOI's) may be a better choice for treating atypical depression, (Mayo Clinic.com, 2008a). Electroconvulsive therapy (ECT) is still used to treat depression in some institutional settings (Moyle, 2002).

Qualitative and Quantitative Studies

Depression is a frequently measured concept in nursing research, often as an outcome variable (Clark et al., 2003). Both qualitative and quantitative designs were used in the articles I read for this literature review. Although I found limitations with both methods of study, the question of ethics comes into play when interviewing depressed patients, particularly during qualitative studies; Clark et al. questions whether depressed participants are fully competent, able to understand the risks and benefits of the study, and give informed consent (2003). Subjects undergoing electroconvulsive therapy are also at an increased risk of not being able to give informed consent (Moyle, 2002). Clark et al. also questions the ethical implications when depression is discovered during a study and no provisions are made for follow-up; participants identified as at risk for depression during the process of a study should be referred to a physician in the same way as someone discovered to have high blood pressure or diabetes (2003).

Methods, Designs, and Tools

Some of the studies I reviewed were combinations of clinical trials, qualitative, and quantitative methods (McCracken, Dalgard, Ayuso-Mateos, Casey, Wilkinson, & Lehtinen et al., 2006) but these were rare, multi-staged, time-consuming, and used up many resources in order to complete. Data collection methods varied from face-to-face interviews, telephone interviews, semi-structured interviews, self-reported questionnaires, mailed surveys, database, and website, and medical and insurance record reviews. Study designs used included controlled trials, cross-sectional, observational, prospective and retrospective cohort, and secondary analyses.

Surveys seemed to be very popular tools for assessing depression, particularly when quantitative studies were performed. Multiple depression surveys and tools were mentioned throughout the literature: the Short Psychiatric Evaluation Schedule (Blay, Andreoli, Fillenbaum, & Gastal, 2007); the Composite International Diagnostic Interview (CIDI) (Kringlen, Torgersen, & Cramer, 2007); the Global Depression Scale (Stanton, Dunkin, & Williams Thomas, 2007); the General Health Questionnaire (Weich, Twigg, & Lewis, 2006); the Kessler 10 and the Hospital Anxiety and Depression Scale (Kilkkinen et al., 2007); the World Mental Health Survey section of the World Health Organization Composite International Diagnostic Interview (WMH-CIDI) (Gureje, Kola, & Afolabi, 2007); the Symptom Checklist, the Inventory of Depressive Symptoms, the Zung Depression scale, the Symptom-Driven Diagnostic System for Primary Care, and the Primary Care Evaluation of Mental Disorders (PRIME-MD) (Goldman et al., 1999). The Center for Epidemiologic Studies Depression Scale (CES-D) and the Beck Depression Inventory (BDI-II) are two of the more well-known depression screening tools currently in use (Clark et al., 2003). However, researchers have questioned their reliability because they ask questions pertaining to changes in appetite or fatigue, which may be related to underlying, undiagnosed physical ailments rather than depression (Clark et al., 2003). The CES-D has also been translated into other languages for use in other countries. Translation of both the tool and the subjects' answers from another language back into English for analysis brings into question the validity of the translated tool; Fleischer et al. question how much information gets lost in translation (2007). Given the well-known link between stress and depression, the Perceived Stress scale is cited as a rapid and very useful tool, as it assesses the frequency of stress-inducing situations and

feelings of stress over the last month (Fleischer et al., 2007). The Geriatric Depression scale and the English version of the CES-D have both been proven to be valid and reliable tools for assessing mature patients (Goldman et al., 1999). For the most part, in all studies, a diagnosis of depression was based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) (Appendix A).

In summary, quantitative studies using surveys appear to be the most popular method of studying depression. However, each survey tool has its strengths and weaknesses. Depending on what aspect of depression the researcher is interested in studying, each tool should be evaluated for sensitivity and specificity prior to its use. Using multiple tools and comparing the results is one way to determine if findings are significant. Qualitative studies are also useful but, as stated earlier, they are very time-consuming and there is the potential for human error when coding the results. Statistical analysis methods used throughout the literature were primarily computer programs designed specifically to identify correlational relationships between various factors and depression. Although this removes the majority of potential for human error, there is still the possibility of data entry errors.

International Findings

Depression is recognized around the world as a significant health issue and it was very interesting to read and compare findings from other countries. Cultural factors influence the definition of depression and how it is treated (Fleisher et al. 2007). European studies frequently find differences in prevalence rates among mature adults living in rural versus urban settings which are similar to findings in the United States, where researchers have found a higher prevalence in urban settings. In Britain, mature adults living in rural

communities had small but significantly lower rates of depression when compared to their urban peers (Weich et al., 2006). However, this study focused primarily on household composition (living alone versus with family) and did not take into consideration outside social networks and support (Weich et al., 2006). Another British study indicated that living alone was correlated with high rates of depression (Walters, Breeze, Wilkinson, Price, Bulpitt, & Fletcher, 2004). In Norway, it appears that stability within a society, little societal or familial change, moderate alcohol intake, a low crime rate, and strong moral and religious traditions lend themselves to a lower rate of mental illness in rural communities (Kringlen et al., 2006).

Spirituality and hope are two concepts highly correlated with lower prevalence of depression among mature adults (Craig, Weinert, Walton, & Derwinski-Robinson, 2007). In one rural Australian study, the prevalence rates for rural and urban residents with depression did not vary all that much (9% versus 11.5%), but the presence of chronic illness was recognized as one of the strongest risk factors for depression (Kilkkinen et al., 2007). Demoralization, helplessness and hopelessness, loss of competence, reduced sense of self-esteem, and loss of a sense of meaning and purpose in life are all recognized as psychological results of chronic illness (Clark et al., 2003). Depression is also acknowledged in the caregivers of the chronically ill, who are often their spouses and of approximately the same age; encouraging social connections, using existing resources, and training a multidisciplinary and skilled healthcare workforce in the use of bio-psychosocial-spiritual models of care is highly recommended (Clarke, 2007).

