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THE CES-D: MEASURING EFFECTIVENESS IN SCREENING FOR
PRENATAL DEPRESSION

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requirements for the Nursing Honors Program

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ABSTRACT

Prenatal depression, though less famous than postpartum depression, has serious implications for maternal and fetal outcomes. Estimates suggest that depression affects 7-13% of all adult women in the United States, while, current research estimates that 8-51% of women have experienced depression or depressive symptoms throughout their pregnancy. Depression in pregnancy can lead to complications, decreased compliance with medical advice, and interrupted maternal-fetal bonding. This sub-study, using data from a current, descriptive longitudinal study, seeks to increase understanding about the occurrence of prenatal depression and related maternal behaviors. Data were collected from the population of interest, comprised of 66 publicly or privately insured pregnant women who reside in the greater metropolitan area of a Midwest city. A convenience sample of women, enrolled prior to 21 weeks gestation, was recruited at 4 maternity care offices with assistance of nurse midwives. This sub-study compares prenatal depression results from the Centers for Epidemiologic Studies Depression Scale (CES-D), administered at enrollment and 34 weeks gestation, with results from similar studies conducted in the United States during the last 5 years. The CES-D is a 20 item scale designed to detect depressive symptoms in the general population. A score of 16 or greater is indicative of risk for depression. Results indicated that the percentage of prevalence for risk of prenatal depression, (CES-D score of 16 or greater) was 30.9% at enrollment, and 20.5% at Time 2 (34 weeks gestation) compared with selected studies that indicate prevalence at 20-44%. Participants reported an average age of 25 years, were primarily Caucasian (68%), married (59%), and 25% of participants had attained at least a baccalaureate education, indicating that this study evaluated prenatal depression in an understudied population. Enhanced knowledge about the prevalence of prenatal depression will facilitate discussion and further research in this area. Provider awareness of the incidence and

significance of prenatal depression can improve outcomes by enhancing patient disclosure, facilitating appropriate diagnosis, and initiating early treatment.

INTRODUCTION

Depression is a problem that approximately 1 in 5 women in the United States will experience during their lifetime (Orr, Blazer, James, & Reiter, 2007) and in one year alone, depression will affect approximately 7-13% of women (Bennett, Einarson, Taddio, Koren, & Einarson, 2004). The childbearing years represent a time of increased vulnerability to the acquisition or recurrence of depression and other psychiatric conditions (Orr et al., 2007; Bennet et al., 2004; Gaynes, Gavin, Meltzer-Brody, Lohr, Sweinson, Garteleher, et al., 2005; Vesga-Lopez, Blanco, Keyes, Olfson, Grant, & Hasin, 2008). While postpartum depression has recently experienced an increase in popularity and media attention, another significant issue for mothers is prenatal depression. Estimates of the incidence of prenatal depression vary widely, suggesting that depression may occur during 8 to 50% of pregnancies (Bennett, et al., 2004). Other estimates suggest that depressive symptoms are reported less frequently, but the most important conclusion that can be drawn from these estimates is that further investigation is needed. Prenatal depression represents a significant health problem for mothers and their infants, poses threats to maternal compliance with important medical recommendations, and may lead to poor maternal-fetal outcomes and continued depression in the postpartum period.

Review of the Literature

Diagnostic Criteria for Depression

Major Depressive Disorder (MDD), more commonly known as depression, is defined by the American Psychiatric Association (APA) as “a depressed mood or a loss of pleasure in nearly all normal activities for a period of at least two weeks (Lintner & Gray, 2006, p.52),” in combination with the presence of at least four of the following symptoms: 1) alteration in normal appetite or weight, 2) changes in sleep or activity, 3) anergia, 4) thoughts or feelings of worthlessness or guilt,

5) difficulty with decision making, attention, or thinking, or, 6) recurrent thoughts, plans, or attempts at suicide (American Psychological Association [APA], 2000).

Diagnosing Depression in Pregnancy

Perinatal depression shares the same diagnostic criteria as depression that is not related to pregnancy (Lintner & Gray, 2006; Lusskin, Pundiak, & Habib, 2007). The diagnostic criteria established by the Diagnostic and Statistical Manual for Mental Health Disorders (4th Edition) allows practitioners to classify depression as postpartum depression if it begins within four weeks of childbirth, however, there is no specific criteria for diagnosing prenatal depression (APA, 2000). The APA does not have specific diagnostic criteria for MDD in pregnancy or Depression in Pregnancy. Depression in pregnancy is associated with the same presentation, symptoms, and course as depression occurring outside the context of pregnancy (Lintner & Gray, 2006).

A descriptive study using the Centers for Epidemiologic Studies Depression assessment scale (CES-D) was conducted by Lindgren in 2001. When scored for prenatal depression, 44.4 % of subjects reported suffering from depression during their pregnancy at some point between their 20th and 40th week of gestation. Of the single, unmarried women participating in the study, 70% reported scores that met or exceeded the CES-D cutoff score of 16, indicating that they had an increased risk of depression or depressive symptoms.

Risk Factors for Prenatal Depression

Depression in the prenatal period, though diagnostically and symptomatically similar to depression occurring at other times in life has a distinct set of predisposing factors associated with it. Marcus, Flynn, Blow, and Barry (2003) have identified that a history of depression is a major factor in predicting the occurrence of prenatal depression. Women in a study by Marcus, et al. (2003) who reported a history of depression were five times more likely than women without a

prior history of depression, to report a score of 16 or greater on the CES-D, indicating that they had an increased likelihood of experiencing depression or depressive symptoms. Robertson, Grace, Wallington & Stewart (2005) indicate that the strongest risk factors for prenatal depression are: 1) personal or family history of mental health illness, 2) stressful life events during pregnancy, 3) low levels of social support, and, 4) a previous history of postpartum depression.

Distinguishing between depression and somatic symptoms of pregnancy

Typical symptoms of major depression make diagnosis of depression in pregnancy more challenging. "The diagnosis of depression, both in the general population and during pregnancy is most often based on clinical signs and symptoms as reported by the patient (Bennett, et al., 2004, p.699)." Pregnancy is a time of extreme change, hormonal fluctuation, and moderate discomfort. Many of the distinguishing features, used in diagnosing depression, are present in non-depressed expectant mothers (Lintner & Gray, 2006; Westdahl et al., 2007). Women may be unaware, or may underreport, that the symptoms that they are experiencing, fatigue, anergia, sleep and appetite disturbances, and weight changes, are related to prenatal depression because many of these symptoms are associated with normal changes in childbearing (Lintner & Gray, 2006; Westdahl, et al; Nonacs, 2006).

Detection of prenatal depression

Research indicates that of the women who experience depressive symptoms, less than 25% will seek treatment for their symptoms (Lintner & Gray, 2006). "Though we know that depression is relatively common among women during pregnancy, only a fraction of the women who suffer from depression are ever diagnosed, and even fewer ever receive any type of treatment (Nonacs, 2006, p.112)." Perhaps the most alarming component of the relatively small number of women who seek treatment for their depressive symptoms during pregnancy is that pregnancy, for most women, represents a time of increased interaction with their healthcare providers (Nonacs, 2006).

The lack of discovery and diagnosis of prenatal depression is a multifaceted problem. Some of the diagnostic difficulty may be attributed to a lack of provider information regarding the disorder. The American Obstetrician, or prenatal care provider, is typically underprepared in understanding and mastering the clinical treatment of prenatal depression. “Many obstetricians, like other health care professionals, have received only the most rudimentary training in the area of mental health and are unable or uncertain how to diagnose depression or similar problems in their patients (Nonacs, 2006, 112).”

Smith, Rosenheck, Cavaleri, Howell, Poschman, and Yonkers (2004) set out to explore the accuracy and incidence of accurate diagnosis and identification of mental health disorders by healthcare providers in the prenatal period. They administered written screening tools to women prior to a prenatal visit with their health care provider. Smith, et al (2004) found that 99 of the 387 pregnant women surveyed reported scores on their written assessment that were indicative of depression, with 17 women reporting suicidal ideation. The study then analyzed the same subjects after their prenatal visit, to identify whether the provider assessed for or attempted to identify the presence of depression or depressive symptoms during the visit. Of the 99 women identified as depressed by the written surveys administered prior to their visit, only 2 women were correctly identified by their healthcare provider. Among the 17 women with suicidal ideation, the providers only correctly identified 2 women during their prenatal visit (Smith, et al., 2004).

Barriers to seeking care

Women who are aware of their symptoms and who feel that they may be depressed may be further discouraged from seeking care for their symptoms during pregnancy due to societal expectations (Westdahl et al, 2007). Pregnancy, though portrayed in popular culture as a time of complete and uninterrupted happiness and joy, can be a time of emotion upheaval. “While life transitions may bring happiness, they also have the potential to cause enormous stress. During

these times of transition women are most vulnerable to emotional problems (Nonacs, 2006, p.109).” Women are most vulnerable to having a new onset of depression during their childbearing years (Orr et al., 2007) Pregnancy, a time of taking on new roles, adjusting to new demands, and trying to adapt to physical changes is a time that places an expectant mother at increased risk for developing depressive symptoms.

Prenatal depression and its effects on pregnancy and maternal-fetal outcomes

Prenatal depression is a significant problem because of the myriad of psychosocial, somatic, and obstetrical complications it poses. One of the major concerns associated with prenatal depression is its effects on the mother’s self-care practices and her compliance with medical advice. Research has shown that depression in pregnancy may have a negative relationship with positive health practices such as nutrition, exercise, and regular prenatal care (Lindgren, 2001). Lindgren (2001) goes on to suggest that prenatal depression is also associated with smoking, alcohol use, drug abuse, and poorer health behaviors in general, especially in the first trimester. Vesga-Lopez et al. (2005) agrees that prenatal depression leads to poorer maternal health practices. Psychiatric disorders during pregnancy, including prenatal depression, are associated with poor maternal health and inadequate prenatal care (Vesga-Lopez et al., 2005).

