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# Depression and Personal Depression Stigma among Hospital Employed Nurses

Christy Herman Moose

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Depression and Personal Depression Stigma among Hospital Employed Nurses

by

Christy H. Moose

A thesis submitted to the faculty of  
Gardner-Webb University Hunt School of Nursing  
in partial fulfillment of the requirements for the  
Master of Science in Nursing Degree

Boiling Springs, North Carolina

2017

Submitted by:

Approved by:

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Date

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## Abstract

**Background.** Nurses experience depression at twice the rate of the general public.

Personal depression stigma may complicate the issue by creating a barrier to help-seeking behaviors. This study sought to determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses.

**Method.** This study used a quantitative study design and a convenience sampling method of nurses at a community hospital. Data was obtained using a web-based survey that included the Patient Health Questionnaire 9 item depression scale (PHQ-9) and the Depression Stigma Scale – personal (DSS – personal). The total depression score (TDS) was used to divide participants into groups of depressed and non-depressed. Mean scores of the DSS-personal were analyzed.

**Results.** Twenty percent of surveyed nurses met the criteria for depression with a TDS of 10 or greater. The non-depressed group had a mean DSS-personal of 10. The depressed group had a DSS-personal mean of 9. An independent samples t-test indicates there was not a statistically significant difference in the mean DSS-personal scores between each group.

**Conclusions.** This study demonstrates that 20% of nurses employed in a community hospital in NC have moderate to severe depression. Personal depression stigma scores were not statistically different between depressed and non-depressed nurses. These findings contradict the authors assumptions that personal depression stigma among depressed nurses may hinder help-seeking behaviors, therefore contributing to the high rate of depression in nursing. This information contributes to the body of knowledge

regarding depression in nursing. Future studies are recommended to determine if these findings are an accurate representation for all hospital employed nurses.

*Keywords:* depression, depressive, mental health, common mental disorders, nursing, nurse, stigma, personal stigma, self-stigma, shame, discrimination, help-seeking, treatment

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## **CHAPTER I**

### **Introduction**

Depression is a common mental disorder that is the leading cause of disability worldwide and is a major contributor to the overall global burden of disease (World Health Organization, 2016). Many factors are shown to be associated with depression, such as work related stress and high psychological job demands, which double the risk in working men and women (Melchior et al., 2007). Hospital employed nurses work in an emotionally and physically demanding environment. The exposure to heavy workloads, long shifts, pain, and sleep deprivation, puts nurses at high risk for depression (AHC Media, 2013). Letvak, Ruhm, and McCoy (2012) reported that 18% of hospital employed nurses experience depression in comparison to 9% of the general US population. The high rate of depression in nursing is a substantial problem and cause for concern, yet continues to be underreported, unrecognized, and largely an unspoken epidemic (AHC Media, 2013).

Although depression is treatable, only 35% of adults with symptoms of major depression, and less than 20% of adults with moderate depressive symptoms reported having seen a mental health professional within the last 12 months between 2009 and 2012 (Centers for Disease Control and Prevention, 2014). The stigma of depression is the result of negative stereotypes, prejudice, and discrimination, and remains a major obstacle in healthcare today. Internalized, or personal-stigma, is psychologically harmful and often results in concealment of the problem and withdrawal from others in an effort to avoid a negative label (Chan & Mak, 2017; Hammer & Toland, 2016). Only 25% of adults with mental illness believe that others are caring and sympathetic toward persons

with a mental illness (Centers for Disease Control and Prevention, 2010). People with mental illness are often concerned of what others will think and desire to deal with the illness independently. Many choose not to seek help, do not complete treatment regimens, or fail to follow up with their health care provider (Kessler et al., 2001).

Stigmatizing attitudes may act as boundaries influencing help-seeking behaviors for those suffering from depression (Abdelsalam & Mohamed, 2016). Health care professionals are not immune to this idea, as there continues to be a fear of stigma surrounding mental illness (AHC Media, 2013). Nurses often feel they must be healthy, competent, and strong to be a respected member of the health care team. Those needing treatment for a mental illness, like depression, may be afraid they will lose their job or be judged by coworkers' (Lampert, 2016). Ross and Goldner (2009) reported that there was almost a complete lack of acknowledgement in the literature concerning nurse's attitudes toward mental illness within their profession and concluded that it appears to be a case of "turning a blind eye" (p. 564).

### **Significance**

The fact that nurses suffer depression at twice the rate of the general public and may be less likely to disclose symptoms due to stigma is a hospital, professional, and public health concern (Letvak, Ruhm, & McCoy, 2012). The greatest concern is job performance deficits such as impairments in mental-interpersonal tasks, time management, output tasks, and physical tasks (Letvak, Ruhm, & Gupta, 2012). A decrease in productivity caused by depression, also known as presenteeism, may have a greater adverse impact on quality of care due to its association with general errors, medication errors, near misses, patient safety, and patient satisfaction scores (Gartner,

Nieuwenhuijsen, Van Dijk, & Sluiter, 2010). In addition, untreated depression is expensive, with an economic burden estimated in 2010 at \$210.5 billion in the US, of which presenteeism accounted for \$78.7 billion, or 37% of the overall cost (Greenburg, Fournier, Sisitsky, Pike, & Kessler, 2015). It is important to note that presenteeism has an estimated cost 6.1 times higher than absenteeism due to injury and illness (Greenburg et al., 2015).

Nursing is the largest healthcare profession in the US, with an estimated 2.7 million registered nurses nationwide (Bureau of Labor Statistics, 2015). The magnitude of the problem calls for a renewed responsibility of healthcare leaders in the nursing profession to systematically research and identify barriers to care for nurses suffering from depression. Initiatives must include strategies to increase awareness, decrease stigma, and promote personal health and wellbeing among nurses.

### **Problem Statement**

There is little known of how personal depression stigma impacts help-seeking behaviors among depressed hospital employed nurses. Most of what we do know comes from research of other populations regarding this topic. Nurses, hospitals, and the general public would benefit from investing in the future of our nation's largest group of healthcare providers. Further research is needed to identify variables and concepts of depression and personal depression stigma to understand how these variables impact help-seeking behaviors among nurses.

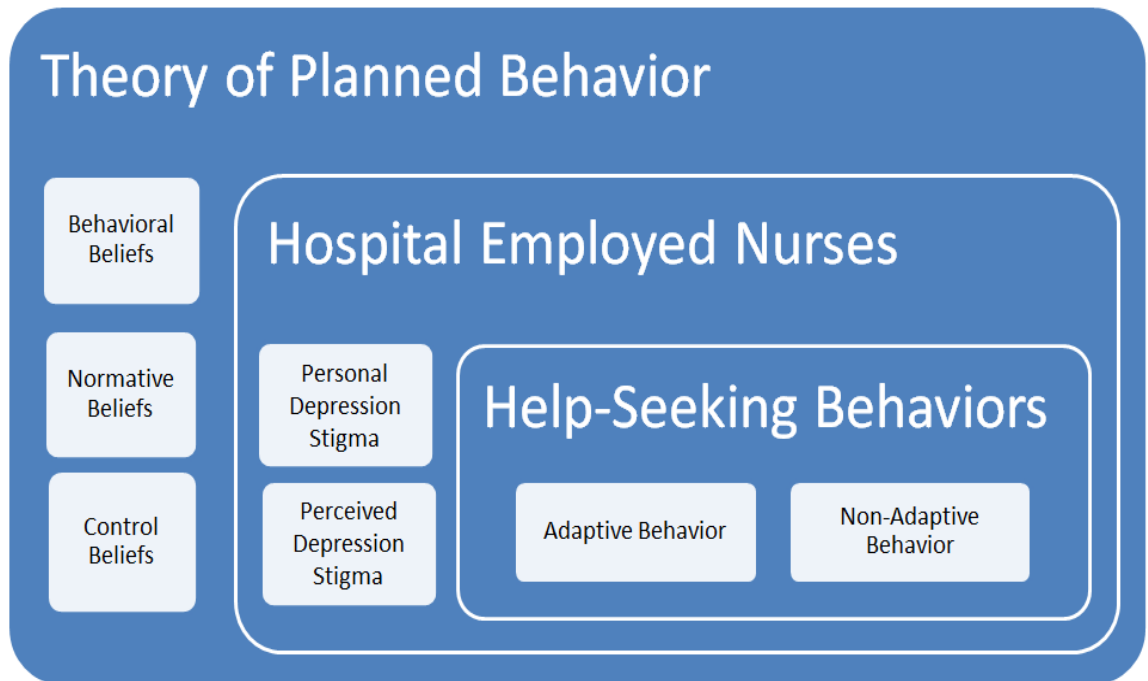
### **Purpose**

The purpose of this study was to determine the current depression rate and determine if there is a relationship with personal depression stigma among hospital employed nurses at a community hospital in North Carolina. The information obtained in this study will be valuable to determine if personal depression stigma plays a significant role in help-seeking behaviors. Future use of the findings can be used to design awareness and educational interventions targeting the nursing profession to decrease stigma and remove barriers to care.