According to Fleisher et al., "People of low socioeconomic status are at greater risk for depression, suggesting that relative rather than absolute poverty may be an important

determinant for depression" (2007). This would appear to hold true in China, as people age 60+ living in abject poverty in poor, rural communities have a lower incidence of depression than people of the same age in Western countries (6% versus the average 12%) (Chen, Wei, Hu, Quin, Copeland, & Hemmingway, 2005). This may be due in part to their strong cultural traditions and social ties and living with family members (Chen et al., 2005). However, local farm workers in China have no health insurance (poor health status was reported in 22.4% of rural dwellers, as compared to 11.6% of urban citizens) and may not visit the doctor for feelings of depression, thus skewing the results of this study (Chen et al., 2005). In Germany, on the other hand, 88% of the population is covered by statutory health insurance, and another 10% have private health insurance (Bramesfeld et al., 2007). Treatment rates in Germany do not vary between rural and urban settings, however pharmacologic treatment is more common in rural settings (42.6% versus 36.7%) and psychotherapy is used more often in urban settings (21.5% versus 15%) (Bramesfeld et al., 2007). Half of all German patients aged 20-29 with depression receive a combination of medication and psychotherapy, while patients over the age of 60 are more often prescribed medication alone and rarely receive counseling (Bramesfeld et al., 2007).

In Japan, loneliness, poor health and subsequent feelings of hopelessness were found to increase the risk of depression and suicide among older persons (Kaneko, Motohashi, Sasaki, & Yamaji, 2007). Lack of medical doctors in rural communities may contribute to poorer health, which may increase the prevalence rate of depression among mature adults in rural Japanese communities; the researchers state that "measures to improve the accessibility to medical facilities in rural communities should receive high priority" (Kaneko et al., 2007). In contrast to studies in China, living within close proximity

of one's immediate family in Japan actually increased the risk of depression; 86.9% of all persons aged 65+ live with their children's family, and family conflicts and family–related stress is common (Kaneko et al., 2007).

In Brazil, poverty, living alone, living in a rural setting, and not being married were important risk factors for predicting depression in both men and women aged 60+ (Blay et al., 2007). Impoverished women, as those studied in Mexico by Fleischer et al., most often report feeling a lack of personal control over their lives, lack of social support, and low social status as the primary reasons for feeling depressed (2007). However, biological and psychosocial factors, such as hormonal fluctuations and coping styles also affect reported depression rates (Fleisher et al., 2007). In one Canadian study of persons age 65+, doctors tended to prescribe psychoactive medication more often to depressed mature adult women living in rural areas whereas their cohorts living in urban areas were more likely to receive psychotherapy; the authors propose this trend is possibly due to the availability of providers and facilities in urban settings (Sewitch et al., 2006).

One study in Nigeria showed that ability to pay and availability of services influenced the type of treatment depressed patients received; only 37% of patients aged 65+ with lifelong depressive symptoms received any kind of treatment, and depressed mature adult patients living in impoverished, rural communities frequently received no treatment at all (Gureje et al., 2007). In another community-based study in rural Uganda, however, psychotherapy alone was shown to be a very successful long-term method of treating depression in the rural setting and offered a viable alternative to expensive antidepressants in poverty-stricken regions (Bass et al., 2006). The authors proposed that the formation of strong, social support groups during the course of the study was another major factor in the

alleviation of depressive symptoms (Bass et al., 2006). Lack of social relationships is a risk factor, both for poor health and associated depression (Knickman & Snell, 2007). And people living in traditionally war-torn nations, such as Lebanon and Ireland, are at a higher risk for depression, particularly mature adults who have seen many changes in their lifetimes (McCracken et al., 2006; Sabbah, Vuitton, Droubi, Sabbah, & Mercier, 2007).

Summary of the Review of Literature

These international findings are very similar to what is evident in rural communities across the United States. Depression, with few exceptions, is more prevalent in urban settings than in rural communities (Craig et al., 2006; Hillemeir et al., 2005; Stanton et al., 2007; Tiesman et al., 2006; Weich et al., 2006). However, I feel these statistics may be skewed, partly because of a lack of mental health professionals in rural settings and also because of underdiagnosis by rural physicians. Close social ties are vital to rural living worldwide, as the rural populations are primarily older and, with the exception of China and Japan, living with family is not that common (Walters et al., 2004). Culture plays a huge part in depression; mature adults living alone in cultures where strong family ties are important tend to have higher rates of depression (Blay et al., 2007; Fleischer et al., 2007) This trend is similar in rural North Dakota where, despite close familial ties, the availability of jobs has drawn the younger generations to more urban settings, leaving mature adults behind (Kiely, 2008). Internationally, chronic illness heavily contributes to depression, both for the patient and the caregiver; this too is similar to findings in the United States (Healthy Holistic Living, 2008).

I found it very interesting that incidence rates for depression are similar in Australian seniors living in both urban and rural settings, where multidisciplinary methods

are more common (Clarke, 2007; Givens et al., 2006; Kilkkinen et al., 2007). Urban versus rural treatment methods were also similar in Germany, where studies show that 98% of the population has health insurance (Bramesfeld,et al., 2007). These findings would warrant more research as to the actual connection between better diagnosis and treatment and multimodal therapies and insurance coverage. Other themes which exist in the United States and are closely linked to depression include feelings of hopelessness, helplessness, unemployment, poverty, lower education levels, multiple health issues, heavy alcohol consumption, lack of medical personnel, clinics and hospitals, social isolation, loneliness, and a family history of mental illness (Cheong, Herkov, & Goodman, 2008; McCrone et al., 2007). These are all similar bio-psychosocial themes which were found in the international literature as well. One general weakness I found throughout the literature was that studies tended to lump all older adults into the "60+" category and did not differentiate between "young-old" and "old-old". With the aging of the "Baby Boomer" generation, this differentiation will become increasingly more important in the next two decades (Knickman & Snell, 2007).

New Therapies, Modalities, and Suggestions

There were several suggestions made throughout the literature, regarding novel ways to approach and treat depression. The World Health Organization supports and encourages studies in depression in mature adults aged 70+ not only because of the looming population explosion in this age group, but also because of the multiple, unwanted side effects associated with antidepressants and the serious risks they impose on this population (Singh, Clements, & Fiatarone Singh, 2001). One study suggested that the alleviation of poverty, improvement of educational opportunities, and addressing the root

causes of depression must all be considered when looking for a solution (Fleischer et al., 2007). These are all wonderful ideas, but may be too broad in scope and it could take a long time to formulate feasible solutions. Exercise has long been studied as a feasible alternative therapy for depression in younger patients, and one study showed this trend to be true in mature adults as well (Singh et al., 2001). Most of the literature supported the fact that improving the physical health of this demographic will logically decrease the risk of them becoming depressed. According to Givens et al., (2006), illness means different things to different people, and can only be described by the person experiencing it; anthropologists call this phenomenon the "emic perspective"; this will become more important in the future as healthcare moves towards more patient-centered practices. The use of multidisciplinary healthcare models is also encouraged, particularly in rural settings (Clarke, 2007; Kilkkinen et al., 2007; Licht-Strunk et al., 2007). Case management in rural healthcare settings has been shown to have a positive effect on healthcare outcomes and it is recommended that rural case managers have, at a minimum, graduate level preparedness (Stanton et al., 2007).