Depression in pregnancy may cause women to have fewer positive health practices than non-depressed women (Lindgren, 2001; Nonacs, 2006). “Depression in the prenatal period has been associated with poor weight gain (reflective of diet), use of alcohol (M.R. Boyd & Hauenstein, 1997; Zuckerman, Amaro, Baucher, & Caral, 1989), drug abuse (M.R. Boyd & Hauenstein; Haller, Knisely, Dawson, & Schnoll, 1993; Zuckerman et al.), smoking (Pritchard, 1994; Zuckerman et al.), and overall poorer health behaviors in the first trimester of pregnancy (Lindgren, 2001). Bennet et al. (2004) states that depressed women often are delayed in seeking prenatal care and that this delay increases their risks for preeclampsia, poor pregnancy outcomes, and progression into

postpartum depression. Orr, et al. 2007 found that women who reported higher levels of depressive symptoms have a higher self perception of diminished health and functional status during pregnancy.

Other studies go further in correlating prenatal depression to negative maternal-fetal outcomes. Depression has been strongly correlated with spontaneous preterm labor (Luskin, et al., 2007). Nonacs (2006) also found that women who are depressed experience pre-term labor twice as often as women who are not affected by depression during their pregnancy. “The high levels of stress hormones, including cortisol and adrenaline, produced may affect the placenta, decreasing the flow of nutrients to the developing fetus (Nonacs , 2006, p.118).” Changes initiated by elevated stress hormone production secondary to depressive symptoms in pregnancy may also alter the brain activity of the fetus, leading to architectural and long-lasting changes in development (Nonacs, 2006, p.118). Another study, conducted among European mothers, indicated that “women with high depression scores were at greater risk for spontaneous preterm birth (Dyan, Creveuil, Marks, Conroy, Herlicoviez, Dreyfus, et al., 2006).”

Another significant and alarming result of prenatal depression is its effect on maternal-fetal bonding. “Depressive symptoms such as a lack of interest in daily activities and a sense of hopelessness, may also act to curb a pregnant woman’s developing relationship with the fetus (Lindgren, 2008). Depression in the prenatal period is disruptive to maternal-infant bonding (Luskin et al., 2007). Lindgren’s article *Relationships Among Maternal Fetal Attachment, Prenatal Depression, and Health Practices in Pregnancy*, (2001), reports that her study of pregnant women demonstrated a correlation between increasing self-reported depressive symptoms and negative maternal-fetal attachment and bonding. Vesga-Lopez, et al. (2005) evaluated the role of psychiatric disorders in the prenatal period and found that “maternal psychiatric disorders during pregnancy and the postpartum period are also associated with numerous adverse outcomes for the offspring,

including maladaptive fetal growth and development, poor cognitive development and behavior during childhood and adolescence, and negative nutritional and health effects (p.805).”

Perinatal depression poses significant risks during the prenatal period, many of which have already been discussed. However, prenatal depression is also the most significant predictor of postpartum depression (Lintner & Gray, 2006; Records & Rice, 2007). Women who have history of prenatal depression or anxiety are increasingly at risk for postpartum depression (PPD), a serious complication following childbirth. Women experiencing PPD may exhibit “disinterest, anxiety, fear, anger, or over concern about the baby,” with more severe cases leading to “thoughts of harming themselves, the baby, or others (Lintner & Gray, 2006; APA, 2000; Miller, 2002).”

Prenatal depression is a problem that poses significant threats to the mother-baby dyad both in the prenatal and postpartum period. However, the prevalence of this issue is not fully known or understood, and is underrepresented in the literature. In order to further the understanding of prenatal depression and its prevalence, we will compare our data regarding prenatal depression with data from current (conducted in the past five years) studies that have also been conducted in the United States. We will compare self-reported findings on the Centers for Epidemiological Studies Depression Scale (CES-D) for similarity.

Research Questions

Data collected from the Centers for Epidemiologic Studies Depression Scale (CES-D), the Pregnancy Risk Assessment Monitoring System (PRAMS), and results from additional studies in the last five years reporting prenatal depression by using the CES-D were analyzed to address the following questions:

- 1.) What is the frequency of self-reported risk for depression in women in the Kansas City area at enrollment (prior to 21 weeks gestation) and at 34 weeks gestation as measured by the CES-D?
- 2.) Are pregnant women in the Greater Kansas City area self-reporting similar frequency indicative of risk for depression on the CES-D at enrollment and 34 weeks gestation to women studied throughout the United States during the past 5 years?
- 3.) What is the frequency of depression, as indicated by elevated CES-D scores, among women who report the following maternal behaviors on demographic and PRAMs surveys administered at enrollment and approximately 34 weeks gestation:
 - a. Alcohol Consumption
 - b. Cigarette Usage
 - c. Age
 - d. Medicaid or Private Pay Insurance Status

RESEARCH METHODOLOGY

This sub-study was conducted using information obtained from a larger, descriptive, longitudinal research study conducted as part of an ongoing pilot study aiming to investigate and compare perinatal maternal stress, depression, pregnancy outcomes, and cost of care in privately and publicly insured populations of pregnant women. Prior to data collection, approval from the Institutional Review Board (IRB) of a midwestern academic medical center was obtained for the larger pilot study. This study was conducted using a convenience sample of pregnant women who were publicly or privately insured and who resided in the greater Kansas City area. Subjects were enrolled prior to 21 weeks gestation. Participants were asked to participate in the study during

their first prenatal visit. An informational brochure about the study was provided. The PI or a Research Assistant discussed the study and consent form in person, prior to the subject consenting in order to answer any questions. Data collection occurred at four maternity care offices in a midwestern metropolitan area. Study inclusion required participants to be 21-30 years of age with no previous history of preterm birth (defined as prior to 37 weeks gestation) and experiencing no complications with their current pregnancy. Participants were to be enrolled prior to the end of their 21st week of gestation, and all resided within the Greater Kansas City area. Participants were required to be either publicly insured (through Medicaid) or privately insured at the time of enrollment. All participants were required to be fluent in speaking and reading the English language. A total of 66 women were enrolled in the study.

After consent was obtained, participants were asked to complete a set of surveys at enrollment, at 34 weeks gestation, 2 weeks postpartum, and at 2 months postpartum. Demographic data was obtained at enrollment. Surveys were conducted by mail or phone interview based on participant preference. Phone Interviews were conducted by research assistants and usually lasted from 15 to 30 minutes depending on individual variation and the number of questions to be asked in each survey period. Participants completed four survey sets, 2 in the prenatal and 2 in the postpartum period. Remuneration for full participation in the study was given via distribution of \$20 store gift cards, which were distributed to participants at after the completion of the Time 2 (34 weeks gestation) and Time 4 (2 months postpartum) surveys.

Demographic Characteristics of Study Sample

Demographic characteristics of the study sample were obtained from the demographic information sheet [Appendix A] that participants completed at the time of enrollment. The average age of participants in this study was 25 years. Simple descriptive statistics found that 68.2% of women enrolled in the study were Caucasian, 11.8% of participants reported their ethnicity as

American Indian/Alaska Native, Asian or Black/African American, and 15 of the participants (22.7%) chose not to respond to this question. Additionally, 33.3% of women reported that they were homemakers (not employed or attending school) while 40.9% of participants either worked or attended school on a full-time basis. When evaluating partner status, 59.1% of the sample population reported being married, and 19.7% were single, never married. Educational achievement found that 26% of participants reported completion of a baccalaureate degree or higher, 25% reported completion of some college (no degree completed), and 13.3% of participants reported their highest level of education as attainment of a high school diploma or GED.

Data Collection and Analyses

This sub-study primarily focused on the administration of the Centers for Epidemiologic Studies Depression Scale (CES-D) [Radloff, 1977] to identify risk for prenatal depression. The CES-D is a 20 question scale developed to identify depressive symptoms in the general population. Participants answer questions based on their mood during the 7 days prior to completing the survey, and respond using four point response set, ranging from 0-3, for each question. Scores can range from 0 to 60, with a score greater than 16 indicating the presence of depression or depressive symptoms. Cronbach's alpha in the general population is 0.85 (Radloff, 1977). The CES-D was administered at enrollment and again at approximately 34 weeks gestation.

The Pregnancy Risk Assessment Monitoring System (PRAMS) survey, a CDC instrument tool with national and state specific standardized questions to measure self-reported maternal attitudes and behaviors before, during, and shortly after pregnancy, was also administered to participants using mail or phone survey methods. The Centers for Disease Control (CDC) created this tool to improve maternal and infant healthcare and it is currently used in 37 states (CDC, 2006). Different combinations of PRAMS questions, designed to best fit the research questions of the larger study, were administered at enrollment, 34 weeks gestation, and 2 weeks post-partum.

This study used demographic information, attitudes and education during prenatal care, and reported risky behavior from subjects, during the first (prior to 21 weeks gestation) and second survey period (34 weeks gestation), to assist with understanding the population being studied.

This sub-study also compared the rates of prenatal depression reported by subjects participating in the current longitudinal study conducted in the Greater Kansas City area, with results from other studies using the CES-D to identify depressive rates in women. The studies for comparison had to meet specific inclusion criteria before being compared. Studies selected were current, being published within the last 5 years, were conducted in the United States, and used the CES-D as a method to identify depressive symptoms in pregnant women during the prenatal period. Studies were obtained by conducting comprehensive search of the following databases using the keywords “preg*”, “*natal,” “depress*,” “CES*.” All databases (CINAHL, Medline, PubMed) were searched from 2003 to the present, in order to identify only articles that were current and met our criteria of being conducted in the past 5 years. Studies conducted in countries other than the United States were eliminated. All studies evaluated were published in English.