### **Theoretical or Conceptual Framework**

The framework chosen for this study was based upon the Theory of Planned Behavior (TPB) which links individuals' beliefs to their behaviors. This theory supports the idea that intentions to perform behaviors can be predicted with high accuracy based upon attitudes toward the behavior, subjective norms, and perceived behavior control (Ajzen, 1991). According to TPB, behavior is neither mysterious nor outside of conscious behavior, but follows reasonable and consistent patterns based upon information available to us (Ajzen, 2012). This theory helps us to understand how we can change the behavior of people by examining behavioral, normative, and control beliefs (Ajzen, 1991). Behavioral beliefs are the individual's belief that the action has a positive or negative consequence in their life (Ajzen, 1991). Normative beliefs come from perceived social pressures, cultural norms, and group beliefs (Ajzen, 1991). Control beliefs result from factors that facilitate or impede the behavior (Ajzen, 1991). This study will use TPB as a foundation to determine if depression stigma is prominent among depressed nurses, therefore, having the potential to influence help-seeking behaviors among hospital

employed nurses. Key concepts leading to help-seeking behaviors are outlined through a Conceptual-Theoretical-Empirical (CTE) structure in Figure 1.



*Figure 1: Key Concepts of Help-Seeking Behaviors based upon Icek Ajzen's Theory of Planned Behavior.*

### Research Questions

- What percentage of hospital employed nurses meet the criteria for moderate to severe depression?
- Do nurses with moderate to severe depression have higher personal depression stigma than nurses without moderate to severe depression?

### **Definition of Terms**

- Absenteeism – Being absent from work. In this paper, absenteeism is discussed as a result of depression among nurses.
- Depression – “Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration” (World Health Organization, n.d., para. 1). In this study, depression is measured using the Patient Health Questionnaire 9 item depression scale (PHQ-9) among hospital employed nurses.
- Help-seeking behavior – This term represents the act of attempting to find help or assistance to improve a situation or problem (Rickwood & Thomas, 2012).
- Perceived Stigma – Perceived stigma refers to a person’s perception of the attitudes of others toward a topic.
- Personal Stigma – Personal stigma refers to a person’s own attitudes and beliefs toward a topic. In this study, personal stigma of depression will be measured using the DSS-personal measurement tool.
- Presenteeism - The practice of coming to work despite illness, injury, anxiety, etc., often resulting in reduced productivity ("Presenteeism," n.d.). In this paper, presenteeism is discussed related to depression among nurses.
- Stigma – The word stigma represents the strong feeling of disgrace or disapproval that exists when elements of labeling, stereotyping, separation, status loss, and discrimination occur together in a power situation that allows them (Link & Phelan, 2001).

## **Summary**

The high rate of depression among hospital employed nurses is a serious concern to the profession, hospitals, and the general public. The purpose of this study was to define the depression rate among nurses and determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses. The data will provide insight and a better understanding of the variables and the relationship between depression and personal depression stigma. This information can be used to guide initiatives to minimize depression stigma, remove barriers to care, and promote help-seeking behaviors among nurses.



## CHAPTER II

### Literature Review

A review of the literature revealed that nurses are at an increased risk for depression (Letvak, Ruhm, & McCoy, 2012). This finding is correlated to the high psychological and physical job demands and stressful working environment (Wang et al., 2015). Complicating the issue is a long-standing stigma associated with mental health that continues to create barriers to help-seeking behavior (Boerema et al., 2016). The need for initiatives to bring awareness and promote education of depression among nurses has been identified by multiple authors (Abdelsalam & Mohamed, 2016; Boerema et al., 2016; Cheung & Yip, 2015; Gartner et al., 2010; Griffiths, Christensen, & Jorm, 2008; Hsiao et al., 2012; Letvak, Ruhm, & McCoy, 2012; Perry, Lamont, Brunero, Gallagher, & Duffield, 2015; Ross & Goldner, 2009; Wang et al., 2015). The purpose of this study was to add to the empirical knowledge of nursing by evaluating the depression rate among nurses and to determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses.

A systematic review of the literature was performed using electronic medical, health, and nursing databases including EBSCOhost (Academic Search Complete, CINAHL Plus with Full Text, Health and Psychological Instruments, Health Source – Consumer Edition, Health Source – Nursing/Academic Edition) and ProQuest (ProQuest Central, Health and Medical Collection, Nursing and Allied Health Database). Keywords searched were a combination of phrases including ‘depression’, ‘depressive’, ‘mental health’, ‘common mental disorders’, ‘nursing’, ‘nurse’, ‘stigma’, ‘personal stigma’, ‘self-stigma’, ‘shame’, ‘discrimination’, ‘help-seeking’, and ‘treatment’. Inclusion criteria

were set to include articles published between 2007 and 2017, English language, and peer-reviewed. In addition, ProQuest databases were limited to include studies only. In all, 2,722 articles were returned using the search criteria and the abstracts were reviewed for relevance to this research study. To be included in the study, articles must have had at least two primary concepts of depression or common mental illnesses related to work environment, job performance, depression stigma, help-seeking behavior, and associated variables, preferably among the nursing population. Thirty one articles met the study inclusion criteria of which 17 were selected as appropriate for inclusion in the literature review.

### **Depression and Work Environment**

Seven studies were identified that shared concepts of depression related to work environment stressors. Two studies were from non-nursing populations but add to and support the evidence. Although many variables were identified throughout this literature review related to depression and the work environment, recurring concepts were identified. These concepts indicate that high psychological demands, heavy workload, lack of supervisor support, low job satisfaction, and loss of autonomy in the work environment contribute to high rates of depression among nurses (Enns, Currie, & Wang, 2015; Melchior et al., 2007; Wang et al., 2015; Weigl et al., 2016).

**Nursing population.** Letvak, Ruhm, and McCoy (2012) sought to determine the prevalence of depression in hospital-employed nurses (n=1,171) and determine individual and workplace characteristics present in depressed nurses. Depression was reported in 18% of nurses, which is twice the rate of the general public (Letvak, Ruhm, & McCoy, 2012). Findings indicate a significant correlation between depression in nurses and low

job satisfaction, lower-rated mental well-being, and lower health-related job productivity (Letvak, Ruhm, & Gupta, 2012). The authors concluded that the prevalence of depression in nursing warrants concern and further research of the impact on the provision of quality care to our patients (Letvak, Ruhm, & McCoy, 2012).

Cheung and Yip (2015) performed a cross-sectional, web-based survey to examine the prevalence of depression, anxiety, and stress among nurses working in Hong Kong. Depression was reported in 35.8% of respondents, with statistically significant relationships between job satisfaction, psychiatric disorder, and self-perceived physical and mental health (Cheung & Yip, 2015). Depressive symptoms in nurses with a history of a psychiatric disorder were seven times higher than nurses without a psychiatric history (Cheung & Yip, 2015).

Weigl et al. (2016) performed a cross-sectional study in Germany to investigate the effects of work overload and supervisor support on the relationship between emotional exhaustion and depressive states among hospital nurses (n=111) and nurses working in day care homes (n=202). Key findings indicated a positive correlation between high emotional exhaustion and depressive symptoms and a negative correlation between supervisor support and depressive symptoms (Weigl et al., 2016). In the presence of low work overload and high supervisor support, emotional exhaustion and depression were not present (Weigl et al., 2016).

Enns et al. (2015) reported that major depression in Canadian nurses is double the national average for working women. To evaluate the role of professional autonomy, health care setting, and work environment, a cross-sectional analysis of female nurses across Canada (n=17347) was conducted (Enns et al., 2015). Low autonomy and high job

strain among nurses were significantly associated with a major depressive episode within the past 12 months (Enns et al., 2015).

Wang et al. (2015) performed a cross-sectional study among psychiatric nurses in Taiwan (n=154) to determine the relationship among work stress, resourcefulness, and depression level. Depression level and work stress were significantly and positively related ( $p < .001$ ) (Wang et al., 2015). High work stress was significantly correlated with an increase in depression levels, and negatively correlated to resourcefulness (Wang et al., 2015).

**Non nursing population.** Blackmore et al. (2007) conducted a national population survey of Canadian residents' (n=24,324) to understand work related factors that contribute to depression. Results revealed an association of increased job strain, high psychological demands, lack of social support, and low levels of job security with a risk of major depressive episodes among men (Blackmore et al., 2007). Lack of social support was significantly associated to depression for both men and women (Blackmore et al., 2007).

A New Zealand longitudinal birth cohort was assessed in 2004-2005 to examine work stress among working men and women age 32 (n=972) (Melchior et al., 2007). The study reports that previously healthy young workers with self-reported high psychological job demands have double the risk for major depressive disorder than workers reporting low demands (Melchior et al., 2007). As the number of stressors increased, the rate of depression increased as well (Melchior et al., 2007).

## **Depression and Job Performance**

Three nursing studies and a systematic review were selected for review regarding depression and its impact on job performance. Overall, authors reported strong evidence that depression is related to a decrease in work performance, termed absenteeism and presenteeism (Tei-Tominaga, Asakura, & Asakura, 2014; Gartner et al., 2010; Letvak, Ruhm, & Gupta, 2012; Perry et al., 2015). Absenteeism is an organizational staffing concern, but even more concerning are the negative effects that presenteeism has on the provision of safe patient care (Gartner et al., 2010; Letvak, Ruhm, & Gupta, 2012; Perry et al., 2015).

Perry et al. (2015) examined the mental health and related characteristics of nurses in Sydney Australia using a cross-sectional survey (n=381). Results revealed 13.9% of participants had a history of mental health disorders of which 12.9% was reported as anxiety or depression (Perry et al., 2015). Vitality among nurses was reported to be lower than that of the general public, which may reduce work productivity in the form of absenteeism and presenteeism (Perry et al., 2015). Tei-Tominaga et al. (2014) reported the highest rate of absenteeism was caused by mental illnesses, like depression (Tei-Tominaga et al., 2014). Although absenteeism is more easily measured, presenteeism is a major concern due to its prevalence and potential impact on patient safety when depressed nurses remain at work (Perry et al., 2015).