Methods

Signs and Symptoms of Depression

The results of the literature review show that the signs and symptoms of depression appear to be much the same from culture to culture. In researching the literature for the next portion of my project, the formulation of the assessment card, I was primarily interested in what healthcare experts considered to be the most common signs and symptoms of depression. Table 1 on the following page lists the most common physical and emotional signs and symptoms of patients suffering from typical depression according to the Mayo Clinic.

Table 1. Signs and Symptoms of Depression.

Loss of interest in normal daily activities	Restlessness
Feeling sad or down	Being easily annoyed
Crying spells for no apparent reason	Feeling fatigued or weak
Problems sleeping	Feeling worthless
Trouble focusing	Loss of interest in sex
Difficulty making decisions	Thoughts of suicide/suicidal behavior
Unintentional weight gain or loss	Unexplained physical problems, such as back pain or headaches
Irritability	

(MayoClinic.com, 2008b)

However, depressed mature adults may not present in the same fashion as younger patients; they may simply feel "generally miserable or unhappy without really knowing why" (Mayo Clinic.com, 2008a). Thus, it is important to recognize atypical symptoms as well. According to the Mayo Clinic, signs and symptoms of atypical depression also include the following:

Table 2. Signs and Symptoms of Atypical Depression

Earlier onset of symptoms	Oversleeping
Overeating	Mood reactivity

(MayoClinic.com, 2008a)

The responses I received from my survey of healthcare providers (Appendix B) very closely matched the symptoms listed by the Mayo Clinic. The World Health Organization well-being index (WHO-5) also supports these signs and symptoms as being indicative of clinical depression (Appendix C). In one study comparing the WHO-5 to two other commonly utilized depression assessment tools, Primack states "The WHO-5 had the greatest sensitivity and negative predictive value of the tests and clinical assessment" (2003). In addition, signs and symptoms of depression in mature adults often include somatic complaints such as headaches, stomach pain, lethargy, and irritability;

mature adults may also experience observable behavioral changes, such as withdrawal, cessation of pleasurable activities, and isolation following a personal loss (Eldercare Skill Builders, 2000). Again, the majority of these findings match those signs and symptoms recognized by the surveyed healthcare providers and the Mayo Clinic.

Survey and Five by Five Assessment Card

In order to investigate the disparities between rural and urban practices of healthcare providers in North Dakota, I formulated a survey (Appendix D) and arranged to participate in the 11th Annual North Dakota Statewide Trauma Conference at the Ramada Inn in Grand Forks, North Dakota on October 1st and 2nd, 2008. I was granted University of North Dakota Institutional Review Board (IRB) approval for this project (Appendix E) and proceeded to make arrangements with Deb Syverson, a member and educator for the North Dakota Trauma Foundation; I received approval to attend the conference and distribute the survey (Appendix F) and I attended both days of the conference. The surveys were handed out to the attendees when they registered, along with an informed consent form stating that by returning the survey, participants implied their consent (Appendix G). From the data gathered through my literature review, combined with data from the surveyed healthcare providers at this conference, I formulated the Five by Five assessment card (Appendix H) with the intent that it could potentially be put into use in clinics, hospitals, and emergency departments in rural North Dakota in order to facilitate discussion about depression between patients, nurses, and healthcare providers. Although there are many depression assessment tools available which have been proved both valid and reliable, these tools are often long, cumbersome, and time consuming and thus may not be appropriate for rapid assessment of potentially

depressed patients, particularly in the emergency department or pre-hospital setting where patient contact time is brief. The Five by Five assessment card is in no way intended to be diagnostic, rather its purpose is to facilitate discussion between healthcare providers and mature adult patients presenting to the with specific signs, symptoms, and complaints indicative of depression.

Target Audience

The target audiences for the Five by Five assessment card are both nurses and healthcare providers in rural clinics, hospitals, and emergency departments who routinely see patients aged 65 or older. The potential exists for an audience of Emergency Medical Technicians (EMT's) and Paramedics as well. As stated earlier, I devised the Five by Five assessment card in accordance with the results of my literature review and my survey of healthcare providers; I specifically asked the healthcare providers to list five signs and/or symptoms which would lead them to a diagnosis of depression in a patient. I then compared their answers to the Mayo Clinic criteria (2008a; 2008b), the DSM-IV criteria (Depression Today, 2010), and the World Health Organization (Five) (WHO (Five)) Well-Being Index. This screening tool is a preferred rapid assessment tool for depression in mature adults (Bonsignore, Barkow, Jessen, & Heun, 2001). By combining these resources, I formulated questions regarding the five most common signs, which may be observed by the nurse, and five most common symptoms of depression, as reported by the patient. These signs and symptoms are as follows:

Signs-

1. Does the patient frequently visit the clinic/emergency room?
2. Does the patient cry, get angry easily, or have a flat affect?

3. Does the patient appear to have dirty clothing/hair/nails? Is there an odor of urine or feces?
4. Are they non-compliant with their medication regime?
5. Are their health complaints unsubstantiated by laboratory tests or physical exam?

Symptoms-

1. Does the patient have vague, nonspecific somatic complaints such as "I just don't feel well"?
2. Does the patient state they "can't sleep" or "sleep all the time"?
3. Do they complain that food "doesn't taste good anymore"?
4. Does the patient make statements about a recent death in the family or about dying themselves?
5. Does the patient say they feel "sad" or "lonely" or "just don't care anymore"?

I followed these questions with the statement that "A 'yes' answer to 2 or more signs/symptoms indicates the need for further evaluation by a healthcare provider". I then placed the signs and symptoms on opposite sides of a small, pocket-sized card and laminated it. In order to proceed with this portion of the project, I applied for and received approval from the IRB for a Protocol Change (Appendix I). Invitations were mailed out to selected healthcare providers to participate in this project and included a copy of the Institutional Review Board approval, informed consent form (Appendix J), and a copy of the card for them to preview. Times convenient to the providers were set up to discuss this project and receive their ideas and responses to six questions (Appendix K). I feel that all of the participants responded candidly and the majority of them appeared truly interested in the results of this project; they wished me luck with the Five by Five assessment card and in my future graduate studies, welcoming me to contact

them again if I choose to take this project to the next level.