Titles and abstracts of studies were evaluated for relevance to the topic, and if they met inclusion criteria, relevant articles then underwent further evaluation. Studies that met inclusion criteria were all research articles, with none being meta-analyses. Four studies were selected for comparison. All articles were analyzed and their data were combined in a data table [Appendix B].

RESULTS

Statistical analysis was done by entering patient responses from the assessment tools used in this study into the Statistical Package for the Social Sciences (SPSS). Descriptive statistics and frequencies were collected to answer the identified research questions.

What is the frequency of self-reported depression in women in the Kansas City area at enrollment (prior to 21 weeks gestation) and at 34 weeks gestation as measured by the CES-D?

CES-D data collected at Time 1 (enrollment) and Time 2 (34 weeks gestation) were analyzed using descriptive and correlational statistics. Individual scores were assigned to each participant based on their response to each CES-D survey administered. Group trends were then analyzed using comparative analysis in the SPSS database. Totals for the prevalence of reported prenatal depression were obtained.

CES-D results in the prenatal period were the primary focus of this sub-study. Statistical analysis revealed that at the time of enrollment, participants (N=55) reported a mean CES-D score of 12.85 with a minimum reported score of 2, and maximum reported score of 40. Of the women who completed the surveys at enrollment, 30.9% of women either met or exceeded the cut-off score of 16 on the CES-D, indicating a higher likelihood of depression. During the second survey period, at approximately 34 weeks, a mean score of 10.17 was reported by participants (N=39), with a minimum score of 0 and a maximum score of 35. During the second survey period, 20.5% of women reported scores that exceed the cut-off for depressive symptoms on the CES-D.

Are pregnant women in the Greater Kansas City area self-reporting similar frequency indicative of risk for depression on the CES-D at enrollment and 34 weeks gestation to women studied throughout the United States during the past 5 years?

Similar studies were obtained through literature review and a comprehensive database search. Studies that met inclusion criteria were also analyzed for CES-D results. Results from each study were placed into a data table, and the results were then compared to the findings from this sub-study. Comparisons were made using a cut-off score of 16 or greater on the CES-D to indicate risk for depression or depressive symptoms.

In a cross-sectional study by Records & Rice (2007), 33% of women in their 3rd trimester of pregnancy reported CES-D scores that met or exceeded the CES-D cut off of 16, indicating an increased likelihood of depression or depressive symptoms. Westdahl, et al. (2007) also used a cross-sectional study to analyze the prevalence of depression in women during their second trimester of pregnancy. Their administration of the CES-D instrument during a study of women in the prenatal period found that 33% of women reported a score of 16 or greater on the CES-D, with a mean score of 12.34. Orr, et al (2007) interviewed pregnant women to assess their level of depression as well as their personal health status perceptions. This study found elevated CES-D levels among 44% of women studied. The final study analyzed, by Marcus, et al. (2003) indicated that 20.4% of the women completing the CES-D in their study scored a 16 or greater. Therefore, comparative findings among the researcher's findings and the other studies suggest that a significant number of women in the Kansas City area, as well as women across the country are reporting elevated CES-D scores in the prenatal period. Despite differences in demographic characteristics, pregnant women who were included in this review still reported increased levels of depression and depressive symptoms in the prenatal period.

What is the frequency of depression, as indicated by elevated CES-D scores, among women who report the following maternal behaviors on demographic and PRAMs surveys administered at enrollment and approximately 34 weeks gestation:

- a. Alcohol Consumption*
- b. Cigarette Usage*
- c. Age*
- d. Medicaid or Private Pay Insurance Status*

All questions regarding maternal behaviors and characteristics were obtained through subjects' self-report on the demographic and PRAMS surveys that were administered as part of the larger, pilot study that this sub-study is derived from. Maternal alcohol consumption was measured by a PRAMS question that asked mothers to indicate the number of drinks they consumed on average during the three months prior to learning that they were pregnant. The mothers were given a set of predetermined responses that included, "I didn't drink then," "Less than 1 drink/week," "1-3 drinks per week," "4-6 drinks/week," "11-13 drinks per week," or "14 or more drinks/week." Maternal cigarette use was also determined by asking the participants to indicate their use of cigarettes during the three months prior to learning that they were pregnant. Mothers were able to indicate that they used "Less than 1 cigarette/week," "1-5 cigarettes/week," "6-10 cigarettes/week," "11-20 cigarettes/week," or "21-40 cigarettes per week." Maternal age was evaluated by self-reported age on the demographic sheet that participants completed at enrollment. Medicaid or Private Insurance status was also evaluated, through the use of a PRAMS survey question in the enrollment survey set. Mothers were asked to indicate whether they were publicly or privately insured by the question that asked, "How is your prenatal care paid for?." Participants were offered two responses to this PRAMS survey question, which were "Medicaid," and "Private Insurance." Responses to these questions, as obtained from the demographic and PRAMS questionnaires, were then evaluated using statistical and correlational data in order to relate participant responses to their total score on the CES-D administered in the prenatal period at enrollment and 34 weeks gestation.

PRAMS survey data indicated that 13.6 % of study participants (N= 55) reported consuming 4-6 drinks/week during the three months prior to learning that they were pregnant. Of the women who scored a 16 or greater on the CES-D at enrollment (N=16), 6 women or 37.5%, reported that they consumed 4 or more drinks per week during the three months prior to learning they were pregnant. Of participants with CES-D scores that met or exceeded the cutoff score, one participant

indicated that she consumed “11-13 drinks per week,” and one participant indicated that she consumed “14 drinks or more per week,” during the three months prior to learning that they were pregnant. Thus, our study data indicate that overall, 12.7% of all study participants reported increased alcohol consumption (at least 4-6 drinks per week or greater in the three months prior to pregnancy) along with a CES-D score of 16 or greater at enrollment. The second CES-D assessment (performed at 34 weeks gestation) indicated that 22.2% of women who reported a CES-D score of 16 or greater also f 4-6 alcoholic drinks or more per day in the three months prior to learning that they were pregnant. Only one participant who reported consuming 11-13 drinks per week prior to pregnancy also reported a CES-D score indicative of depression during the second survey period.

Maternal cigarette usage indicated that 7.6% of study participants consumed 1-5 cigarettes per day during the three months prior to becoming pregnant. In this study, 10.9% of participants who self-reported a CES-D score greater than or equal to 16 (N=12) also reported consumption of greater than one cigarette per day in the 3 months prior to learning they were pregnant. Of those women scoring greater than or equal to 16 on the CES-D at enrollment, 37.5% reported using 6 cigarettes or more during the 3 months prior to becoming pregnant. Results from the surveys administered at 34 weeks gestation indicate that 33.3% of mothers with a CES-D score greater than or equal to 16 also reported using 6 or more cigarettes per day in the 3 months prior to learning that they were pregnant. Overall, at the 34 week survey period, 7.9% of all participants reported increased levels of depression on the CES-D and a history of using 6 or more cigarettes a day during the three months prior to learning they were pregnant. An increased use of cigarettes and tobacco may put mothers at an increased risk of developing depression or depressive symptoms.

Maternal age and CES-D results were also evaluated for correlation during this study. The average age of participants was 25. At enrollment, 37% of participants who completed the surveys were 24 years of age or younger, and 63% of participants were 25 years of age or older. The highest

CES-D score at enrollment was reported by a participant who was 18 years old. However of those women who scored greater than or equal to 16 on the CES-D at enrollment, 31.3% were 24 years of age or younger. Of the participants who scored a 16 or greater on the CES-D at enrollment, 68.8% were 25 years of age or older. The initial administration of the CES-D survey, at enrollment, revealed that of the 32.4% of participants who reported being 25 years of age or older (N= 34) also reported scores that met or exceeded the CES-D cutoff score, while 25% of women who reported an age of 24 years or younger (N= 20) reported scores that exceeded the CES-D cutoff in this time period. In the second survey period, 20% of participants who were 25 years of age or older reported a CES-D score of 16 or greater. In this same survey period, conducted at 34 weeks gestation, 30.8% of participants who were 24 years of younger (N=13) reported a CES-D score at or above 16. Overall, 50% of participants who scored a 16 or greater on the CES-D during the second survey period were 25 years of age or older. The highest CES-D score in the second survey period was reported by a participant who was 26 years old.

In this study, participants were asked to indicate their insurance status. At enrollment the 66 women surveyed indicated that 28.8% were insured by Medicaid of Kansas, 51.5% were privately insured, 3.0% indicated that they did not have either Medicaid or Private insurance, and 16.7% of participants did not respond to this question. Medicaid and private payer status were also correlated with CES-D results to look for possible trends. At enrollment, 42.1% of participants insured by Medicaid (n= 19) reported a CES-D total of 16 or greater. Participants who reported that they were privately insured (n=34) and reported a CES-D score of 16 or greater at enrollment accounted for 25.2% of the total number of privately insured women surveyed. At 34 weeks gestation, 36.4% of Medicaid participants (n=11) reported a CES-D of 16 or greater. Of the privately insured participants who completed the CES-D at 34 weeks gestation (n=25), 16% reported CES-D scores of 16 or greater.

DISCUSSION

All data collected from the current longitudinal study that this sub-study is based on was analyzed using descriptive statistics and frequencies.