Letvak, Ruhm, and Gupta (2012) examined the effects of depression in RNs (n = 1171) and how this affects work productivity, quality of care, and healthcare costs. According to the study, the most significant finding reported was that presenteeism is significantly associated with an increase in medication errors, patient falls, and a lower

self-reported quality of care (Letvak, Ruhm, & Gupta, 2012). The authors note that hospital attendance policies promote high rates of presenteeism by penalizing for absenteeism and discouraging the use of sick time (Letvak, Ruhm, & Gupta, 2012).

Gartner et al. (2010) performed a systematic review of psychological and occupational health literature to determine aspects of work functioning of nurses and allied health professionals with common mental disorders, including depression. The literature review reported that depression has a negative effect on work performance in the form of absenteeism and presenteeism (Gartner et al., 2010). Data synthesis produced themes of presenteeism in the form of general error, medication errors, near errors, patient safety, and patient satisfaction (Gartner et al., 2010).

### **Depression Stigma and Help-Seeking Behaviors**

Five studies and one literature review are included in this section to evaluate depression stigma and/or help-seeking behaviors and were chosen for this study. Of these articles, three were performed on the nursing population and the other two were studied using the general public. Overall themes indicated that depression stigma remains prominent in today's culture and negatively impacts help-seeking behaviors (Abdelsalam & Mohamed, 2016; Boerema et al., 2016; Griffiths et al., 2008; Joyce, Hazelton, & McMillan, 2007; Ross & Goldner, 2009; Tei-Tominaga et al., 2014;).

**Nursing population.** The association between depression stigma, treatment seeking behaviors, and attitudes among nursing students (n=192) was studied at Cairo University by Abdelsalam and Mohamed (2016). The study revealed that significant correlations exist between depression stigma and help-seeking behaviors among nursing students (Abdelsalam & Mohamed, 2016). Moderate depression was reported in 67% of

students and 75% stated they would not seek help due to concerns of being labeled mentally ill (Abdelsalam & Mohamed, 2016).

Ross and Goldner (2009) performed a primary literature review to examine major themes in existing literature pertaining to stigmas, negative attitudes, and discrimination towards mental illness within the nursing profession. They found that healthcare workers assumed one of three roles in relation to stigma of mental illness: stigmatizers, stigmatized, and the de-stigmatizers (Ross & Goldner, 2009). This review reported that general practice and psychiatric nurses have negative and stigmatizing attitudes toward persons with mental illness. General nurses reporting negative attitudes felt that that mental illness was caused by weakness of morals, character or will, laziness, and lack of discipline (Ross & Goldner, 2009). Psychiatric nurses' negative attitudes were attributed to ongoing contact with mentally ill patients in crisis, relapse, or those who are poorly functioning, which may skew their perspectives and shape negative attitudes (Ross & Goldner, 2009). Negative attitudes toward the mentally ill result in a negative effect on the provision of care (Ross & Goldner, 2009).

Joyce et al. (2007) explored workplace experiences of psychiatric nurses (n=29) with mental illness through a qualitative study design. For the majority of participants, having a mental illness was largely a negative experience in the workplace (Joyce et al., 2007). Common themes were reported as being subjected to negative attitudes, discriminatory actions, and ill-treatment by coworkers (Joyce et al., 2007).

Tei-Tominaga et al. (2014) examined the rate of mental illnesses, the related stigma, and coworker perceptions among nurses in Japan. They reported that nurses have a greater personal stigma toward mental illness than stigma toward physical health

problems. Findings also indicate that depression stigma among nurses is influenced by individual experience with mental illness (Tei-Tominaga et al., 2014).

**Non nursing population.** Boerema et al. (2016) performed a cross-sectional study to determine the predisposing and need factors associated with help-seeking among people (n=102) with major depression. This study found that participants with lower personal depression stigma were more likely to seek help (Boerema et al., 2016).

Griffiths et al. (2008) studied the predictors of depression stigma to investigate potential predictors for perceived and personal depression stigma using data in three samples of Australian adults' age 18 to 50 years (n=1001; n=5,572; n= 487). Personal stigma was associated with psychological distress and lower prior contact with depression, lower depression literacy, and lack of awareness. Perceived and personal stigmas were associated with higher psychological distress (Griffiths et al., 2008).

### **Summary**

This literature review outlined and validated the current nursing knowledge and shared concepts from other populations regarding depression, depression stigma, and help-seeking behaviors. Nurses are exposed to stressful environments such as high psychological demands, heavy workloads, lack of supervisor support, and loss of autonomy which contribute to the high rate of depression in nursing (Enns et al., 2015; Melchior et al., 2007; Wang et al., 2015, Weigl et al., 2016). Those suffering from depression are at greater risk for job performance deficits in the form of absenteeism and presenteeism (Gartner et al., 2010; Letvak, Ruhm, & Gupta, 2012; Perry et al., 2015; Tei-Tominaga et al., 2014). Presenteeism is the most concerning job performance deficit, as it is costly and is associated with negative outcomes regarding the provision of safe, quality



patient care (Letvak, Ruhm, & Gupta, 2012). Increased depression awareness and educational initiatives were recommended by all reviewed articles. Although the variables of depression, personal depression stigma, and help-seeking behaviors among the nursing population have been studied independently and in various combinations with other variables, no studies were identified that examined their relationship among the nursing population. This indicated a gap in the current literature.

## **CHAPTER III**

### **Methodology**

Depression among hospital employed nurses is reported to be 18%, which is twice the rate of the general public (Letvak, Ruhm, & McCoy, 2012). This statistic is concerning, not only due to personal suffering, but the potential impact depression can have on job performance and patient safety (Letvak, Ruhm, & McCoy, 2012). Compounding this issue is the long-standing stigma of depression. Stigmatizing attitudes are not limited to the general public but are present among healthcare providers and nurses as well (Ross & Goldner, 2009). Stigma has been identified as a barrier to seeking help (Abdelsalam & Mohamed, 2016). This study examined the depression rate and personal depression stigma among hospital employed nurses to determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses.

### **Study Design**

This study used a quantitative study design. Data was obtained using a voluntary, web-based, self-administered survey delivered via email. No identifying personal data was collected. The PHQ-9 was used to measure the total depression score (TDS) of respondents (See Appendix A). A subset of the Depression Stigma Scale, Depression Stigma Scale – personal (DSS – personal), was used to measure respondents personal attitudes toward depression (See Appendix B). Descriptive statistics were utilized to determine mean scores and correlations between TDS and personal depression stigma among hospital employed nurses.

### **Setting and Sample**

Participants in this study were obtained using a convenience sampling method of registered nurses (RNs) at a community hospital located in North Carolina. An invitation requesting participation in the survey was emailed to all employed RNs at the facility.

### **Design for Data Collection**

Data collection was obtained via an anonymous, voluntary, self-administered, web-based survey. After obtaining institutional review board (IRB) approval from the hospital and the University, potential participants were contacted via the institution's employee email. The invitation email included an introduction to the problem, the purpose of the study, confidentiality statement, participation guidelines, consent statement, and instructions of how to access the survey (See Appendix C). The survey was accessible via a custom URL web link supplied in the invitation email. One week after the invitation email was sent, a reminder email was sent to the group as a reminder to complete the survey (See Appendix D). Verbiage contained in both emails requested that each participant take the survey one time only.

No one, including the researcher, had the ability to associate responses to an identity. Survey Monkey software was used to create and obtain responses for this survey. Using a web link is the most secure way to obtain a survey on Survey Monkey (Survey Monkey, 2017). The anonymity setting was set to 'collect responses anonymously'. The survey URL began with <https://> indicating responses were sent over a secure SSL encrypted connection. Many nurses access their hospital email using shared hospital devices; therefore, the option to allow multiple responses per computer or IP address was set to 'yes' in Survey Monkey.

The survey contained 20 questions including the PHQ-9 and DSS-personal measurement tools (See Appendix E). Data was collected from the survey web-site and exported into International Business Machines (IBM)® Statistical Package for the Social Sciences (SPSS) software version 24. Analysis was performed to determine if a correlation was present among TDS and DSS-personal.

### **Measurement Methods**

The PHQ-9 is a brief, self-administered questionnaire used to determine a TDS for participants (Kroenke, Spitzer, & Williams, 2001). The tool was chosen for use in this study due to its simplicity and wide range of use. The PHQ-9 has proved to be a reliable and valid measurement tool with a Cronbach  $\alpha$  of 0.89 and a test-retest reliability of 0.84 (Kroenke et al., 2001). TDS range from 0-27: 0-4 indicating no depressive symptoms; 5-9 indicating minimum symptoms; 10-14 indicating mild to moderate depression; scores of 15-19 indicating moderately severe depression; scores greater than 20 indicating severe depression (Letvak, Ruhm, & McCoy, 2012). The PHQ-9 is part of the public domain. "No permission is required to reproduce, translate, display, or distribute" ("Instructions for Patient Health Questionnaire," n.d., p. 8). For the PHQ-9 Instruction Manual containing the permission statement, see (See Appendix F).