Experts

For the purpose of evaluating the Five by Five assessment card, I drew upon a convenience sample of healthcare providers in the rural community wherein I live and work. These providers all work within a 50 mile radius of my home, making it possible for me to meet with them and discuss the Five by Five assessment card. In total, I invited ten providers to participate in this part of my project and six accepted. The group was comprised equally of two medical doctors, two physician assistants, and two certified nurse practitioners; the group was further broken down into two male and four female providers. Being that the geographical area in which these providers work is so small, all six of them work in both the clinic and hospital setting, and all of them are trauma certified and take call in the local rural hospital's emergency department as well. Thus I felt them eminently equally qualified to judge the validity and potential for use of the Five by Five assessment card.

I asked them the following six questions:

1. In your opinion, as a healthcare provider, do you think the signs and symptoms on the 5X5 assessment card adequately represent the most common indicators of depression, and particularly depression in older patients (>65 y.o.)?

2. Do you think the 5X5 card will be easy to use by nurses when performing an initial assessment of patients?

3. Do you feel the 5X5 card is better suited to the clinic or hospital ER setting, or does it have the potential for use by nurses in both settings?

4. Do you feel there is potential for the 5X5 card to be used in the pre-hospital setting by emergency medical personnel?

5. Do you think the 5X5 card will be an effective tool to help facilitate dialogue between yourself and a potentially depressed patient?

6. What changes, if any, would you suggest I make to the 5X5 card?

Evaluation of the Five by Five Assessment Card

In response to question #1, all of the healthcare providers responded positively "yes", with one provider stating "You need to address medical concerns first; home life and recent events beyond a death" and another stating "I think it may be a bit too vague, especially in the older than 65 population."

In response to question #2, the healthcare providers all responded positively "yes". One of the providers even stated "I shared the card with clinic staff and they (stated that they) would use the card for reference when performing an initial patient assessment. The information is short and the compact size makes it easy to use."

In response to question #3, five of the providers thought the card would be useful in both hospital and clinic, while one thought it would be better suited to the clinic setting.

In response to question #4, again five of the providers thought the card would be an appropriate assessment card to be utilized in the pre-hospital setting, with one stating "The information is good for training as well." However, one provider stated that they "Don't feel that the ER is an appropriate setting to address this." When I asked for clarification on what they meant, they stated "To discuss depression."

In response to question #5, again five of the providers responded positively "yes". One provider stated "Generally, these are questions I already ask myself." Yet the same provider who did not feel the emergency room was an appropriate setting stated that they thought the Five by Five assessment card would be effective in facilitating dialogue "...if it were a bit more specific."

In response to question #6, one provider commented that, upon reviewing the Geriatric Depression Scale (Appendix L), they felt "these questions are very relevant". Another provider suggested a "brighter design to prompt use more often...it would be nice if all (information) was on one side so as not to forget all the questions." Yet another provider stated "I can't think of any changes at this time, but maybe after using the card something will come to mind." And one provider advised adding the following symptoms:

1. Dietary changes; not eating or eating too much.
2. Fatigue, lethargy.
3. Lack of interest in things or events they were interested in before.

Overall, I feel this feedback was very positive and helpful. I found it interesting that the one provider stated that they did not feel the emergency department was an appropriate setting in which to discuss depression, when in actuality my experience as an emergency department nurse was one of the driving forces for this project; I feel that I cared for many patients who presented with non-specific somatic health complaints who, while waiting for test results, opened up and talked to me about events in their lives that were making them feel depressed.

Five by Five Assessment Card Revisions

In accordance to the advice of the healthcare providers, I made the following revisions to the Five by Five assessment card questions:

Signs-

2. Does the patient cry, get angry easily, or have a flat affect? Do they appear lethargic?

Symptoms-

2. Does the patient state they "can't sleep" or "sleep all the time"? Do they complain of fatigue?
3. Do they complain that food "doesn't taste good anymore"? Do they state they are not eating or eating "too much"?
5. Does the patient say they feel "sad" or "lonely" or "just don't care anymore"? Do they express a loss of interest in things they used to enjoy?

I also made the card a brighter color, as suggested, but I was unable to put all of the signs and symptoms on one side as suggested (Appendix M). I do not feel having the questions on two sides of the card will detract from its overall use.

Limitations

Some limitations of this project were that only a small sample of healthcare providers responded to my invitation to discuss the Five by Five assessment card and I was limited to a relatively small area in North Dakota. It is possible that healthcare providers in other areas of the state would have given me different opinions and insights as to how I could improve the card. My sample size for the trauma conference survey of healthcare providers was also quite small (N=10) and, had I had more time, I feel I could

have contacted more of them to increase my sample size and performed a more in-depth interview. However, the survey was conducted over a two-day period during a very fast paced conference and I was grateful to the providers who took time out of their busy schedules to participate. As for the evaluation of the Five by Five assessment card, it was a time consuming method of data collection and, were I to do it again, I think I would have to devise a more efficient method.

Evaluation of the Project

Variables in Clinical Questions and Population

As my first clinical question indicates, I questioned whether or not there were discrepancies between the treatments provided to mature adults living in rural communities as compared to those residing in urban communities. However, the definition of "rural" versus "urban" may vary between healthcare providers, especially in North Dakota where family farms and small towns predominate. I also focused on a demographic of adults aged 65 or older for the purpose of this project; this does not mean that the signs and symptoms listed on the Five by Five assessment card would not be applicable to adults younger than age 65. In addition, the cause of depression will vary from patient to patient; many mature adults are still very healthy while others may have concomitant illnesses, such as cancer or chronic lung disease, which may contribute to the patient feeling depressed. Regardless of the cause of depression, based on my research I feel that the signs and symptoms listed on the Five by Five assessment card are an adequate representation of the most common complaints made by mature adults when they are suffering from depression.

In general, I feel that the Five by Five assessment card was acceptable to the healthcare providers for use in both the clinic and hospital setting, with the potential for use in the pre-hospital setting as well. The majority of the providers who participated in this project were positive in their responses; many of them told me that they, too, believe that depression is greatly under-assessed and under-diagnosed in this demographic, primarily because "That generation doesn't want to discuss depression. They think it is a sign of weakness or that it will be misinterpreted as them losing their minds" (B. Reich, personal communication, 2009). I feel confident that, with the revisions, the validity and reliability of the Five by Five assessment card is ready to be practically researched in the various healthcare settings.