The participants in this sub-study were predominantly white women who were seeking care at maternity care offices in the Greater Kansas City area. Women were both publicly and privately insured. Our results may be generalized to groups of women with similar characteristics; however, more research would need to be conducted with other groups of women to determine whether or not the findings are valid across racial, socioeconomic, educational, marital, and insurance statuses.

The CES-D results obtained through the original longitudinal study that this sub-study is a part of indicated that women in the Kansas City area are reporting significant levels of risk for prenatal depression as indicated by elevated CES-D scores. This data seems to correspond with data that has been collected through similar studies, using the CES-D, that were conducted in the United States during the past 5 years. Similar studies have indicated that the presence of prenatal depression has ranged from 20-44%. Our study indicates that risk for prenatal depression, as defined as a CES-D score of 16 or greater, occurred in approximately 20-30% of our participants in the prenatal period. This data indicates the need for increased screening and provider awareness regarding depression and depressive symptoms in the prenatal period. The elevated prevalence of depression in women in the prenatal period, across different geographic and socioeconomic circumstances indicates that this screening should be wide-spread, and should not specifically be targeted at women who have less education, are younger, and have access to fewer resources. Our study indicates that prenatal depression is occurring in a primarily Caucasian, older, more educated, primarily married demographic, while many of the studies previously conducted to evaluate depression in the prenatal period have focused on younger, less educated, more

socioeconomically disadvantaged mothers. Study findings indicate that prenatal depression is not reserved for the financially disadvantaged, or those who have limited access to resources or support, but that it occurs across a variety of demographic and socioeconomic situations.

Maternal behaviors data, as obtained by self-report from mothers on the demographic form and PRAMS Survey indicates that a significant number of women in their childbearing years are consuming 4-6 drinks a week or more, along with more than 5 cigarettes a week during the 3 months prior to learning that they are pregnant. This risky behavior is alarming due to the potential teratogenic effects that alcohol and tobacco can have on a developing fetus, especially in the early days and weeks of development. Findings also indicate that a significant number of mothers who are using these substances prenatally are reporting elevated levels of depression as measured by the CES-D. Provider awareness of the incidence of alcohol and cigarette use among mothers prior to conception may help facilitate discussions that will increase the health of the mother and her pregnancy. Risky behaviors that occur prior to pregnancy increase the likelihood of developing a risk for prenatal depression, and should be taken seriously.

Findings regarding maternal age and the incidence of elevated CES-D scores indicate that depressive symptoms were not directly related to age. The CES-D results of this sub-study, when correlated with age, indicate that mothers over the age of 25 that reported elevated CES-D scores more frequently at enrollment than mothers who were 24 years of age or younger, indicating risk for depression. This information is important because many previous studies have indicated a link between a younger age and prenatal depression. In the second survey period, 30.4 % of participants who were 24 years of age or younger reported elevated CES-D scores, compared with 20% of participants who were 25 years of age or older. This study emphasizes that prenatal depression is not confined to a certain age range. Risk for prenatal depression, as defined by elevated CES-D scores obtained at enrollment, in this study occurred more than twice as often in

participants who were 25 years of age or older. In the second survey period, a greater percentage of participants who were 24 years of age or younger reported elevated CES-D scores. Due to the descriptive nature of these findings, no generalized conclusions of significance can be made regarding CES-D scores, depression risk, and age. However, providers must be aware that depression may occur at any age, and must screen women for depression despite their maturity and age.

Publicly insured women (those who indicated that they were insured by Medicaid) were more likely to report a CES-D score that indicated risk for depression, at both enrollment and at 34 weeks gestation than women who reported that they were privately insured. At both time periods, the mothers who were publicly insured reported significantly higher levels of depressive symptoms, as evidenced by their elevated CES-D scores. This information is important, but it must also be noted that mothers who were insured by Medicaid made up a smaller portion of the sample population, and thus, fewer Medicaid mothers were studied..

Limitations

The small sample size, high attrition rate and geographic location of the pilot study limit the ability to generalize the information obtained from this study to the population as a whole. The recruitment and retention of participants has proved to be the greatest challenge in conducting this survey. Attrition has affected the sample size. Literature shows that depressed mothers may be less likely to participate in studies and data collection. Therefore, the loss of participants may have affected the validity of the incidence of reported prenatal depression in this study.

This sub-study used the CES-D alone to indicate risk for depression or depressive symptoms among participants. The CES-D is a screening tool, not a diagnostic tool. Though our study used the well established and documented cut-off of a score of 16 or greater to indicate the presence of prenatal depression, a score at or above 16 is only indicative of depression, not diagnostic. True

rates of depression can only be confirmed by professional evaluation. The information obtained in this study used the CES-D to estimate the prevalence of depression among women. Also, many other tools exist to evaluate depression; however, studies that used these tools were eliminated to allow for accurate comparison of results.

Strengths

One strength of this study was that it looked at a primarily Caucasian (68%), Married (59%), Educated (26% report completion of a baccalaureate degree, while 25% have completed some college but have not attained a degree, and 13.3% report completion of high school or a GED program). This demographic is previously underrepresented in the literature. Findings from this study confirm the need for universal screening for depression in the postpartum period by indicating that prenatal depression affects mothers from a variety of backgrounds and socioeconomic classes. Thus, socioeconomic status, education, marital status, and ethnic origin appear to be neither a risk nor a protective factor when it comes to prenatal depression.

CONCLUSION

Prenatal depression poses obvious risks to the mother-fetus or mother-child dyad both during the prenatal period and beyond. Prenatal depression is a serious problem, and is also a problem which occurs in a large number of expectant mothers, but that goes largely undiagnosed. The risks associated with prenatal depression include reduced maternal fetal bonding, decreased maternal health, poorer birth outcomes, and potential for postpartum or recurrent depressive episodes throughout the mother's lifetime. This serious problem calls for more research. Additionally, the high levels of prenatal depression or depressive symptoms among mothers indicated a need for universal screening of expectant mothers for depression. Risky behaviors and characteristics of mothers in this study call attention to the fact that prenatal depression does not

affect one population, and that this disease can strike in any demographic and any population. Screening in the prenatal period must be increased. The consistency of depressive symptoms in the prenatal period reported by the CES-D by a variety of participants from differing socioeconomic and educational backgrounds, as well as multiple geographical areas indicates that it is simple and reliable tool that should be used to screen for depressive symptoms, and then used to facilitate discussion among the provider and patient. Screening patients for risky behaviors, as well as depressive symptoms may prove to be clinically useful in assessing for depression, but more importantly, this screening should occur as a means increase health in pregnant women across the board. This study indicates an increased need for screening in maternal care offices, as well as an increased understanding of the prevalence of depression across a wide range of demographic characteristics. Practitioners must use this information to screen for depression in their patients in order to provide complete, ethical care.

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APPENDIX A

A Comparison of Pre and Postnatal Maternal Stress, Depression, Pregnancy Outcomes, and Cost of Care in Private and Publicly Insured Populations of Pregnant Women

Demographic Data Form: Enrollment Information

1. Age in Years: _____
2. Estimated date of delivery: _____
3. Number of weeks pregnant at enrollment: _____
4. Social Security Number: _____ (Necessary for remuneration of Target gift certificates for completing survey's)
5. Ethnicity/Race: Please check all that apply
 - _____ American Indian or Alaska Native
 - _____ Asian
 - _____ Black or African American
 - _____ Native Hawaiian or Other Pacific Islander
 - _____ White
 - _____ Hispanic or Latino
 - _____ Not Hispanic or Latino
 - _____ Unknown
 - _____ More than one race
6. Educational Level: Please check one of the following
 - _____ 8th grade or less
 - _____ 9-12th grade; no diploma
 - _____ High school graduate or GED
 - _____ Some college credit no degree
 - _____ Associate degree
 - _____ Bachelor's degree
 - _____ Masters Degree
 - _____ Doctorate or Professional degree
7. Employment Status: Please check all that apply
 - _____ Homemaker/full time mother
 - _____ Maternity leave job/school
 - _____ Part time job/school
 - _____ Self employed work/home
 - _____ Full time job/school
8. Marital Status: Please check one of the following
 - _____ Married
 - _____ Single (never married)
 - _____ Divorced
 - _____ Separated
 - _____ Widowed
 - _____ Living with partner
9. County of Residence: _____
10. Planned location for labor and delivery: _____