The DSS-personal is a subscale of the Depression Stigma Scale and was included in the web-based survey. The DSS-personal measures respondents' attitudes toward depression ("Depression Stigma Scale," 2017). Written permission was obtained to use the DSS-personal tool for this study (K. Griffiths, personal communication, February 21, 2017) (See Appendix G). Scores range from 0-5 for each of nine questions, with higher scores indicating a higher personal depression stigma ("Depression Stigma Scale," 2017).

Test re-test reliability of the DSS - personal:  $r = 0.71$  ( $n=435$ ), and internal consistency:  $\alpha = 0.78$  ("Depression Stigma Scale," 2017).

### **Data Collection Procedure**

The survey link was active for two weeks to allow opportunity for survey completion. At the close of the survey, data was exported from Survey Monkey directly into IBM SPSS software version 24 for analysis. To be included in the study, participants must have identified as a hospital employed RN and completed all 20 survey questions.

### **Protection of Human Subjects**

The protection of human subjects was considered throughout the study design. Potential participants may be worried about repercussions or potential negative stereotypes from coworkers if their responses were made public. To mitigate these risks, no identifiable information was obtained in the survey or by the survey software that could link participants with results, as the survey design was anonymous. The invitation email informed participants that participation was completely voluntary and no repercussions would occur personally or professionally through participation in this survey. The email also informed participants that the completion of the survey indicated consent to participate in this study. If participants experience discomfort or have questions regarding the study, a contact number was provided in the invitation email. The study design was reviewed and approved by the hospital IRB and the University IRB prior to data collection.

### **Data Analysis**

IBM SPSS software version 24 was used to complete descriptive analysis of the survey data. The PHQ-9 TDS was evaluated and respondents with a score of nine or less

were put into the non-depressed group. Respondents with a TDS of 10 or higher were placed in the depressed group to determine if participants in the sample had a similar rate of depression as reported by Letvak, Ruhm, and McCoy (2012). Mean scores of the DSS-personal were then evaluated using an independent samples t-test to determine if there was a statistically significant difference in personal depression stigma among the groups.

## **CHAPTER IV**

### **Results**

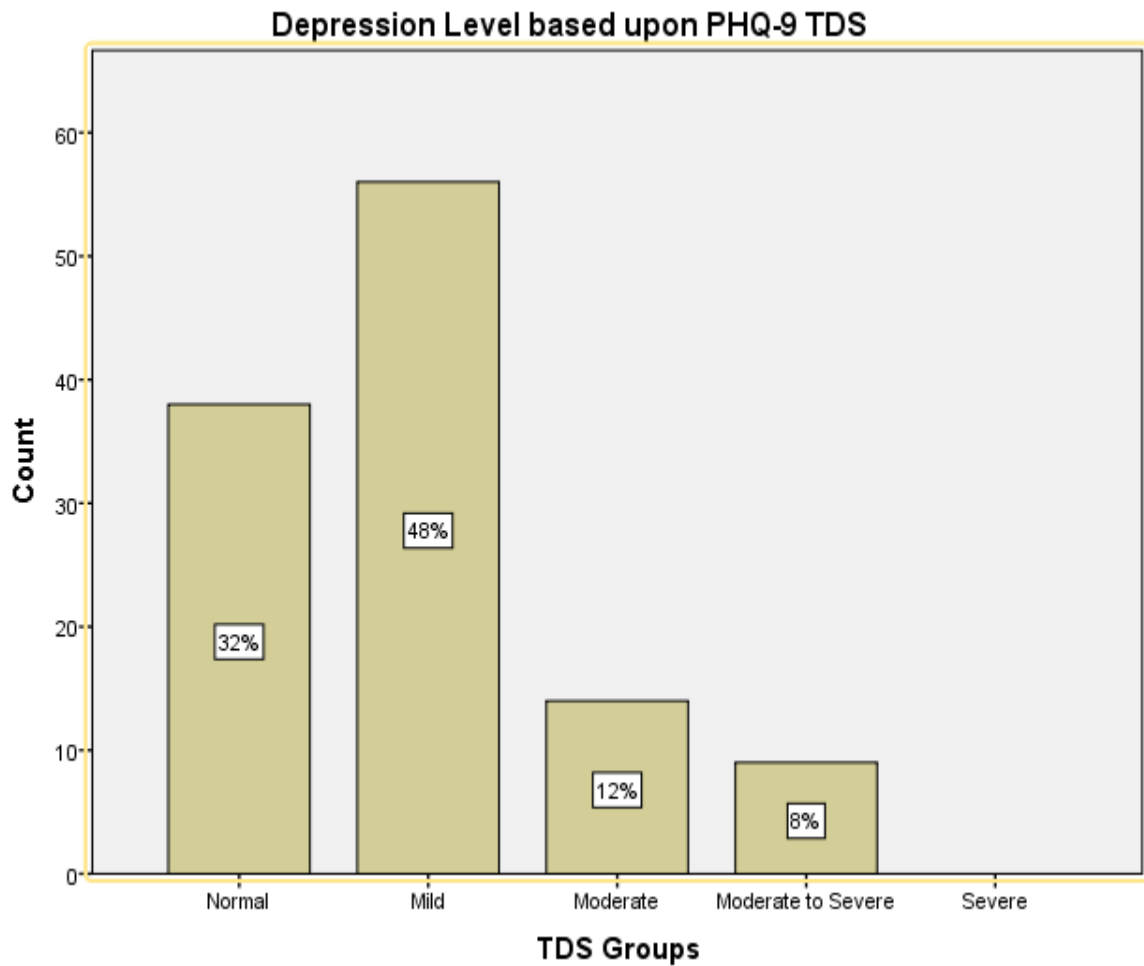
The PHQ-9 was used to determine the total depression score (TDS) of respondents. The PHQ-9 is a nine item self-report depression tool with scores ranging from 0-27. Scores from 0-4 indicate no depressive symptoms, 5 to 9 indicate minimal symptoms, 10 to 14 indicate moderate depression, scores of 15-19 indicate moderately severe depression, and scores 20-27 indicate severe depression. The DSS-personal consisted of nine questions and was included in the survey to measure the personal depression stigma of respondents. Scores range from 0 to 36, with higher scores indicating higher personal depression stigma. Participants must have identified as a hospital employed nurse and completed the entire survey for responses to be included in the results.

### **Sample Characteristics**

A total of 447 invitation emails were sent out to hospital employed nurses working at a community hospital in NC requesting participation in this survey. A total of 138 surveys were returned for a 31% return rate. Three surveys did not meet the survey criteria due to participants not identifying as a hospital employed nurse. Eighteen returned surveys were incomplete, therefore excluded from the data. A total of 117 surveys were included in the data and analyzed.

## PHQ-9 TDS

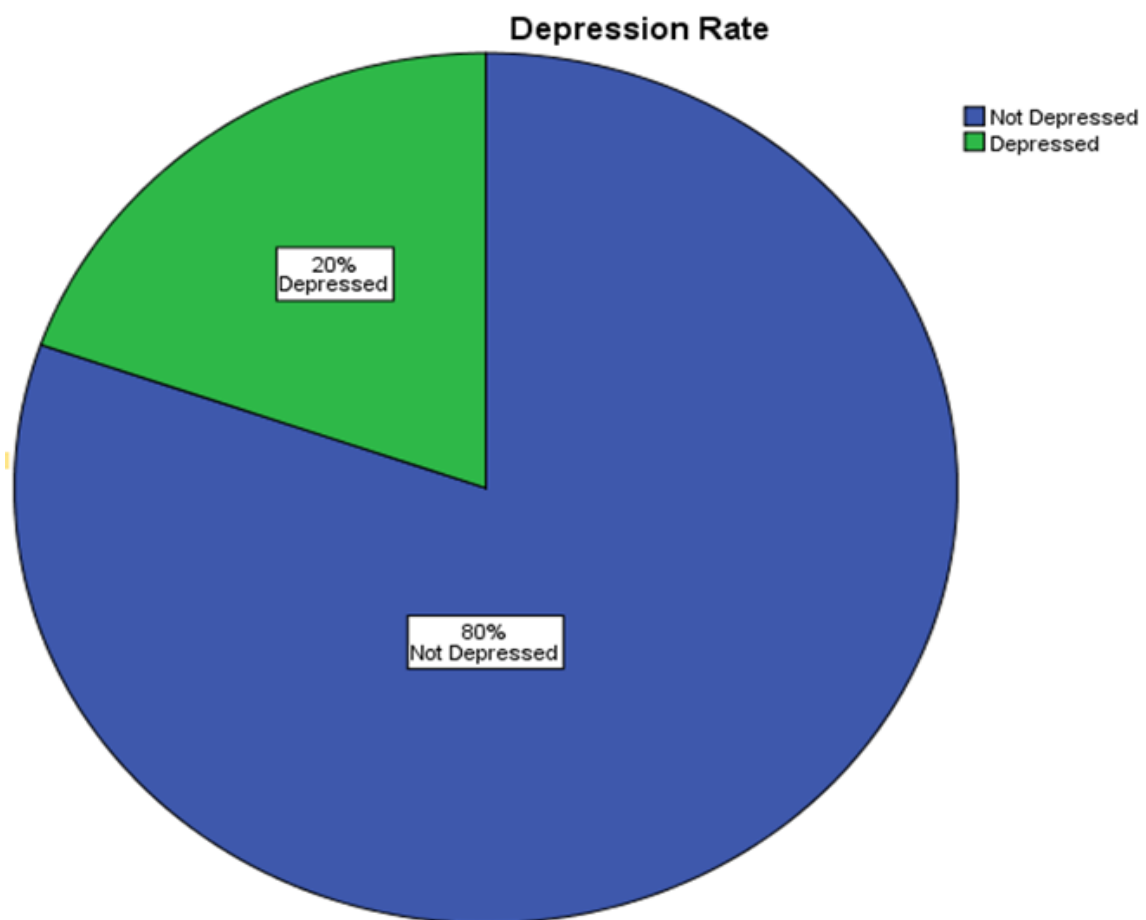
The mean TDS was 6 (SD = 5), with a median score of 4 for all participants. 32% had a TDS of 0-4, 48% scored 5 to 9, 12% scored 10-14, 8 % scored 15 to 20, and 0% scored 20-27, as seen in Figure 2.