Implications for Practice, Research, Policy, and Education

In theory, the Five by Five assessment card could impact the healthcare industry by limiting the need for timely and costly medical testing, thus reducing the time spent searching for underlying physical illness when in fact the mature adult patient is suffering from depression. Following a diagnosis of depression, rural North Dakota healthcare providers could then make referrals to a mental health specialist. The literature supports the fact that medication and psychotherapy combined are considered the "gold standard" of treatment for depression (Harmon, et al., 2005; Kinkead, 2007). Yet in rural communities, practitioners of psychotherapy are not always readily available. Thus, depressed mature adults living in rural areas are often undertreated with medication alone; my survey indicated that only 30% of healthcare providers prescribe both medication and psychotherapy. By initiating facility policies for assessing mature adults for depression using the Five by Five assessment card, as well as recommending that

psychotherapy become a mandatory part of treatment for depressed mature adults, healthcare providers would be able to more efficiently and effectively treat this demographic.

The impact of this project on research is that it has the potential to add to the knowledge base of nursing, which serves to strengthen nursing as a profession. By providing nurses and other healthcare professionals with a quick-reference card containing both common and atypical signs and symptoms of depression, I feel they will be able to do a more thorough assessment and provide doctors with the tools needed to properly diagnose and treat depression, again resulting in better patient outcomes. The potential educational impact of the Five by Five assessment card can be summed up in the comments of Deb Syverson from the North Dakota Trauma Foundation; "If we don't educate our doctors and start screening these patients as they come through the ER, it becomes an issue for the Trauma Foundation when a depressed patient gets discharged, goes home, and shoots himself" (D. Syverson, personal communication, 2008).

Recommendations for Further Studies

In the future, should I choose to pursue my doctorate degree, I plan to continue my research in the area of depression in mature adults. I would like to examine the validity, reliability, specificity, and sensitivity of the Five by Five assessment card by actually putting it into practice. I would develop a research project involving nurses working in the clinic, hospital, and emergency room settings who would utilize the card when assessing mature adult patients when they present with the signs and symptoms as listed on the revised Five by Five assessment card. The nurses could record when they utilized the card, which signs and symptoms led them to utilize the card, and whether or

not it facilitated discussion between the mature adult patient and the doctor; this data could then be compared to how frequently this discussion led to a diagnosis of, and subsequent treatment for, depression in this age demographic. I also feel that the Five by Five card has the potential to be utilized in the pre-hospital setting; Emergency Medical Technicians and Paramedics could be included in this research when assessing mature adult patients in their homes or in the ambulance and discuss their findings with the healthcare provider, thus opening the door to discussion and appropriate treatment.

Summary

Depression is a very serious and often undiagnosed condition in mature adults. The literature supports that there are many potential causes of depression, including isolation, poverty, and concurrent illness. As an "invisible health problem" (National Institute of Mental Health, as cited in Clark, Deaton, & Dunbar, 2003), the signs and symptoms of depression are not always obvious and often patients will present to the clinic or hospital emergency department with vague, nonspecific complaints of simply not feeling well. Other complaints revolve around sleep and eating disorders, or feelings of sadness, loneliness, or apathy; often they will relate recent life events such as family moving away or a loved one dying. These patients are sometimes those which healthcare providers refer to as "frequent flyers", as they utilize the clinic or emergency department frequently with vague, non-specific somatic complaints which are not substantiated by laboratory tests or physical exam. Their mood may appear to be sorrowful or they may present with a flat effect; their mood may also be very labile and they may have angry outbursts. And quite often, they appear unkempt and unwashed, as if they have lost all interest in their personal hygiene. In the process of the literature review, physician

surveys, and subsequent revision of the Five by Five assessment card, each and every one of these signs and symptoms are supported by physician report and research on depression. Thus I feel that the newly developed Five by Five assessment card is ready to be taken into the next phase of this project; actual quantitative research in the field of depression in mature adults. I feel the card is particularly applicable to healthcare in rural North Dakota communities, where many mature adults live alone, are in poor health, and lack social networks (Kiely, 2008). If healthcare providers can adequately screen, assess, diagnose, and treat depression in mature adults with a combination of medication and psychotherapy, they can greatly improve the quality of life for these patients.

Appendices

Appendix A
DSM-IV Criteria for Depression

Major Depressive Episode
A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure. **Note:** Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations. (1) Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note:** In children and adolescents, can be irritable mood. (2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others). (3) Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **Note:** In children, consider failure to make expected weight gains. (4) Insomnia or hypersomnia nearly every day. (5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down). (6) Fatigue or loss of energy nearly every day. (7) Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick). (8) Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others). (9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide .
B. The symptoms do not meet criteria for a Mixed Episode.
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D. The symptoms are not due to the direct physiological effects of a substance (e.g., a

drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.
Major Depressive Disorder
Single Episode: A. Presence of a single Major Depressive Episode.
B. The Major Depressive Episode is not better accounted for by Schizoaffective Disorder and is not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.
C. There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode. **Note**: This exclusion does not apply if all the manic-like, mixed-like, or hypomanic-like episodes which are substance or treatment induced or are due to the direct physiological effects of a general medical condition.
Recurrent: A. Presence of two or more Major Depressive Episodes. **Note**: To be considered separate episodes, there must be an interval of at least 2 consecutive months in which criteria are not met for a Major Depressive Episode.
B. The Major Depressive Episodes are not better accounted for by Schizoaffective Disorder and are not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.
C. There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode. **Note**: This exclusion does not apply if all the manic-like, mixed-like, or hypomanic-like episodes are substance or treatment induced, or are due to the direct physiological effects or a general medical condition.

(Depression Today, 2010)

Appendix B
Responses to Survey

Responses to the Question "Please list 5 signs and/or symptoms which would lead you to a diagnosis of clinical depression"						
Appetite	**Sleep**	**Relationships**	**Withdrawal**	**Behavior**	**Frequent health complaints**	**Emotions**
Poor	Excessive/ Not sleeping	Loss of interest in family	Loss of interest	Reckless	Coming to clinic often	Change in emotions
Changes in appetite	Changes in sleep patterns	Concerns voiced from family members	Loss of participation in activities	Loss of energy	Somatic complaints	Easy tearfulness
Loss of appetite	Trouble sleeping/ Excessive sleeping	Relationship changes	Loss of interest in activities	Difficulty concentrating	Difficulty with chronic disease medication compliance	Feeling worthless
Eating/ Appetite changes	Sleep changes. Ups and downs.	Death of a family member	Loss of interest in activities	Changes in disposition		Hopelessness
Weight loss/gain	Insomnia		Social isolation	Suicidal ideation		Irritability
Weight loss	Poor sleep		Loss of interest in activities	Unfocused		Increased anger
			Loss of interest	Mood changes		Sadness
			Lack of motivation	Drug/Alcohol use		Anger/ Frustration
			Lack of interest in usual activities			Emotional ups and downs
			Withdrawal from family/friends			Feeling blue
			Loss of interest in normal activities/interests			Flat affect
						Tearful

Appendix C

WHO (Five) Well-Being Index (1998 version)

WHO (Five) Well-Being Index (1998 version)

Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks.