APPENDIX B

Authors/ Year/ Country/Article/ Purpose	Study Design/ Sample Size	Data Collection	Outcome Measurement	Strengths	Weaknesses	Results
<p>Records & Rice (2007) USA Psychosocial Correlates of Depression Symptoms During the Third Trimester of Pregnancy</p> <p>“To explore the psychosocial correlates of depression symptoms during the third trimester of pregnancy”</p>	<p>Cross-sectional Design</p> <p>139 women in 3rd trimester</p> <p>Most women were married and Caucasian</p>	<p>Participants were given questionnaires with data collectors present in an office or home setting. All participant answered instrument in the same order, data collectors were present during the filling out of instruments and then reviewed instruments and dialogued if any additional info was needed.</p> <p>After birth CHQ were completed through the use of participants medical records</p>	<p>Predictors of Postpartum Depression Inventory-Revised (PDPI-R)</p> <p>Center of Epidemiologic Studies Depressed Mood Scale (CES-D)</p> <p>Severity of Violence Against Women Scale (SVAWS)</p> <p>Childbearing Health Questionnaire (CHQ)</p> <p>Lifetime Hx of physical and sexual abuse questions</p> <p>DSM-IV Criteria</p>	<p>Multiple data sources increases validity</p> <p>Tools used have been tested for reliability and validity this increase the validity and the reliability</p> <p>Use of Selye’s stress response theory and a biopsychosocial model</p> <p>Equal across socioeconomic status, marital status, & # of pregnancies increases validity</p> <p>The use of the same tools, in the same order by educated data collectors increased the reliability of data</p>	<p>Convenience sample participants may have had a personal interest in study</p> <p>Mostly Caucasian in US does not provide a general representation of population decreases the validity</p> <p>Participant possible failure to disclose depression or abuse decreases the reliability of the data</p> <p>Some single-item screening measures</p>	<p>Prenatal depression screening is needed</p> <p>1/3 of sample exceeded the CES-D cutoff for depression</p> <p>1/3 reported a hx of abuse</p> <p>1/5 reported depression during previous pregnancy that lasted 2w-8m</p> <p>½ responded + to the PDPI-R item asking if felt depressed during current pregnancy</p> <p>Lifetime abuse did not contribute</p> <p>Supportive partners and marital satisfaction, significant contributors</p> <p>Gravida minor, but significant contributor</p>
<p>Westdahl, et al. (2007) USA Social Support and Social Conflict as Predictors of Prenatal Depression</p> <p>“To estimate how social support and social conflict relate to prenatal depressive symptoms and to generate a brief</p>	<p>Prospective study</p> <p>1,047 participants from early pregnancy- 1 yr postpartum recruited from New Haven Hospital System, New Haven, Connecticut and Grady Memorial Hospital</p>	<p>Baseline interview in the 2nd Trimester (ave 18 w)</p> <p>Structured interview were audio computer-assisted self-interviewing</p>	<p>7-item subscale of the Social Relationship Scale</p> <p>7-items of social conflict of the social relationship Scale</p> <p>CES-D – 15 cognitive-affective items of the scale</p> <p>Demographic information provided</p> <p>Level of community poverty</p> <p>Baron and Kenny Framework for</p>	<p>Dual Language increases validity</p> <p>Audio computer-assisted interviewing increased reliability</p> <p>All procedure approved increased validity</p> <p>68% participation rate increased reliability and validity</p> <p>CES-D used increases</p>	<p>Self Interviewing decreased reliability</p> <p>Mostly young nulliparous</p> <p>With limited socioeconomically status decrease validity</p> <p>Mostly African-American and Latina decreased validity</p> <p>Social support and social conflict questionnaire untested decreased</p>	<p>Rates of depression during the 2 and 3 trimester or substantial</p> <p>The rates of depression tend to be greater in low socioeconomic status women then the entire population</p> <p>Social Conflict play a substantial role in depressive symptoms</p> <p>Social Support</p>

Screening for Prenatal Depression

clinical tool to identify women at increased psychosocial risk.”	and Atlanta GA Data is from a larger study a randomized controlled trial Inclusion Criteria: Pregnant <24 w, age 25 or <, no severe medical problems, able to attend groups in English or Spanish, willingness to be randomly assigned		testing for interactions	reliability and validity Sample size increase validity Hierarchical Regression Analysis increases validity 2 distinct population increases validity	reliability and validity	doesn't buffer women from effects of conflict as predicted. # of risk factor tend to increase the likelihood of depression 33% of participants reported a score greater than or equal to 16 on the CES-D Mean CES-D score was 12.74
Orr, et al (2007) USA Depressive Symptoms and Indicators of Maternal Health Status during Pregnancy To investigate the relationship between depressive symptoms and health/functional status among pregnant women.	Self reporting Cross-sectional study Recruited from Pitt County Memorial Hospital and Brody School of Medicine, East Carolina University Inclusion criteria: >or=16 yr, Seeking prenatal care	A single interview at time of enrollment 52% during 1 st trimester, 37% 2 nd trimester. All were seeking prenatal care	CES-D Maternal Health Status questions modeled after the National Health Interview Survey Assessed limitation in performing activities Identified as smokers Logistic regression models: Maternal age, education, race, marital status, insurance, smoking, trimester	CES-D increases reliability and validity Trained research assistant obtained consent and conducted interview increases reliability and validity Large sample size increases validity	Self reporting decreases reliability Only one exclusion criteria defined decreases validity Only completed in one part of the country decreases overall population validity Majority were Medicaid patients and black decreased validity	Women with clinical significant depression or major depression report health and functional status lower by 2 times Increased depressive symptoms are associated with diminished health and may explain an association between depressive symptoms and preterm birth 44% of participants scored greater than or equal to 16 on the CES-D Women with elevated CES-D scores were more likely to report their health as fair or poor than women with CES-D scores less than or equal to 16
Marcus, et al (2003)	Self reporting	Screened using a 10 minute	CES-D	Large number of participants	Self Reporting decreases reliability	A large number of women showed

Screening for Prenatal Depression

<p>USA</p> <p>Depressive Symptoms among Pregnant Women Screened in Obstetrics Settings</p> <p>“This study aimed to describe the prevalence of depressive symptomatology during pregnancy when seen in obstetric settings, the extent of treatment in this population, and specific risk factors associated with mood symptoms in pregnancy. “</p>	<p>Cross-sectional Study</p> <p>3472 pregnant women with an average weeks of gestation at 25 with a range from 3w to 41 w</p> <p>Inclusion criteria 18 yrs or older</p>	<p>questionnaire during the wait to receive prenatal care in 10 OB clinics in Michigan</p>	<p>Demographics, tobacco and Alcohol (TWEAK)</p> <p>Antidepressant medication, past hx of depression, current tx for depression</p> <p>Bivariate logistic regression</p>	<p>increases validity</p> <p>CES-D increases reliability and Validity</p> <p>TWEAK increase validity</p> <p>Current depression and tx assessment increases validity</p> <p>Use of 10 clinics increase validity</p> <p>Lg variety of ages increases validity</p> <p>Bivariate logistic regression increases validity and reliability</p>	<p>Very little exclusion criteria decrease validity</p> <p>Population majority was Caucasian</p> <p>Most women were married with a High education</p>	<p>signs of depression very little were dx and/or receiving tx for depression.</p> <p>Hx of depression, poor health, alcohol use, smoking, unmarried, unemployment, low educational attainment were significantly associated with symptoms of depression.</p> <p>There is a need to screen all pregnant women for depression which could decrease negative maternal and infant outcomes.</p> <p>20.4% of pregnant women had elevated depressive symptoms (n=689)</p> <p>13.8% of depressed women (n=91) reported that they were receiving any type of formal treatment</p> <p>Women with a prior history of depression were 4.9 times more likely to have an elevated CES-D score than women without a history of depression</p>
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PATIENT SELF-REPORT COMPARED TO NURSE ASSESSMENT
OF DEPRESSION IN HEART FAILURE

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Submitted to the School of Nursing in partial fulfillment of the
requirements for the Nursing Honors Program

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ABSTRACT

HF patients with clinical depression are at greater risk for rehospitalization and have higher mortality rates than those without depression. The purpose of this study was to use content analysis to identify factors that patients report make them feel depressed. Fifty five study participants were screened at baseline for depression using the CES-D. A sub-sample of participants ($N = 37$) was randomized to the intervention group and were screened for depression using the PHQ-9. Participants who scored as having moderate or severe depression on CES-D or the PHQ-9 were referred to the Psychiatric Nurse specialist for assessment ($N = 20$). Content analysis was used to analyze the question on the CES-D: Describe what makes you feel depressed or blue. The results of the identified factors was compared with themes emerged from the nurse's assessment. CES-D content analysis found that 69% ($N = 38$) of participants reported experiencing depression due to: illness/health; loss of independence; financial concerns, and life stressors. Nurse's assessments ($N = 20$) identified themes of grief and situational depression ($N = 5$), fatigue/insomnia ($N = 9$), and anger reactions ($N = 4$). Participants also disclosed concerns with concurrent psychiatric illnesses, worry over family, loneliness, and illicit drug use. Psychiatric nurse specialists can identify additional factors contributing to depression and make further treatment recommendations. The patho-physiologic effects of depression on HF suggest the need for future study in this area.

INTRODUCTION

Research indicates an increased risk for rehospitalization, emergency room visits, and mortality for HF patients with depression. As a result, development of interventions to increase the emotional well-being of patients has become an important goal for research. However, limited research has been performed identifying the causative factors of depression in HF patients.

One intervention currently being tested is a nurse-led multidisciplinary HF group clinic. The intervention (HFcareGroup) being tested has five outpatient clinic appointments, each of which includes a HF self-management assessment and a rapid physical exam by a HF nurse practitioner, a short DVD of 12 to 15 minutes on a self-management topic followed by group discussion among four to eight patients and multidisciplinary health professionals (Smith, Russell & Porter, 2008). Group discussions emphasize patients' use of the self-management components of: a) daily checklist diaries that guide HF self-monitoring, b) step-by-step algorithms that prompt early symptom reporting, and c) follow-up nurse telephone calls to reinforce HF self-management. To meet The Joint Commission (JCAHO) criteria and control for consistent HF education, all subjects should receive our professionally-produced and international award winning DVD series that incorporates HF national evidenced-based guidelines for HF home management (Smith, 2005).

Numerous studies have identified HF treatment typically aimed at achieving palliative outcomes, such as reduction in hospital admission rates, increased quality of life, and depression prevention. Symptoms such as dyspnea, limited vital capacity, and fatigue affect physical, mental, and social aspects of life in all HF patients. Key factors that are related to improving daily life of HF patients, including self-management of sodium and fluid intake, adherence to medications, smoking cessation, and stress and depression management.