*Figure 2: Depression Level based upon PHQ-9 TDS*



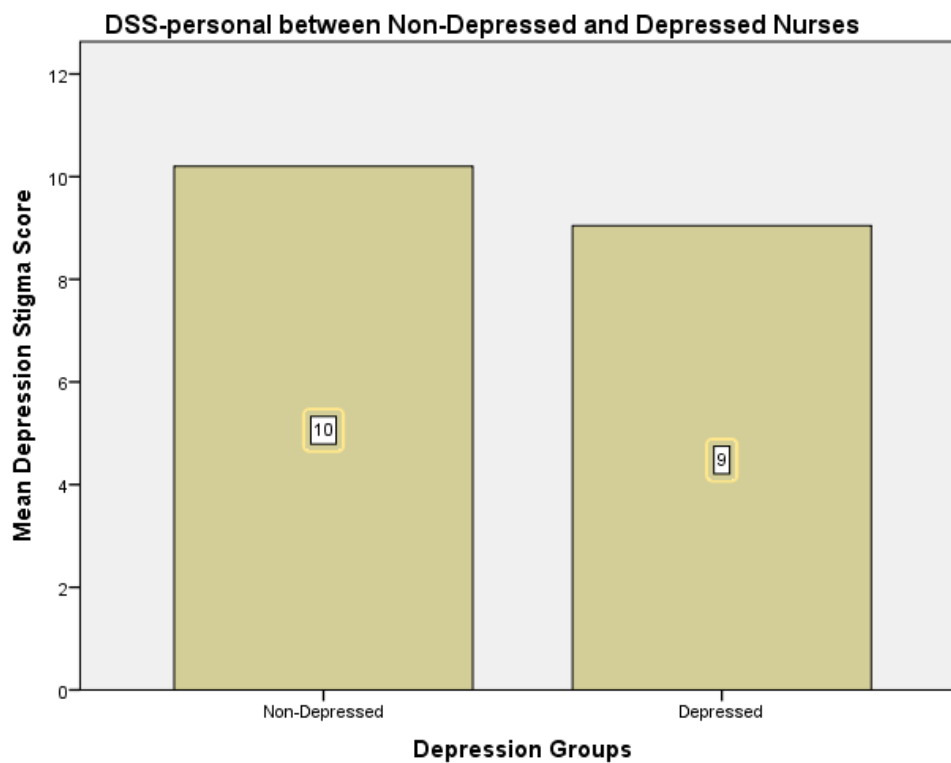
Eighty percent of respondents had a TDS of 9 or less and 20 % scored 10 or higher. Based upon these scores, the respondents were divided into two groups. Participants with a TDS of 9 or less were assigned to the non-depressed group and participants with a TDS of 10 or higher were assigned to the depressed group. See Figure 3.



*Figure 3: Depressed vs Non-Depressed Nurses Based upon TDS*

## DSS-personal

The mean DSS-personal score for all participants was 10, with a median score of 10. The non-depressed group had a mean DSS-personal score of 10, with a median of 11. The DSS-personal scores for participants in the depressed group had a mean score of 9, with a median of 10. See figure 4.



*Figure 4:* DSS-Personal Scores between Non-depressed and Depressed nurses.

## Major Findings

The first research question in this study sought to determine the percentage of hospital employed nurses meeting the criteria for depression. This question was answered using descriptive statistics of the PHQ-9 TDS. Twenty percent of participants had a TDS of 10 or above indicating moderate to severe depression (n=23). Eighty percent of

participants had a TDS of 9 or less (n=94), therefore, not meeting the criteria for moderate to severe depression for this study.

The second research question explored if depressed nurses have higher personal depression stigma than non-depressed nurses. The non-depressed group had a mean DSS-personal score of 10, with a median of 11. The DSS-personal scores for participants in the depressed group had a mean score of 9, with a median of 10. An independent-samples t-test was utilized to determine if there were statistically significant differences in DSS-personal scores between these groups. Homogeneity of variances was assessed and confirmed using Levene's test for equality of variances ( $p = .981$ ). Although the mean DSS-personal score was slightly higher in the non-depressed group, an independent-samples t-test indicates there is no statistically significant difference in the overall scores between the depressed and non-depressed groups,  $M = 1.16$ , 95% CI  $[-.902, 3.2]$ ,  $t(115) = 1.114$ ,  $p = .268$ .

### **Summary**

In this study hospital employed nurses were assessed for depression based upon their TDS using the PHQ-9 depression scale. Twenty percent of surveyed hospital employed nurses met the criteria for depression with a TDS of 10 or higher (n=23). Eighty percent did not meet the criteria for depression with a TDS or 9 or less (n= 94). The DSS-personal was used to measure personal depression stigma among respondents. The mean DSS-personal for non-depressed nurses was 10, with a median of 11. The mean DSS-personal score among depressed nurses was 9, with a median of 10. An independent sample t-test was utilized to determine if there was a statistically significant difference in DSS-personal scores among depressed and non-depressed nurses. The

independent-samples t-test indicates there is no statistically significant difference in the overall DSS-personal scores between the depressed and non-depressed groups,  $M = 1.16$ , 95% CI [-.902, 3.2],  $t(115) = 1.114$ ,  $p = .268$ .

## **CHAPTER V**

### **Discussion**

Hospital employed nurses work in an emotionally and physically demanding environment, putting them at risk for depression (AHC Media, 2013). Letvak, Ruhm and McCoy (2012) reported that 18% of hospital employed nurses are depressed, which is twice the rate of the general public. A decrease in productivity caused by depression, also known as presenteeism, impacts quality of care delivery due to its association with general errors, medication errors, near misses, patient safety, and patient satisfaction scores (Gartner, Nieuwenhuijsen, Van Dijk, & Sluiter, 2010). These reports coupled with personal suffering, make the high rate of depression among hospital employed nurses a hospital, professional, and public health concern.

The stigma of depression is the result of negative stereotypes, prejudice, and discrimination. Internalized, or personal-stigma, is psychologically harmful and often results in concealment of the problem and withdrawal from others in an effort to avoid a negative label (Chan & Mak, 2017; Hammer & Toland, 2016). Previous studies have indicated that stigmatizing attitudes may act as boundaries influencing help-seeking behaviors for those suffering from depression (Abdelsalam & Mohamed, 2016). The purpose of this study was to define the depression rate among nurses and determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses at a community hospital in North Carolina.

### **Implication of Findings**

This study's findings of a 20% depression rate is higher than that previously reported in 2012 by Letvak, Ruhm and McCoy. This finding adds validation to the concerning high rate of depression among hospital employed nurses. During the planning phase of this study, assumptions were made by the author based upon the literature review. Assumptions included that personal depression stigma would be higher in depressed than non-depressed nurses, therefore, hindering help-seeking behaviors and contributing to the high rate of depression among nurses.

A major finding for this study was that contrary to previous assumptions, the personal depression stigma scores for the non-depressed group were slightly higher ( $M = 10$ ,  $SD = 4.5$ ) than the depressed group ( $M = 9$ ,  $SD = 4.3$ ). The results that depressed nurses have lower personal depression stigma support studies indicating that familiarity with mental illness actually decreases depression stigma (Angermeyer, Matschinger, & Corrigan, 2004). Therefore, personal experience with depression may have made an impact on their personal beliefs and decreased their personal depression stigma. Another consideration of why the DSS-personal was lower in the depressed group could be based upon local beliefs and cultural considerations of the nurses surveyed in this small geographic area.

This study did not address the impact of personal depression stigma's role in help-seeking behaviors. Assumptions were made that depressed nurses may have a higher personal depression stigma score than non-depressed nurses, therefore hindering help-seeking behaviors. Still unknown is the overall impact that personal depression stigma may play in the high depression rate among nurses. There is a continued need for ongoing

initiatives to bring awareness and promote education of depression among nurses (Abdelsalam & Mohamed, 2016; Boerema et al., 2016; Cheung & Yip, 2015; Gartner et al., 2010; Griffiths et al., 2008; Hsiao et al., 2012; Letvak, Ruhm, & McCoy, 2012; Perry et al., 2015; Ross & Goldner, 2009; Wang et al., 2015).

### **Application to Theoretical/Conceptual Framework**

The framework chosen for this study was based upon the Theory of Planned Behavior (TPB) which links individuals' beliefs to their behaviors. The TPB was an appropriate theory to use for this study, as this theory states that behavior follows reasonable and consistent patterns and indicates that we can change the behavior of people by examining behavioral, normative, and control beliefs (Ajzen, 1991). This study used TPB as a foundation to determine if depression stigma is prominent among depressed nurses, therefore, having the potential to influence help-seeking behaviors. Although these assumptions were contradicted in the results, as no statistically significant difference was found between personal depression stigma scores between depressed and non-depressed nurses, the TPB remained an applicable framework for this study.