Notice that higher numbers mean better well-being.

Example: If you have felt cheerful and in good spirits more than half of the time during the last two weeks, put a tick in the box with the number 3 in the upper right corner.

Over the last two weeks	All of the time	Most of the time	More than half of the time	Less than half of the time	Some of the time	At no time
1. I have felt cheerful and in good spirits.	*5*	*4*	*3*	*2*	*1*	*0*
2. I have felt calm and relaxed.	*5*	*4*	*3*	*2*	*1*	*0*
3. I have felt active and vigorous.	*5*	*4*	*3*	*2*	*1*	*0*
4. I woke up feeling fresh and rested.	*5*	*4*	*3*	*2*	*1*	*0*
5. My daily life has been filled with things that interest me.	*5*	*4*	*3*	*2*	*1*	*0*

Scoring:

The raw score is calculated by totaling the figures of the five answers. The raw score ranges from 0 to 25, 0 representing worst possible and 25 representing best possible quality of life.

To obtain a percentage score ranging from 0 to 100, the raw score is multiplied by 4. A percentage score of 0 represents worst possible, whereas a score of 100 represents best possible quality of life.

Interpretation:

It is recommended to administer the Major Depression (ICD-10) Inventory if the raw score is below 13 or if the patient has answered 0 to 1 to any of the five items. A score below 13 indicates poor wellbeing and is an indication for testing for depression under ICD-10.

Monitoring change:

In order to monitor possible changes in wellbeing, the percentage score is used. A 10% difference indicates a significant change (ref. John Ware, 1995).

Appendix D

Depression Survey

Depression Survey

Penny Briese, RN, BSN

University of North Dakota

The purpose of this survey is to gather information on the assessment, diagnosis, and treatment of depression in mature adults aged 65+ when presenting to a clinic or Emergency Department in rural versus urban facilities in North Dakota. Information gathered at this time will be used for the purpose of education. Future use of this information may include the formulation of a new depression assessment tool. All information will be kept confidential and it should take approximately 5-10 minutes to complete the survey. Filling out this survey implies consent to participate. Thank you for your participation.

1. Please indicate your primary area(s) of practice.

_____Clinic _____ Emergency Department _____ Other (please specify) _____

2. City (or cities) in which you practice_____

3. Do you routinely screen patients aged 65 or older for signs and symptoms of depression?

_____ Yes _____ No

4. Please list 5 signs and/or symptoms which would lead you to a diagnosis of clinical depression.

1._____

2._____

3._____

4._____

5._____

5. Please list any screening tools you use to facilitate a diagnosis of clinical depression in patients age 65 or older.

_____

_____

6. How do you primarily treat patients aged 65 or older for depression?

___ Pharmacologic agents ___Psychotherapy __ Combination of pharmacologic agents and psychotherapy

7. How are you licensed?

_____ MD _____ PA _____ CNP _____ Other (please specify) _____

8. Demographic information: _____ Your age _____ Sex _____ Years in practice

9. May I contact you personally for a more information? If so, please provide your contact information.

Name _____ Contact number_____

Appendix E
Institutional Review Board Approval

Sep 19 08 02:15p Briese 701-493-2116 p.2

University of North Dakota Graduate School SEP 2 2 2008
414 Twamley - P.O. Box 8178 - Grand Forks, ND 58202-8178
Phone (701) 777-2784; 1-800-CALL-UND (ext 2784); Fax (701) 777-3619

TOPIC PROPOSAL

Name	Penny Briese	Student ID #	0727985
Address	PO Box 434	Phone	701-320-0010
	Edgeley, ND 58433	E-Mail	penny.briese@und.nodak.edu
		Expected Graduation Date	May 2010

Independent Study ☒ Thesis ☐ Dissertation ☐ Project Design ☐ Scholarly Project ☐

Proposed Title: Assessment, diagnosis, and treatment for depression in mature adults; Rural versus urban practices

The research involves Human Subjects: Good until 9/24/11 ☒Yes ☐No
If yes, IRB (*Institutional Review Board*) approval date: 9/24/08 Project #: IRB-200809-043
The research involves Animal Subjects: ☐Yes ☒No
If yes, IACUC (*Institutional Animal Care & Use Committee*) approval date: Project #:
The research involves the use of recombinant DNA or biohazardous material research: ☐Yes ☒No
If yes, IBC (*Institutional Biosafety Committee*) approval date: Project #:
The research involves the use of radiation & hazardous materials: ☐Yes ☒No
If yes, RSHMC - *Radiation Safety & Hazardous Materials / name of authorized faculty:*

If you have questions on the above requirements, please contact the appropriate committee:
IRB- human subject research - Office of Research & Program Development at (701) 777-4279 or www.und.edu/dept/rdc
IACUC – animal research – Center for Biomedical Research (701) 777-4493
IBC – DNA or biohazardous material research - Research Development & Compliance at (701) 777-4279 or www.und.edu/dept/rdc
RSHMC – radiation & hazardous material research – Safety & Environmental Health Office at (701) 777-3341 or 3216

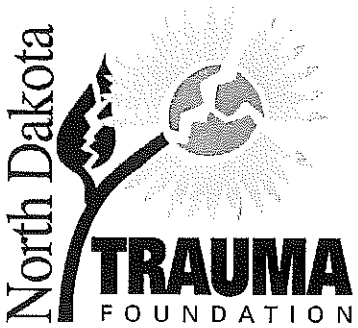
Advisor or	Date 9-22-08	Committee Member	Date
Committee Member	Date	Committee Member	Date
Dean of the Graduate School	Date 2-5-10	Member-at-Large	Date

Non-thesis students need only their advisor's signature; all other students need the signatures of their entire committee.