Literature Review

Heart failure, commonly referred to as congestive heart failure, is defined as a “patho-physiologic state in which an abnormality of cardiac function is responsible for the failure of the heart to pump blood at a rate commensurate with the requirements of metabolizing tissues” (Luttik, Jaarsma & Moser, 2005, p162). Many conditions lead to heart failure, including (but not limited to) hypertension, myocardial infarction, diabetes, cardiomyopathy, valve disease and congenital conditions. HF requires an extensive self-care regimen, often impeded by the social behavioral characteristics accompanying depression (Robinson, Jorge & Moser, 2008). The specific behavioral and biological processes remain unclear, however depressive symptoms are consistently found to increase cardiovascular risk. Specifically, depression is associated with decreased adherence to medications and triple the risk of noncompliance with medical treatment regimens (Luttik, Jaarsma, Mose, Sanderman & vanVelhuisen, 2005). Depression is associated with higher healthcare utilization costs and a significantly reduced quality of life (Lichtman, et al., 2008). Thus, patients enrolled in my mentor’s current clinical trial are queried and also assessed for factors possibly related to their depression.

METHODS

The primary study design ($n = 94$) was a clinical trial, where patients were randomly assigned using block randomization to a control or experimental group assigned by a team member not involved in any evaluation. The outcome data of rehospitalization frequency, depression, and HF self-management scores were collected quarterly over 12 months. For the purpose of the additional analysis done for this study, a subsample of subjects ($n = 37$) were used to identify contributing factors of depression in HF reported by patients and assessed by a Psychiatric Nurse Specialist.

Sample

Patient Self-Report Compared to Nurse Assessment

Participants included in the primary study ($N=55$) were subjects with a recent acute episode of HF requiring hospitalization. Additional inclusion criterion required that the patient had at least two of the following symptoms upon admission: dyspnea, pedal edema, positive chest x-ray, exercise intolerance, jugular venous distention, objective evidence of left ventricular dysfunction such as ejection fraction $\leq 40\%$, left ventricle internal diastolic dimension greater than normal or diastolic dysfunction noted on diagnostic report via cardiac echo, or catheterization. Participants also had to be able to read and speak English, have access to a telephone, be 18 years of age or older, and had to have transportation to KU to attend meetings or be willing to use taxi vouchers for transportation to group meetings.

Exclusion criteria were that participants could not be undergoing or planning to undergo chronic dialysis, had transient HF or recent acute myocardial infarction, had HF due to a correctable cause that could likely be totally reversed within 6 months, or had any comorbidities with survival expectancy less than 12 months (i.e. cancer). Participants also could not have had severe cognitive impairment, have disabilities which would interfere with videos and group discussion, be pregnant or planning to become pregnant within 12 months of enrollment, come from a facility (nursing home, rehabilitation unit, or skilled nursing facility) with the high probability that he/she would return at discharge, or be currently enrolled in a HF intervention study. "Severe cognitive impairment" was defined as a diminished ability to reason, perceive, judge, or memorize which would interfere with learning or using the intervention materials.

Sample Characteristics

Nearly 14% of participants in this study are between the ages of 20-45 years old, and 18% are between the ages of 46 and 55. This younger group represents almost 1/3 of the total study sample, which parallels statistical reports from national databases. Nearly 40% of the study sample

consists of women managing HF. While HF is predominately found in males, the population of women living with heart failure is growing. The number of Caucasian and African-American participants is nearly even, with the remaining 6% of persons in the study identifying more than one ethnicity. Over 1/3 of the participants in the study are married. Nearly 30% of study participants reports living alone, and 25% reported living in a household with from 2 to 4 people, including themselves.

Procedures

Quantitative (numerical) data were collected from patients using rating scales. These scales have items listing characteristics of depression (e.g. feeling blue, inability to sleep, inability to experience pleasure). Each subject rated his or herself on each item, which is then summed to create a score. Scores from these reliable rating scales were categorized as none, mild, and moderate to severe depression. Patients who scored as having moderate or severe depression on either questionnaire were referred to the Psychiatric Nurse specialist for further assessment ($n = 37$ patients with 20 patients interviewed one time, 11 patients interviewed two times, two patients interviewed three times, and four patients interviewed four times). The Psychiatric Nurse specialist wrote summaries of her consultations with patients, and content analysis was performed to identify causative factors of depression that the Psychiatric Nurse specialist noted. All patient interviews were performed by the same Psychiatric Nurse Specialist.

Instruments

The Center for Epidemiological Studies Depression Scale and the Patient Health Questionnaire-9 were used to measure patient's symptoms of depression and severity of depression; and the psychiatric nurse specialist assessments were used to identify contributing factors to depression.

Center for Epidemiological Studies Depression Scale (Radloff, 1977). The Center for Epidemiological Studies Depression Scale (CES-D) questionnaire was given during a baseline assessment to all patients for comparison across control and experimental groups. All subjects ($N = 94$) were screened for depression on the baseline questionnaire using the CES-D. The CES-D is a standard screening instrument developed by NIH and used worldwide to self-report the presence and persistence of depressive symptoms.

Patient Health Questionnaire (Spitzer, Kroenke & Williams, 1999). The Patient Health Questionnaire (PHQ-9) was given to patients participating in the experimental intervention at each meeting and was used to follow weekly variations. Patients participating in group discussions were screened each time for depression utilizing the PHQ-9, a short, clinically usable instrument which has been found to be a reliable and powerful tool for the assessment of clinical depression. The PHQ-9 is a nine-item depression scale based directly on the diagnostic criteria for major depressive disorder.

Data Analysis

Content analysis research methods were used to summarize the written data recorded by the psychiatric nurse specialist reports and from patients' answers to the CES-D question: Describe what makes you feel blue or depressed? Content analysis is defined as a methodology by which a researcher determines the common content of written, recorded, or published communication by means of a systematic, objective and quantitative procedure.

RESULTS

Notably, 17 subjects (30.9%) reported feeling no depression or blues in the last three months. In contrast, 38 (69.1%) subjects reported experiencing the blues or depression within the

Patient Self-Report Compared to Nurse Assessment

past three months. Of the subjects who reported experiencing depression, 31.6% ($N=12$) reported experiencing the blues due to their illness/health, 20% ($N=8$) reported experiencing the blues due to a loss of independence in function due to heart failure and aging, 14.5% ($N=5$) subjects reported experiencing the blues due to financial concerns or a lack of insurance, and 10.9% ($N=4$) stated that they had life stressors and/or heart failure demands that made them feel the blues. The remaining patients reported having a variety of these factors including no energy, retirement/life change, fatigue, marital conflicts, weather, isolation from family and friends, and having a pacemaker as being reasons for feeling the blues.

20 patients scored as having moderate to severe depression, requiring further assessment by the Psychiatric Nurse Specialist. The Psychiatric Nurse Specialist identified normal grief ($N=3$, 15%), depressed moods and antidepressant medications ($N=12$, 60%), lack of sleep or insomnia ($N=4$, 20%), anger and regret ($N=4$, 20%), and presence of psychiatric illnesses such as bipolar affective disorder and schizophrenia ($N=3$, 15%), as factors related to depression. The Psychiatric Nurse Specialist also noted worry over family and friends ($N=6$, 30%), loss of independence ($N=8$, 40%), and financial concerns ($N=3$, 15%) as factors related to depression. Many of the themes that arose from the Psychiatric Nurse's assessment were previously uncoded for, yet were consistently present in these patients' assessments.

LIMITATIONS AND RECOMMENDATIONS

Over 30% of this population scored as having moderate to severe depression according to the scores on the questionnaires that are used nationally to assess depression in clinical practice and research with cardiac populations. Subjects expressed loss of independence in function, HF symptoms and self management demands, financial/insurance concerns and life stressors as leading to the blues. However, additional assessment from the Psychiatric Nurse Assessments

revealed prevalent themes that did not occur at all or in much lower frequency than when patients were asked questions administered from the questionnaires.

Implications

Because of the high prevalence of depression in heart failure, patients should be well informed of possible causes of depression, how to differentiate depression from normal grief, and how to manage depression upon discharge from the hospital. Multi-disciplinary coordination of care in patients with depression and HF is essential. It is important to assess depression in HF patients with a goal of targeting those in need of intervention and support services. High prevalence of depression in HF patients supports a need for increased awareness of causative factors of depression. HF patients should be routinely screened for depression by using the easily administered instruments and referral to Psychiatric Nurse specialists when patients disclose other relevant information.

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USING CONVERSATION SKILLS IN A SELF-CARE INTERVENTION
FOR CARE-GIVERS OF STROKE SURVIVORS

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ABSTRACT

Most stroke survivors return home and rely heavily on family and friends for support. Caregiver responsibilities often are underestimated and can result in negative outcomes for the caregiver. Nurses can use specific communication elements to help caregivers improve self-care skills necessary to protect their own health, while caring for their family member. In implementing the six-session Self-Care TALK (SCT) intervention, the nurse interventionist (NI) uses four communication skills to build partnerships with caregivers. The NI: 1) listened with intent 2) affirmed emotions 3) created relational images and 4) planned enactment during the weekly SCT conversations. The SCT intervention was tested with older spouse caregivers of stroke survivors to identify how education and support conversations affect caregiver health. In this secondary analysis, the detailed NI recordings of communication skill use were analyzed to compare use across SCT sessions. Caregivers were age 55 and older, and were caring for a spouse stroke survivor. Using simple random sampling, 10 caregivers were selected from the 20 participants, yielding 60 conversation recordings for analysis. The number of recordings of each specific communication skill was identified for each participant, and totals were compared across participants and between sessions 1 and 6. The NI recording for each skill varied significantly across participants at Session 1 and Session 6. While following protocol, the NI was able to individualize the intervention for each participant. When comparing Session 1 to Session 6, the Listening skill use was significantly greater at Session 1 and there were no differences between Sessions 1 and 6 for the other 3 skills, reflecting consistency over time for skill use with each participant. Communication skill use was adapted to individual caregivers, while adhering to intervention protocol. Individualization is essential in caregiver interventions, and was reflected in the differences of skill use that were recorded across caregivers of stroke survivors.