### **Limitations**

Due to time restraints of completing the MSN Thesis, limitations in this study included the use of a convenience sampling method, small sample size, and the restriction of a one hospital setting for survey distribution. Other limitations included the use of self-reporting and the inability to ensure the survey was taken only one time per participant due to the anonymous nature of the survey, which was also intentional to encourage participation and maintain confidentiality. Due to the study limitations, generalizing these results to the entire nursing population of hospital employed nurses is not recommended,

yet should be used as a guide to inspire the need for further research regarding the high depression rate among nurses.

### **Implications for Nursing**

The reported high rate of depression among hospital employed nurses is a professional concern. Nurses make up the largest healthcare profession in the US and are most often the first line of patient contact. The magnitude and widespread impact of depression among nurses not only negatively impacts the individual, their family, and facility of employment, yet quality care delivery in the form of presenteeism. Presenteeism in the workplace is associated with general errors, medication errors, near misses, patient safety, and patient satisfaction scores (Gartner et al., 2010).

Studies have shown that factors associated with depression are work related stress and high psychological job demands (Melchior et al., 2007). Ready and sustainable interventions, including conversations with hospital administrators are needed to fully address this issue. As leaders in the healthcare field, nurses must make finding a solution to the high rate of depression among hospital employed nurses a priority. Initiatives must include strategies to increase awareness, decrease stigma, and promote personal health and wellbeing among nurses.

### **Recommendations**

Further research is needed to fully understand and identify all the attributing factors and possible resolutions to depression among hospital employed nurses. In this study, it was found that personal depression stigma is not different between depressed and non-depressed nurses, contradicting study assumptions that stigma may be higher in depressed nurses, therefore hindering help-seeking behaviors and contributing to the high



rate of depression among nurses. Recommendations for further research was to continue to monitor the depression rate and depression stigma scores among hospital employed nurses on a larger scale to validate this study's findings. Another recommendation was to determine the percentage of depressed nurses who are receiving treatment and those who are not. Then, determine if those receiving treatment are well controlled and determine factors contributing to those not receiving treatment.

### **Conclusion**

The high rate of depression among hospital employed nurses is concerning for the profession, hospitals, and patients. This study found that 20% of hospital employed nurses were depressed using the PHQ-9 TDS measurement tool. Personal depression stigma was measured using the DSS-personal score, of which no statistically significant difference was found between depressed and non-depressed nurses. This was a major finding for this study, as assumptions were made based upon the literature review that depressed nurses may have a higher depression stigma than non-depressed nurses. Further research is needed to better understand this issue and all of the factors that may contribute this this high rate of depression and interventions to improve these statistics. The need for continuing research and initiatives are needed to bring awareness and promote education of depression and treatment options among nurses and the general public.

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## Appendix A

## Patient Health Questionnaire (PHQ-9)

## PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Over the last 2 weeks, how often have you been  
bothered by any of the following problems?  
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns  +  +

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card). TOTAL:

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	_____
	Somewhat difficult	_____
	Very difficult	_____
	Extremely difficult	_____

## Appendix B

## Depression Sigma Scale (DSS) Questionnaire

**DSS questionnaire**

Questions **1 to 18** contain statements about depression. Please indicate how strongly **you personally** agree or disagree with each statement.

- 1** People with depression could snap out of it if they wanted.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 2** Depression is a sign of personal weakness.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 3** Depression is not a real medical illness.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 4** People with depression are dangerous.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 5** It is best to avoid people with depression so that you don't become depressed yourself.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 6** People with depression are unpredictable.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 7** If I had depression I would not tell anyone.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 8** I would not employ someone if I knew they had been depressed.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

- 9** I would not vote for a politician if I knew they had been depressed.

Strongly agree  4  
 Agree  3  
 Neither agree nor disagree  2  
 Disagree  1  
 Strongly disagree  0

## Appendix C

### Invitation Email

Subject: Request for Survey Participation

Dear RN,

I am working on completing my thesis for the MSN program at Gardner-Webb University. I would like for you to participate in a **brief 5-10 minute survey** to help with my research entitled “Depression and Personal Depression Stigma among Hospital Employed Nurses”.

Letvak, Ruhm and McCoy (2012) report that 18% of hospital employed nurses experience depression in comparison to 9% of the general US population. **The purpose of my study is to evaluate depression rate and determine if depressed nurses have a higher rate of personal depression stigma than non-depressed nurses.** I am very passionate about this subject and hope that you will help with this study through participation in the survey.

The survey is **anonymous**. No one, including the researcher, will be able to associate your responses with your identity. Your participation is completely voluntary and no repercussions will occur personally or professionally through participation in this survey. The Iredell Memorial Hospital (IMH) Institutional Review Board (IRB) and the Gardner-Webb University IRB have approved this survey. To participate you must be a registered nurse working in a hospital environment. The survey should be taken **one time** per participant.

The completion of the survey indicates consent to participate in this study. If you experience discomfort or have questions related to participation in this study, please contact me at 704-437-1463. I will be glad to answer your questions or put you in contact with a counselor or the hospital Chaplin.

To access the survey, please click on the link below to go to the survey website (or copy and paste the link into your Internet browser). Survey link: <https://www.surveymonkey.com/r/FT82NH3>

Results will be reported in my thesis ‘Depression and Personal Depression Stigma among Hospital Employed Nurses.’ The thesis will be loaded into the ProQuest database in July 2017. Results will also be disseminated via a poster presentation at Gardner-Webb University in July 2017 and again at IMH during Nurses week 2018.

Should you have any comments or questions, please feel free to contact myself or my faculty advisor using the information below. Thank you so much for your time and cooperation.

Sincerely,

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[https://libres.uncg.edu/ir/uncg/f/T\\_McCoy\\_Depression\\_2012.pdf](https://libres.uncg.edu/ir/uncg/f/T_McCoy_Depression_2012.pdf)

## Appendix D

## Reminder Email - Request for Survey Participation

Subject: Reminder - Request for Survey Participation

Dear RN,

This email is intended as a reminder for you to complete the survey to help with my research entitled “Depression and Personal Depression Stigma among Hospital Employed Nurses”. If you have already completed the survey, thank you for your assistance. If you haven’t, please consider taking the survey today. The survey should take 5-10 minutes to complete. The survey will close in one week. The survey should be taken **one time** per participant. Thank you for your support.

Survey link: <https://www.surveymonkey.com/r/FT82NH3>

Sincerely,

Christy Moose, BSN, RN  
Gardner-Webb University  
Hunt School of Nursing  
Masters of Nursing Student  
cmoose@gardner-webb.edu

Jill Parker, MSN, APRN, FNP-C  
Gardner-Webb University  
Hunt School of Nursing  
Faculty Advisor  
Jparker11@gardner-webb.edu

## Appendix E

### Survey PDF

#### Work Setting

\* 1. Are you an RN working in a hospital setting?

- Yes
- No - If the answer is no, your responses will not be included in this survey
- Other (please specify)

#### Patient Health Questionnaire - 9 (PHQ-9)

**Over the last 2 weeks, how often have you been bothered by any of the following problems?**

**Select your response to each question.**

2. Little interest or pleasure in doing things.

- Not at all
- Several days
- More than half the days
- Nearly every day

3. Feeling down, depressed, or hopeless.

- Not at all
- Several days
- More than half the days
- Nearly every day

4. Trouble falling or staying asleep, or sleeping too much.

- Not at all
- Several days
- More than half the days
- Nearly every day

5. Feeling tired or having little energy.

- Not at all
- Several days
- More than half the days
- Nearly every day

6. Poor appetite or overeating.

- Not at all
- Several days
- More than half the days
- Nearly every day

7. Feeling bad about yourself — or that you are a failure or have let yourself or your family down.

- Not at all
- Several days
- More than half the days
- Nearly every day

8. Trouble concentrating on things, such as reading the newspaper or watching television.

- Not at all
- Several days
- More than half the days
- Nearly every day

9. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual.

- Not at all
- Several days
- More than half the days
- Nearly every day

10. Thoughts that you would be better off dead or of hurting yourself in some way.

- Not at all
- Several days
- More than half the days
- Nearly every day

11. If you have checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all
- Somewhat difficult
- Very difficult
- Extremely difficult

#### Depression Stigma Scale - Personal (DSS-personal)

12. People with depression could snap out of it if they wanted.

- Strongly Agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

13. Depression is a sign of personal weakness.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

14. Depression is not a real medical illness.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

15. People with depression are dangerous.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

16. It is best to avoid people with depression so that you don't become depressed yourself.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

17. People with depression are unpredictable.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree



18. If I had depression I would not tell anyone.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

19. I would not employ someone if I knew they had been depressed.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

20. I would not vote for a politician if I knew they had been depressed.

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

Reference

Depression stigma scale (DSS). (2017). Retrieved February 20, 2017, from <http://cmhr.anu.edu.au/mental-health-measures/depression-stigma-scale-dss#field-cmhr-scale-resource-tab-0>

## Appendix F

## PHQ-9 Permission

**INSTRUCTION MANUAL**  
**Instructions for Patient Health Questionnaire (PHQ) and GAD-7 Measures**

<u>TOPIC</u>	<u>PAGES</u>
<b>Background</b>	<b>1</b>
<b>Coding and Scoring</b>	<b>2, 4, 5</b>
<b>Versions</b>	<b>3</b>
<b>Use as Severity and Outcome Measures</b>	<b>6-7</b>
<b>Translations</b>	<b>7</b>
<b>Website and Other Issues</b>	<b>8</b>
<b>Selected References</b>	<b>9</b>

**BACKGROUND**

The Primary Care Evaluation of Mental Disorders (PRIME-MD) was an instrument developed and validated in the early 1990s to efficiently diagnose five of the most common types of mental disorders presenting in medical populations: depressive, anxiety, somatoform, alcohol, and eating disorders.[1] Patients first completed a one-page 27-item screener and, for those disorders for which they screened positive, were asked additional questions by the clinician using a structured interview guide. However, this 2-stage process took an average of 5-6 minutes of clinician time in patients without a mental disorder diagnosis and 11-12 minutes in patients with a diagnosis. This proved to be a barrier to use given the competing demands in busy clinical practice settings.