In *narrative style*, describe the nature of the problem/study, the procedure or methodology to be followed, and the anticipated results (please keep the proposal to one page in length):

The purpose of this project is to gather statistical information from medical practitioners in both rural and urban communities in order to evaluate differences in practice between the two settings in regard to current practices in the assessment, diagnosis, and treatment of depression in mature adults, aged 65+. My literature review has shown that depression often goes undiagnosed in this age demographic and that there is a disparity between rural and urban practices in the use of psychotherapy in conjunction with pharmacological treatment. The rationale behind this project is to help reduce this disparity by eventually formulating a new depression assessment tool to be used by nurses to rapidly assess patients aged 65+ for signs and symptoms of depression and provide this information to medical practitioners. The study design is a survey. I plan to take advantage of the upcoming North Dakota Trauma Foundation conference. The attendees are a potential source of doctors, physician's assistants, and certified nurse practitioners who may encounter depressed mature adults in either the clinic or Emergency Department setting. I have asked the North Dakota Trauma Foundation to allow me to include the survey in the packets which attendees receive when they come to the conference, and for a representative to further make mention of the survey during the convention, requesting that attendees respond. Participation is entirely voluntary and there is no compensation offered for responding to the survey. There is a statement included in the survey introduction, stating that consent is implied by responding to the survey. The expected time to complete the survey is 5-10 minutes. The respondents will have two days in which to complete the short survey. I will be in attendance at the convention and will personally gather all surveys. I will then utilize computerized analysis of the data, looking for patterns and relationships using the Excel and SPSS programs. I will present my findings in paper form to the university for credit.

Appendix F
North Dakota Trauma Foundation Approval



To whom it may concern;

The Board of Directors of the North Dakota Trauma Foundation in conjunction with the planning committee of the State Wide Trauma Conference, have received and discussed Ms. Briese's request to conduct her survey on the current practices of screening, diagnosing, and treatment of depression at the upcoming Trauma Conference. The conference is scheduled to be held in Grand Forks on October 1-2, 2008. She has explained the purpose and methods of her research project, and we hereby give our approval for Ms. Briese to attend the conference and distribute her survey to the appropriate attendees.

Vicky Black

Vicky Black

President, North Dakota Trauma Foundation

PO Box 1198

Bismarck, ND 58502-1198

vblack@altru.org

(701) 780-5337

Appendix G
Informed Consent Form for Survey

TITLE:	**Assessment, diagnosis, and treatment for depression in mature adults; Rural versus urban practices.**
PROJECT DIRECTOR:	**Penny Briese, RN, BSN**
PHONE #	**1-701-320-0010**
DEPARTMENT:	**Nursing**

This study is being conducted as part of graduate coursework at the University of North Dakota. The purpose of this research study is to gather and analyze data in order to investigate differences in the screening, diagnosing, and treatment practices of health care providers in rural versus urban communities, with a specific focus on patients age 65+, and various factors which may or may not influence these differences in practice.

Approximately 50-100 people will take part in this study. Data collection will be in the form of the attached survey and will take place at the North Dakota Trauma Foundation Conference you are currently attending. Your participation in the study will last 5-10 minutes. You will only need to do the survey once.

There are no forseeable risks to participating in this survey. However, if you have any questions or feel you would like to discuss this study more in depth with the researcher, feel free to contact her at the number provided. She is in attendance at the conference and will be happy to meet with you to answer any of your questions personally.

You may not benefit personally from being in this study. However, we hope that, in the future, other people might benefit from this study. The knowledge gained may be used in the formulation of a new, rapid assessment tool for depression to be used by providers when first encountering patients in either the clinic or Emergency Department setting. The assessment tool may have the future potential to be used by Emergency Medical Technicians as well.

You will not have any costs for being in the study, nor will you be paid. The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

There will be no way for you to be identified as a participant in this study. The study record may be reviewed by Government agencies and the University of North Dakota Institutional Review Board. If a report or article is written about this study, the study results will be described in a summarized manner so that you cannot be identified.

Your participation is voluntary. You are free to skip any questions which you would prefer not to answer. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

The researcher conducting this study is Penny Briese, RN, BSN. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Ms. Briese at (701) 320-0010 at any time. Questions may also be directed to Dr. Bette Ide at her UND office; telephone (701) 777-4531 during daytime hours.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

The completion of the survey constitutes your consent. Please place the completed survey in the locked box provided.

Thank you for participating!

Appendix H
The Five by Five Assessment Card

Five by Five-Signs

1. Does the patient frequently visit the clinic/emergency room?

2. Does the patient cry, get angry easily, or have a flat affect?

3. Does the patient appear to have dirty clothing/hair/nails? Is there an odor of urine or feces?

4. Are they non-compliant with their medication regime?

5. Are their health complaints unsubstantiated by laboratory tests or physical exam?

A "yes" answer to 2 or more signs/symptoms indicates the need for further evaluation by a healthcare provider.

Five by Five-Symptoms

1. Does the patient have vague, nonspecific somatic complaints such as "I just don't feel well"?

2. Does the patient state they "can't sleep" or "sleep all the time"?

3. Do they complain that food "doesn't taste good anymore"?

4. Does the patient make statements about a recent death in the family or about dying themselves?

5. Does the patient say they feel "sad" or "lonely" or "just don't care anymore"?

A "yes" answer to 2 or more signs/symptoms indicates the need for further evaluation by a healthcare provider.

Appendix I
Protocol Change

REPORT OF ACTION: PROTOCOL CHANGE
University of North Dakota Institutional Review Board

Date: 10/30/2009 **Project Number:** IRB-200809-063

Principal Investigator: Briese, Penny

Department: Nursing

Project Title: Assessment, Diagnosis and Treatment for Depression in Mature Adults: Rural Versus Urban Practices

The above referenced project was reviewed by a Designated Member for the University's Institutional Review Board on 11/6/09 and the following action was taken:

☐ Protocol Change approved. **Expedited Review** Category No. _____
Next scheduled review must be before: _____
☐ **Copies of the attached consent form with the IRB approval stamp dated _____ must be used in obtaining consent for this study.**

☑ Protocol Change approved. **Exempt Review** Category No. 2
This approval is valid until September 24, 2011 as long as approved procedures are followed.
No periodic review scheduled unless so stated in the Remarks Section.
☐ **Copies of the attached consent form with the IRB approval stamp dated N/A must be used in obtaining consent for this study.**

☐ Minor modifications required. The required corrections/additions must be submitted to RDC for review and approval. **This study may NOT be started UNTIL final IRB approval has been received.**
(See Remarks Section for further information.)