INTRODUCTION

Stroke is the leading cause of severe, long-term disability in the United States. Each year 795,000 people suffer a new or recurrent stroke (American Heart Association (AHA), 2009). There are about 6.5 million stroke survivors today in the United States and many of them have permanent life-long disabilities that require caregiver support. Stroke often occurs abruptly and without warning, allowing the caregivers of the stroke survivor little time to adapt to their new life. Most caregivers feel inadequately prepared and do not realize the physical and emotional demands of caring for someone with complex needs. This caregiving situation can lead to physical and mental health problems for the caregiver (AHA, 2009).

According to Schultz and Beach (1999), caregiving responsibilities require emotional support and education to help prevent stressors that can otherwise increase the risk of morbidity and mortality among caregivers. The intervention Self-Care TALK (SCT) was based on the Health Promotion in Aging Model (Leenerts & Teel, 2006), and uses four communication skills to build relationships between the advanced nurse practitioner and the caregiver. These four skills include: 1) listening with intent 2) affirming emotions 3) creating relational images and 4) planning enactment. As part of the SCT intervention, these skills were used with older caregivers of stroke survivors to identify how the relational conversations affect caregiver health outcomes, including strain, depression, and perceived health.

Study

Problem

The four relational conversational skills were used during the primary SCT study. For this secondary analysis, frequency of skill use across each SCT session was examined. Although research interventions must follow protocol, interventions with older caregivers also require flexibility to

maximize relevance for each caregiver. Defining nurse interventionist use of conversation skills during the SCT intervention is an essential component in assessment of intervention fidelity.

Purpose

The purpose of this study was to conduct a secondary analysis of nurse interventionist recordings from the recent study of the SCT intervention with older spouse caregivers of stroke survivors. The research question focused on how the advanced practice nurse recordings of relational conversation skills changed across the six SCT sessions with study participants.

Significance to Nursing

Being the caregiver of a stroke survivor can impact the caregiver's life in many aspects. Nurses can help caregivers learn skills necessary to protect their own health, while also caring for another. In the SCT studies, the nurse interventionist (NI) uses communication skills to build relationships with the caregivers during the six intervention sessions. Each of the SCT sessions are practicing healthy habits, building self-esteem, focusing on the positive, avoiding role overload, communicating, and building meaning. The NI used a partnership approach through telephone conversation with the caregiver. Together the NI and the caregiver worked together as a team to promote the health and well being for the caregiver through self-care. Understanding how skill recordings vary across SCT sessions will indicate whether or not the NI was able to adapt to each individual caregiver's unique needs while also adhering to study protocol.

Review of Literature

This review of literature for this secondary analysis includes a discussion of self-care of the elderly, nurse-patient communication, nursing practice as a partnership, modes of relating in caring conversations, and relational conversation skills.

Self-Care of the Elderly

The number of older people in Western countries is rapidly growing, especially in the oldest age group (Backman & Hentinen, 1999). Self-care has been identified traditionally as activities that are associated with promoting health and general well-being. Activities of daily living such as exercise, nutrition, and relaxation are often used to measure self-care (Backman & Hentinen, 1999).

External and internal factors can affect the self-care of an older person. External factors can include living conditions, services available, and social support. Social support is one of the most important ways to promote health promotion and self-care of older adults (Backman & Hentinen, 1999). The social support also helps shape the overall attitude and outlook of persons towards self-care (Backman & Hentinen, 1999). According to McCormack (2003) having a clear picture of what the patient values in their life is very important. This gives the nurse baseline information to compare current decisions and behaviors of the patient related to daily self-care (McCormack, 2003). Health and the level of functioning are key internal factors that can affect self-care (Backman & Hentinen, 1999). Other internal factors that can have an impact on self-care include coping strategies and hardiness (Backman & Hentinen, 1999).

Nurse-Patient Communication

Communication with patients is one of the most important aspects of caring for older people (Caris-Verhallen, De Gruijter, Kerkstra, & Bensing, 1999). Several studies suggest that lack of communication is the biggest complaint and largest source of dissatisfaction in patients (Caris-Verhallen et al., 1999). Communication skills are essential in nursing education and practice.

Lack of communication skills have been identified specifically in relation to care of older people, sexually transmitted disease clinics, cancer care, and unconscious intensive care patients (Chant, Jenkinson, Randle, & Russel, 2002). There are deficiencies in teaching of certain skills that

are considered necessary for effective communication in various healthcare situations. The specific skills nurses lacked were in communicating with patients and their families who made telephone inquiries to wards. Nurses provided inadequate or wrong information and did not treat the caller appropriately (Chant et al., 2002). Another skill that was lacking was media communications and it is suggested that is incorporated in skills training. Another limitation to communication skills is that nursing schools tend to emphasize the “mechanistic” rather than relational communication skills (Chant et al, 2002). The communication skills that are focused on in schools often are “learning skills, such as empathy, questioning, confrontation, and self-disclosure, as concrete, discrete behavioral actions and learning lists of skills.” (Chant et al, 2002, p. 15). Instead of students learning important conversational skills, they are learning lists of skills that are not as applicable to daily nursing practice. There needs to be more emphasis placed on connecting with patients and relationship development instead of learning a discrete set of skills (Chant et al, 2002). Morrison and Burnard (1997, p. 177) further emphasized this by stating, “...caring and communicating are inseparably linked. You cannot hope to communicate effectively if you do not care about the person on the receiving end.”

Nursing Practice as a Partnership

The core of nursing is a process of professional partnership (Jonsdottir, Litchfield, Pharris, 2004). In a partnership, the nurse is fully present to the patient and is able to relate and be open to their personal needs and suggestions. The nurse’s job is to hold the patient in “unconditional warm regard” as their patient and a fellow human being just like they are. The nurse’s sole agenda should be focused on what is going on with the patient in regards to their current health condition and going along with the flow of the conversation and finding what other meaning their conversation holds (Jonsdottir et al, 2004).

Dialogue is considered a natural conversation between the nurse and patient in addressing the health issues at hand (Jonsdottir et al, 2004). The dialogue between nurses and patients should be individual and nothing said should be considered “right” or “wrong,” “good” or “bad” (Jonsdottir et al, 2004). The main focus of the nurse and patient is to expand the understanding of the situation at hand. The nurse’s ability to acknowledge and value each of the patient’s experiences and to understand their perception of the health care experience is fundamental to forming a partnership (McCormack, 2003).

The ending of the relationship is most important and it brings meaning to the relationship as a whole. It has been found that the insight gained from partnerships is the key to articulating a conclusion with the patient and understanding the relationship’s meaning (Jonsdottir et al, 2004). While the beginning of the relationship is meaningful as a new blossoming relationship, “it is the ending that shapes the meaning of the partnership” (Jonsdottir et al, 2004, p. 244).

In today’s evolving world of technology, the emphasis of service has been on a “fast speed,” and a “fast talking,” healthcare environment (Jonsdottir et al, 2004). This change in healthcare has caused little room for responding to the personal needs of patients and families. Families and patients are sometimes not given the attention they deserve as healthcare has become so limited to “instrumental treatments” (Jonsdottir et al, 2004). According to Broyard (1990, p. 34), “Technology deprives me of the intimacy of my illness, makes it not mine but something that belongs to science.”

For nurses to continue to form strong bonds with their patients, the focus should not be solely on the medical diagnoses but also on uniqueness and meaning of the illness to the patient. This is the core of nursing practice as a partnership. Nurses need to engage in dialogue with the patient that helps the patient find meaning and a more useful way of living life.

Modes of Relating in Caring Conversations

There are many ways of relating to a patient in a caring conversation. According to Fredriksson (1999) the modes of presence, touch, and listening in a caring conversation should be taken into clinical consideration. Communicating with patients is more than just a simple conversation.

Presence is divided into two parts which include: “being there” and “being with” (Fredriksson, 1999, p. 1170). The phrase “being there” means that the nurse is attentive during the interaction and has no outside influences or distractions. The nurse is “grounded” (p.1171) and has their full attention on what the patient has to say (Fredriksson, 1999). The other term “being with,” according to Pettigrew (1990, p. 505) means “The nurse enters the patients world and will remain with the patient, enduring one’s feelings of discomfort and awkwardness, and – in the process- expose one’s humanness and offer comfort.”

Listening is imperative in nursing and is necessary in order to connect with a patient at a deeper level. In order to listen to another person effectively, an individual must be able to quiet yourself. According to Fredriksson (1999), a person must be silent in order to listen to another person with openness. Perry (1996, p.9) states, “This involves not only silencing your mouth, but silencing your mind.” If a nurse has many outside distractions and is unavailable at an emotional level, this can be devastating to the listening process. According to Gibbons (1993, p. 599):

If we focus on our own emotional discomfort, we will be unavailable emotionally because our attention will be diverted to our feelings about the pain that is being expressed. This will distract us, and we will not be able to hear the message that lies behind the words that are being spoken.

Some of the outcomes of listening carefully and without distraction are forming a caring, well-rounded relationship that is strong and has meaning. Listening also helps the nurse

understand the experiences the patient has been through and give them respect for what they have experienced in their lifetime.