Therefore, in two large studies enrolling 6000 patients (3000 from general internal medicine and family practice clinics and 3000 from obstetrics-gynecology clinics), a self-administered version of the PRIME-MD called the Patient Health Questionnaire (PHQ) was developed and validated.[2,3] In the past decade, the PHQ in general and the PHQ-9 depression scale in particular [4-6] have gained increasing use in both research and practice. The original PRIME-MD is now largely of historical interest and seldom used except in a few types of research studies.

Given the popularity of the PHQ-9 for assessing and monitoring depression severity, a new 7-item anxiety scale using a response set similar to the PHQ-9 was initially developed to diagnose generalized anxiety disorder (hence its name, the GAD-7) and validated in 2740 primary care patients.[7] Though originally developed to diagnose generalized anxiety disorder, the GAD-7 also proved to have good sensitivity and specificity as a screener for panic, social anxiety, and post-traumatic stress disorder.[8] Finally, the PHQ-15 was derived from the original PHQ studies and is increasingly used to assess somatic symptom severity and the potential presence of somatization and somatoform disorders.[9]

Each PHQ module can be used alone (e.g. the PHQ-9 if depression is the condition of interest), together with other modules, or as part of the full PHQ. Also, alternative or abbreviated versions of the PHQ-9 and GAD-7 are sometimes used in certain screening or research settings [10-14]

Although the PHQ was originally developed to detect five disorders, the depression, anxiety, and somatoform modules (in that order) have turned out to be the most popular.[10] Also, most primary care patients with depressive or anxiety disorders present with somatic complaints and co-occurrence of somatic, anxiety, and depressive symptoms (the *SAD* triad) is exceptionally common. This is the rationale behind the PHQ-SADS screener.[15] The most commonly used versions of the PHQ scales are summarized in **Table 1, page 3**.

### **CODING AND SCORING**

The full PHQ, Brief PHQ, and PHQ for Adolescents (PHQ-A) can be used to establish provisional diagnoses for selected DSM-IV disorders. The diagnostic algorithm for the PHQ modules are included in footers at the bottom of each page of the PHQ, and also reiterated in **Table 2, page 4**. The other measures are principally used to derive severity scores (PHQ-9 and PHQ-8 for depressive symptom severity; GAD-7 for anxiety symptom severity; PHQ-15 for somatic symptom severity) or as ultra-brief screeners (PHQ-2, GAD-2, PHQ-4). An example in which the PHQ depression module can be used as both a diagnostic module as well as a depression severity score (PHQ-9 score) is shown in **Table 3, page 5**.

Over time, the severity scores have been a particularly popular use of the measures, and are now used much more commonly than the provisional diagnoses. For example, cutpoints of 5, 10, and 15 represent mild, moderate, and severe levels of depressive, anxiety, and somatic symptoms, on the PHQ-9, GAD-7, and PHQ-15 respectively. Also, a cutpoint of 10 or greater is considered a “yellow flag” on all 3 measures (i.e., drawing attention to a possible clinically significant condition), while a cutpoint of 15 is a “red flag” on all 3 measures (i.e., targeting individuals in whom active treatment is probably warranted). For the ultra-brief measures (PHQ-2 and GAD-2), a score of 3 or greater should prompt administration of the full PHQ-9 and/or GAD-7, as well as a clinical interview to determine whether a mental disorder is present.

The final question on the PHQ (and some of its abbreviated versions) asks the patients to report “how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?” This single patient-rated difficulty item is not used in calculating any PHQ score or diagnosis but rather represents the patient’s global impression of symptom-related impairment. It may be useful in decisions regarding initiation of or adjustments to treatment since it is strongly associated with both psychiatric symptom severity as well as multiple measures of impairment and health-related quality of life.

A particularly important question is how to assess suicide risk in individuals who answer positively to the 9<sup>th</sup> question of the PHQ-9. A four-item screener has been developed that may assist in positive responses to this 9<sup>th</sup> question [16], although a final decision about the actual risk of self-harm requires a clinical interview.

**Table 1. Versions: Patient Health Questionnaire (PHQ) Family of Measures**

Measure	Description	Scoring	References
<b>Core</b>			
PRIME-MD	Predecessor of PHQ, now mainly of historical interest.	Combined self-administered patient screener with clinician follow-up questions.	1
PHQ	Five modules covering 5 common types of mental disorders: depression, anxiety, somatoform, alcohol, and eating.	Selected (but provisional) DSM-IV diagnoses for all types of disorders except somatoform.	2, 3
PHQ-9	Depression scale from PHQ.	Nine items, each of which is scored 0 to 3, providing a 0 to 27 severity score.	1, 4, 5, 6, 10
GAD-7	Anxiety measure developed after PHQ but incorporated into PHQ-SADS.	Seven items, each of which is scored 0 to 3, providing a 0 to 21 severity score.	7, 8, 10
PHQ-15	Somatic symptom scale from PHQ.	Fifteen items, each of which is scored 0 to 2, providing a 0 to 30 severity score.	9, 10
PHQ-SADS	PHQ-9, GAD-7, and PHQ-15 measures, plus panic measure from original PHQ.	See scoring for these scales above.	10
<b>Variants</b>			
Brief PHQ	PHQ-9 and panic measures from original PHQ plus items on stressors and women's health.	See scoring for PHQ above. Stressor and women's health items are not diagnostic or scored.	3
PHQ-A	Substantially modified version of PHQ developed for use in adolescents. Moderate data exists for validity but much less than for original PHQ.	Diagnostic scoring described in manual, available upon request.	11
PHQ-2	First 2 items of PHQ-9. Ultra-brief depression screener.	Two items scored 0 to 3 (total score of 0-6)	10, 12
GAD-2	First 2 items of GAD-7. Ultra-brief anxiety screener.	Two items scored 0 to 3 (total score of 0-6)	8, 10, 12
PHQ-4	PHQ-2 and GAD-2.	See PHQ-2 and GAD-2 above.	10, 12, 13
PHQ-8	All items of PHQ-9 except the 9 <sup>th</sup> item on self-harm. Mainly used in non-depression research studies.	Eight items, each of which is scored 0 to 3, providing a 0 to 24 severity score.	5, 10, 14

**Table 2. Diagnostic Algorithms for the PHQ**

<b>Page 1</b>
<b>Somatoform Disorder</b> if at least 3 of #1a-m bother the patient "a lot" and lack an adequate biological explanation.
<b>Major Depressive Syndrome</b> if #2a or b and five or more of #2a-i are at least "More than half the days" (count #2i if present at all) .
<b>Other Depressive Syndrome</b> if #2a or b and two, three, or four of #2a-i are at least "More than half the days" (count #2i if present at all).
<u>Note:</u> the diagnoses of Major Depressive <u>Disorder</u> and Other Depressive <u>Disorder</u> requires ruling out normal bereavement (mild symptoms, duration less than 2 months), a history of a manic episode (Bipolar Disorder) and a physical disorder, medication or other drug as the biological cause of the depressive symptoms.
<b>Page 2</b>
<b>Panic Syndrome</b> if #3a-d are all 'YES' and 4 or more of #4a-k are 'YES'.
<b>Other Anxiety Syndrome</b> if #5a and answers to three or more of #5b-g are "More than half the days".
<u>Note:</u> The diagnoses of Panic <u>Disorder</u> and Other Anxiety <u>Disorder</u> require ruling out a physical disorder, medication or other drug as the biological cause of the anxiety symptoms.
<b>Page 3</b>
<b>Bulimia Nervosa</b> if #6a,b, and c and #8 are 'YES';
<b>Binge Eating Disorder</b> the same but #8 is either 'NO' or left blank.
<b>Alcohol abuse</b> if any of #10a-e are "YES".

**Additional Clinical Considerations.** After making a provisional diagnosis with the PHQ, there are additional clinical considerations that may affect decisions about management and treatment.