☐ Protocol Change approval **deferred. This study may not be started until final IRB approval has been received.**
(See Remarks Section for further information.)

☐ Protocol Change **disapproved. This study may not be started until final IRB approval has been received.**

REMARKS: **Any unanticipated problem or adverse occurrence in the course of the research project must be reported within 5 days to the IRB Chairperson or RDC by submitting an Unanticipated Problem/Adverse Event Form.**

Any changes to the Protocol or Consent Forms must receive IRB approval prior to being implemented (except where necessary to eliminate apparent immediate hazards to the subjects or others).

PLEASE NOTE: **Requested revisions for student proposals MUST include adviser's signature. All revisions MUST be highlighted.**

☑ Education Requirements Completed. (Project cannot be started until IRB education requirements are met.)

Michelle L Bartsch 11/6/09
Signature of Designated IRB Member Date
UND's Institutional Review Board

cc: Dr. Bette Ide

If the proposed project (clinical medical) is to be part of a research activity funded by a Federal Agency, a special assurance statement or a completed 310 Form may be required. Contact RDC to obtain the required documents.

(Revised 10/2006)

Appendix J
Informed Consent Form for Healthcare Provider Interviews

TITLE:	**Assessment, diagnosis, and treatment for depression in mature adults; Rural versus urban practices.**
PROJECT DIRECTOR:	**Penny Briese, RN, BSN**
PHONE #	**701-320-0010**
DEPARTMENT:	**Nursing**

This study is being conducted as part of graduate coursework at the University of North Dakota. A person who is to participate in research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study about depression in mature adults living in rural communities because you are a rural healthcare provider.

The purpose of this segment of the research study is to assess the potential usefulness and appropriateness of the Five by Five assessment card in the clinic, emergency room, and potentially the pre-hospital setting

Approximately 10 people will take part in this study. Data collection will be performed solely by the project director at the convenience of the subjects. Your participation in the study will last approximately 30 minutes, at a time and location that is convenient to you.

WHAT WILL HAPPEN DURING THIS STUDY?

The project director will ask you for your opinion of the newly developed and experimental Five by Five depression assessment card. You will be asked your opinion of any revisions that should be made, based upon your experience in treating mature adults in the rural healthcare setting.

The Five by Five assessment card is intended for use by nurses and potentially emergency medical technicians in the early identification of common signs/symptoms of depression in mature adults living in rural communities. It is NOT intended to be used as a diagnostic tool, rather as a cue card to initiate further communication about depression between patient and healthcare provider.

The format of this segment of the study is one-on-one discussion with each participant individually, at a time and location of their choosing and convenience. There are no anticipated risks from this study. Participants may be identified solely by their initials, credentials, and major area of practice. You may not benefit personally from being in this study. However, we hope that, in the future, other people might benefit from this study because early identification and treatment of depression in mature adults living in rural communities has the potential to increase their quality of life and reduce the overuse of clinic, emergency room, and emergency medical services. You will not have any costs for being in this research study, nor will you be paid. The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified other than by your initials, credentials, and major area of practice. Your study record may be reviewed by Government agencies, and the University of North Dakota Institutional Review Board. Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of all data being collected, analyzed, and kept in a locked cabinet by the project director.

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota. If you decide to leave the study early, we ask that you contact the project director. You will be informed by the research investigator of this study of any significant new findings that develop during the study which may influence your willingness to continue to participate in the study.

CONTACTS AND QUESTIONS?

The researcher conducting this study is Penny Briese. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Penny Briese at 701-320-0010 at any time, day or night. Questions may also be directed to Dr. Bette Ide at her UND office; telephone (701) 777-4531 during daytime hours.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Subjects Name: _____

_____ _____

Signature of Subject Date

Appendix K
Sample Questions for Healthcare Provider Interviews

5X5 Assessment Card Interviews: Sample questions.

1. In your opinion, as a healthcare provider, do you think the signs and symptoms on the 5X5 assessment card adequately represent the most common indicators of depression, and particularly depression in older patients (>65 y.o.)?

2. Do you think the 5X5 card will be easy to use by nurses when performing an initial assessment of patients?

3. Do you feel the 5X5 card is better suited to the clinic or hospital ER setting, or does it have the potential for use by nurses in both settings?

4. Do you feel there is potential for the 5X5 card to be used in the pre-hospital setting by emergency medical personnel?

5. Do you think the 5X5 card will be an effective tool to help facilitate dialogue between yourself and a potentially depressed patient?

6. What changes, if any, would you suggest I make to the 5X5 card?

Appendix L
15-Item Geriatric Depression Scale

MOOD SCALE
(short form)

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / NO

2. Have you dropped many of your activities and interests? YES / NO

3. Do you feel that your life is empty? YES / NO

4. Do you often get bored? YES / NO

5. Are you in good spirits most of the time? YES / NO

6. Are you afraid that something bad is going to happen to you? YES / NO

7. Do you feel happy most of the time? YES / NO

8. Do you often feel helpless? YES / NO

9. Do you prefer to stay at home, rather than going out and doing new things? YES / NO

10. Do you feel you have more problems with memory than most? YES / NO

11. Do you think it is wonderful to be alive now? YES / NO

12. Do you feel pretty worthless the way you are now? YES / NO

13. Do you feel full of energy? YES / NO

14. Do you feel that your situation is hopeless? YES / NO

15. Do you think that most people are better off than you are? YES / NO

Appendix M
Revised Five by Five Assessment Card

Five by Five-Signs

1. Does the patient frequently visit the clinic/emergency room?

2. Does the patient cry, get angry easily, or have a flat affect? Do they appear lethargic?

3. Does the patient appear to have dirty clothing/hair/nails? Is there an odor of urine or feces?

4. Are they non-compliant with their medication regime?

5. Are their health complaints unsubstantiated by laboratory tests or physical exam?

A "yes" answer to 2 or more signs/symptoms indicates the need for further evaluation by a healthcare provider.

Five by Five-Symptoms

1. Does the patient have vague, nonspecific somatic complaints such as "I just don't feel well"?

2. Does the patient state they "can't sleep" or "sleep all the time"?

3. Do they complain that food "doesn't taste good anymore"? Do they state they are not eating or "eating too much"?

4. Does the patient make statements about a recent death in the family or about dying themselves?

5. Does the patient say they feel "sad" or "lonely" or "just don't care anymore"? Do they express a loss of interest in things they used to enjoy?

A "yes" answer to 2 or more signs/symptoms indicates the need for further evaluation by a healthcare provider.

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