- *Have current symptoms been triggered by psychosocial stressor(s)?*
- *What is the duration of the current disturbance and has the patient received any treatment for it?*
- *To what extent are the patient's symptoms impairing his or her usual work and activities?*
- *Is there a history of similar episodes, and were they treated?*
- *Is there a family history of similar conditions?*



**Table 3. Example of PHQ Depression Module for both Diagnostic and Severity Purposes**

**Patient:** A 43-year-old woman who looks sad and complains of fatigue for the past month.

2. Over the <u>last 2 weeks</u> , how often have you been bothered by any of the following:	Not at all	Several days	More than half the days	Nearly every day
	(0)	(1)	(2)	(3)
a. Little interest or pleasure in doing things?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Feeling down, depressed, or hopeless?.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Trouble falling or staying asleep, or sleeping too much?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Feeling tired or having little energy?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Poor appetite or overeating?.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Feeling bad about yourself—or that you are a failure or have let yourself or your family down?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Trouble concentrating on things, such as reading the newspaper or watching television? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual?.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Thoughts that you would be better off dead or of hurting yourself in some way? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FOR OFFICE CODING: Maj Dep Syn if #2a or b and five or more of #2a-i are at least "More than half the days" (count #2i if present at all) . Other Dep Syn if #2a or b and two, three, or four of #2a-i are at least "More than half the days" (count #2i if present at all).

**Major Depressive Disorder Diagnosis.** The criteria for Major Depressive Syndrome are met since she checked #2a "nearly every day" and five of items #2a to i were checked "more than half the days" or "nearly every day". Note that #2i, suicidal ideation, is counted whenever it is present.

In this case, the diagnosis of Major Depressive Disorder (not Syndrome) was made since questioning by the physician indicated no history of a manic episode; no evidence that a physical disorder, medication, or other drug caused the depression; and no indication that the depressive symptoms were normal bereavement. Questioning about the suicidal ideation indicated no significant suicidal potential.

**PHQ-9 Depression Severity.** This is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of "not at all," "several days," "more than half the days," and "nearly every day," respectively. PHQ-9 total score for the nine items ranges from 0 to 27. In the above case, the PHQ-9 depression severity score is 16 (3 items scored 1, 2 items scored 2, and 3 items scored 3). Scores of 5, 10, 15, and 20 represent cutpoints for mild, moderate, moderately severe and severe depression, respectively. Sensitivity to change has also been confirmed.

## **USE OF SOME SCREENERS AS SEVERITY AND OUTCOME MEASURES**

**PHQ-9 Depression Severity.** This is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of “not at all,” “several days,” “more than half the days,” and “nearly every day,” respectively. PHQ-9 total score for the nine items ranges from 0 to 27. In the above case (see table 3, page 5), the PHQ-9 depression severity score is 16 (3 items scored 1, 2 items scored 2, and 3 items scored 3). Scores of 5, 10, 15, and 20 represent cutpoints for mild, moderate, moderately severe and severe depression, respectively. Sensitivity to change has also been confirmed. The **PHQ-8** is scored just like the PHQ-9 and its total score ranges from 0 to 24. Cutpoints on the PHQ-8 are identical to the PHQ-9.

**GAD-7 Anxiety Severity.** This is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of “not at all,” “several days,” “more than half the days,” and “nearly every day,” respectively. GAD-7 total score for the seven items ranges from 0 to 21. Scores of 5, 10, and 15 represent cutpoints for mild, moderate, and severe anxiety, respectively. Though designed primarily as a screening and severity measure for generalized anxiety disorder, the GAD-7 also has moderately good operating characteristics for three other common anxiety disorders – panic disorder, social anxiety disorder, and post-traumatic stress disorder. When screening for anxiety disorders, a recommended cutpoint for further evaluation is a score of 10 or greater.

**PHQ-2 and GAD-2 Severity.** These consist of the first two items of the PHQ-9 and GAD-7 respectively, and constitute the two core DSM-IV items for major depressive disorder and generalized anxiety disorder, respectively. Each ranges from a score of 0 to 6. The operating characteristics of these ultra-brief measures are quite good; the recommended cutpoints for each when used as screeners is a score of 3 or greater. When used together, they are referred to as the **PHQ-4** a 4-item screening measure which ranges from a score of 0 to 12, and serves as a good measure of “caseness” (i.e., the higher the score, the more likely there is an underlying depressive or anxiety disorder). In particular, the PHQ-2 and GAD-2 subscores of the PHQ-4 provide separate depressive and anxiety scores, and can be used as screeners for depression and anxiety.

**PHQ-15 Somatic Symptom Severity.** This is calculated by assigning scores of 0, 1, and 2 to the response categories of “not at all”, “bothered a little”, and “bothered a lot”, for the 13 somatic symptoms of the PHQ (items 1a-1m). Also, 2 items from the depression module (sleep and tired) are scored 0 (“not at all”), 1 (“several days”) or 2 (“more than half the days” or “nearly every day”). Thus, a PHQ-15 score can be derived from page 1 of the PHQ, or from separate administration of the PHQ-15 scale or the PHQ-SADS. PHQ-15 scores of 5, 10, and 15 represent cutpoints for low, medium, and high somatic symptom severity, respectively.

**Sensitivity to Change for Monitoring Treatment Outcomes.** A particularly important use of a measure is its responsiveness to changes of condition severity over time. This is well-established for the PHQ-9 which is increasingly used as a measure to assess the level of depression severity (for initial treatment decisions) as well as an outcome tool (to determine treatment response).[6,10] An example of how different PHQ-9 severity levels might guide treatment is shown in **Table 4, page 7**. There is preliminary evidence that the PHQ-15 may be responsive to changes as individuals with somatoform disorders or high somatization are treated.[10] The GAD-7 has demonstrated change as a secondary anxiety outcome in several depression trials, but has not yet been studied as a primary outcome in anxiety trials. Also, since there is more diagnostic splitting for anxiety than for depressive disorders, it remains to be determined whether a single anxiety measure can suffice as an outcome measure. It is likely the GAD-7 will be useful but not yet certain it will be sufficient.

**Psychometrics.** The psychometrics of the PHQ and its component scales are described in the validation articles for specific measures (see Selected References on page 9) and are summarized in a review article on the PHQ-9, GAD-7, and PHQ-15.[10]

**Table 4. PHQ-9 Scores and Proposed Treatment Actions \***

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
0 – 4	None-minimal	None
5 – 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 – 14	Moderate	Treatment plan, considering counseling, follow-up and/or pharmacotherapy
15 – 19	Moderately Severe	Active treatment with pharmacotherapy and/or psychotherapy
20 – 27	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management

\* From Kroenke K, Spitzer RL, *Psychiatric Annals* 2002;32:509-521

### **TRANSLATIONS**

There are numerous translations of the PHQ as well as the PHQ-9 and GAD-7 available in many languages, which are freely downloadable on the PHQ website ([www.phqscreeners.com](http://www.phqscreeners.com)). The abbreviated versions of these measures – PHQ-8, PHQ-2, GAD-2, and PHQ-4 – can simply be derived from the translations by selecting the relevant items (see Table 1, page 3). The PHQ-15 can also be simply derived by selecting the 13 somatic items (1a-1m), plus the *sleep* and *tired* items (2c and 2c) from the PHQ translations.

Many of the translations have been developed by the MAPI Research Institute using an internationally accepted translation methodology. Thus, most of the translations are linguistically valid. However, unlike the English versions of the PHQ and GAD-7, few of the translations have been psychometrically validated against an independent structured psychiatric interview.



**WEBSITE**

Copies of the PHQ family of measures, including the GAD-7, are available at the website:

[www.phqscreeners.com](http://www.phqscreeners.com)

Also, translations, a bibliography, an instruction manual, and other information is provided on this website.

**QUESTIONS REGARDING DEVELOPMENT, ACKNOWLEDGMENTS AND USE**

The PHQ family of measures (see Table 1, page 3), including abbreviated and alternative versions as well as the GAD-7, were developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc.

All of the measures included in Table 1 are in the public domain. No permission is required to reproduce, translate, display or distribute.

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## Appendix G

## Depression Stigma Scale (DSS) permission

**KG** Kathy Griffiths <kathy.griffiths@anu.edu.au>  
Yesterday, 9:51 PM

Hi Christy,  
Yes, that is fine. :-) Thanks for asking.  
Best wishes,  
Kathy.

[Kathleen Griffiths, PhD](#)  
*ANU Emeritus Professor*  
College of Biology, Medicine & Environment  
The Australian National University  
PO Box 6284  
O'Connor. ACT. 2601  
\*\*\*

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**CM** Christy Moose  
Yesterday, 1:54 PM  
Kathy Griffiths <kathy.griffiths@anu.edu.au> ↕

Kathy,

For my study design, I am planning to send out my survey via email using a link to Survey Monkey. My professor stated that I had to have your permission to administer the DSS-personal questions via Survey Monkey vs the paper format that you emailed to me earlier.

Here is the link to the entire survey including the PHQ-9 and DSS-Personal for my research: <https://www.surveymonkey.com/r/FT82NH3>


May I have your permission to replicate the DSS-personal questions in Survey Monkey?

Thank you so much for your time and consideration.

Respectfully,  
Christy Moose  
\*\*\*

---

**KG** Kathy Griffiths <kathy.griffiths@anu.edu.au>  
Tue 2/21, 6:15 PM  
Christy Moose ↕

 **DSS.doc**  
92 KB

Download Save to OneDrive - Gardner-Webb University

Hi Christy,  
I am very happy for you to use the DSS (attached).  
Best wishes with your project,  
Kathy.

[Kathleen Griffiths, PhD](#)  
*ANU Emeritus Professor*  
College of Biology, Medicine & Environment  
The Australian National University  
PO Box 6284  
O'Connor. ACT. 2601  
\*\*\*