Relational Conversation Skills

The four relational conversation skills used in the primary SCT study are listening with intent, affirming emotions, creating relational images, and planning enactment. Listening intently is gaining information to personalize care, affirming emotions conveying respect for uniqueness, creating relational images reinforcing positive health beliefs, and relationships to support care goals, and planning enactment focusing on individual self-care activities to promote health (Leenerts & Teel, 2005).

This review of literature focused on self care of the elderly, nurse-patient communication, nursing as a partnership, modes of relating in caring conversations and relational conversation skills. All of these factors tie into understanding how the nurse-caregiver relationship evolves overtime, and how it can be achieved at the highest level.

RESEARCH METHODOLOGY

This current study used data from an intervention study in which SCT was tested with older spouse caregivers of stroke survivors. The current study is a secondary analysis of nurse interventionist SCT session recordings, to determine how the use of the four relational conversation skills changed across the six SCT sessions in caregivers of stroke survivors.

Design

The primary study, “Promoting Stroke Caregiver Health via Self-Care TALK: Education and Support Telephone Partnerships with Nurses” involved an intervention group who had six weekly telephone conversations with a nurse about health and self-care. Calls lasted 30 minutes and were

scheduled at the caregivers' convenience. Intervention group participants received a notebook of materials related to health at the beginning of the study. The control group continued with usual care, and received the notebook of materials after the final data collection was completed. For intervention group participants, the nurse interventionist also recorded detailed field notes during each SCT session.

For the analysis of the nurse interventionist recordings, data from half of the study sample were used. Of the 20 intervention participants, 10 were randomly selected. Each of the ten participants had six interview sessions in the SCT study, so data from 60 sessions were available for analysis.

Subjects

The subjects involved in this study were a convenience sample that consisted of men and women over the age of 55 years. Participants lived with and cared for their spouse or partner who had suffered from a first-ever stroke between six months and three years before entry into the study. Participants had telephones, were able to hear well enough to engage in a telephone conversation, and were fluent in English. Following informed consent, subjects were given a self-care resource book, and the first telephone conversation was scheduled. Caregivers were referred from stroke centers, neurologists, and stroke support groups and were between the ages of 56-89 years (67.50 mean, 11.77 SD). Five of the caregivers were women and all 10 were Caucasian.

Setting

In the SCT study, the nurse interventionist (NI) prepared for each session by reviewing session protocol and previous session notes. The NIs also used a quiet office for the SCT conversations, so they could participate without interruption.

Procedures

Detailed field notes were recorded by the NI during each SCT session and these recordings provided the data for this secondary analysis. The NI recordings from each of the 60 conversations were analyzed for frequency of recording of the four relational conversational skills.

Data Analysis

The mean, range and standard deviation of skill use were calculated and examined for change across sessions. Conversation skill use was compared between sessions 1 and 6, to determine if recording of skill use changed over time. Using a one-sample t-test, each relational conversation skill was compared between session one and session six, to test whether the recording of skill use changed over time. In addition to the quantitative analysis of the recordings, an interview was conducted with a NI, to explore how the conversational skills were used during the SCT sessions and to explore impressions of change over time regarding conversational skill use.

FINDINGS

The NI recording for each skill varied significantly across participants at Session 1. While following protocol, at baseline the NI was able to individualize the intervention for each participant.

Conversational Skills: Sessions 1, N=10, Differences Across Participants

Conversational Skill	Mean (SD)	t-test	df
Listening 1	26.7 (14.17)	5.96	9
Affirming 1	7.60 (3.41)	7.06	9
Creating 1	4.40 (2.87)	5.88	9
Planning 1	6.90 (3.90)	5.60	9

When looking at differences in conversational skills between sessions one and six, the NI recording of listening was significantly greater at session one, compared to session six. There were no differences in recordings of the other three skills between sessions one and six.

Conversational Skills: Differences Between Sessions 1 and 6, N=10

	Mean	SD	t	df	Sig. (2- tailed)
Listening	11.70	8.03	4.61	9	.001
Affirming	1.20	5.05	.75	9	.472
Creating	.00	2.40	.00	9	1.00
Planning	-.20	3.79	-.17	9	.871

How did you prepare for the sessions?

For each of the intervention sessions to be successful, it was very important that the interventionist be organized. The NI prepared for each session by reading over prior sessions. The NI especially paid attention to planning enactment so she could remember who the caregivers were and what the circumstances were. She had the session protocol and notebook, previous sessions to refer back too and a sample session in front of her during the phone conversations. She also spent time on centering, or spending quiet time alone so she could just think about that person she was about to have a session with. These were all important for the nurses to incorporate into each session in order to avoid distractions and to use relational conversational skills consistently across the sessions. During each of the sessions the interventionist found that writing and talking at the

same time and coming up with a new topic to discuss with the caregiver was difficult. She tried to write down everything that they said, but she had a more difficult time writing down what she had said to the patient. She tried to make little notations off to the side when she could. The NI also thought it was difficult in the beginning for the responses so there was not a pause, but it got easier for her as the sessions went on. At the end of each of the sessions, the NI immediately typed their wording of what they said and categorized it by skill.

What does listening intently, relational images, affirming emotions, and creating relational images mean to you?

According to Leenerts and Teel (2006), listening with intent is gaining information to personalize care. According to the NI, this included what the person had to say. She stated that “I was worried about the reply, so I had a hard time listening in the beginning.” She also conveyed that “I was always worried about what to say next, so I suppose listening did change throughout the sessions.” This indicated that other factors in the sessions such as being nervous and worrying could have affected how the interventionist listened during some of the sessions.

Creating relational images is reinforcing positive health beliefs and relationships to support care (Leenerts & Teel, 2006). The interventionist said she obtained from what they said and I would bring it up with them again in later sessions.

Affirming emotions is conveying respect for uniqueness (Leenerts & Teel, 2006). According to the NI, often she did not know how to start in the beginning. She would always say ‘Oh that is wonderful’ and I had a hard time tuning into the negatives. She always had to draw those things out. Of the four skills that the interventionists were required to learn, she thought affirming emotions was a difficult skill to learn. She was just learning, so she was afraid to say certain things. She would not think much of it until she went back and reviewed the session at the end. This

suggests that the NI's struggled learning certain skills and may have been reluctant to use them because they were unsure or not confident in what they were trying to say.

Planning enactment is when the NI focuses on the individual self-care activities to promote health (Leenerts & Teel, 2006). The NI thought that planning enactment was always mutual. The NI and the caregivers always reviewed each session and if other events significant other than caregiving was going on, like their son was sick, she would make note of it. This suggests that planning enactment some weeks may not have been quite as productive if other events were going on in the caregiver's lives.

What did you think of the conversational skills as they were named?

The interventionists agreed that there were four separate skills and none of them could be combined. The NI felt like affirming emotions is related to relational images. She also felt like planning enactment was not much of a goal. She would just follow up each week with things from the previous week over and over and did not really know where to draw the line. The NI thought there needs to be some way to say it is resolved. This finding shows that some of the conversational skills such as "affirming emotions" and "creating relational images" may not have been clear to the interventionist if she felt like they were somewhat related to each other. They may have been used interchangeably in the sessions. The NI agreed that learning the skills in the beginning was challenging and applying them in conversations with the caregivers got easier overtime.

DISCUSSION

Skill use recordings varied across caregivers, which indicates the flexibility of the NI to adapt to each caregiver and their unique and individual needs. The NI recorded more examples of listening during the first session, which suggests the particular need for learning about the caregiver's uniqueness during the earlier sessions.

When each of the relational conversational skills were compared across session one through six, listening was found to be recorded more during session one. This indicated that initially the nurse was strongly focusing on what the caregiver had to say and getting to know them at a deeper level. The other conversational skills stayed relatively consistent throughout each of the sessions.

IMPLICATIONS FOR PRACTICE

In each of the 30-minute conversations the skills listening with intent, affirming emotions, creating relational images, and planning enactment were all adapted to each individual caregiver while adhering to intervention protocol. The NI spent time before each session preparing for each individual caregivers unique qualities that were learned from previous sessions in order to adapt to their individual needs. With 6.5 million stroke survivors alive today, caregivers have a lot of responsibilities to care for the stroke survivors' everyday needs. The SCT intervention needs to be tested further, but so far is encouraging and has lots of possibilities. Through the use of specific conversation skills, nurses can provide helpful support for older family caregivers.

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ACCULTURATION AND ALCOHOL USE AMONG
IMMIGRANT HISPANIC & LATINA WOMEN

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requirements for the Nursing Honors Program

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ABSTRACT

Acculturation of immigrant Hispanic and Latina women may be directly related to their alcohol consumption. This use of alcohol may result in negative physical and psychosocial consequences. Previous research has not addressed identifying the reasons the women use alcohol, or determined if their alcohol use is a result of acculturation, or rather serves as a means of acculturation.

Understanding the reasons immigrant Hispanic and Latina women use alcohol will provide the information needed to develop specific educational interventions and programs regarding alcohol use for this population. A mixed-methods research design was used. The women were asked to complete a demographic questionnaire, the Alcohol Use Disorders Inventory Tool (AUDIT) and Short Acculturation Scale for Hispanics (SASH). In addition, participants who reported alcohol use were asked to complete a personal audio-taped interview and describe their alcohol use and reasons for choosing to drink. Surveys and interviews were provided in English or Spanish, dependent on language preference of the participant.

A total of 20 women, with ages ranging from 18 years to 72 years (mean = 33 years) completed the study questionnaires. For all participants, length of time in the U.S. ranged from 0.5 years to 35 years, with a mean of 13 years. Nine of these women reported alcohol use, and four agreed to participate in an audio-taped interview. Quantitative analysis showed that women who reported alcohol use, there was a positive correlation between drinking and their level of acculturation. If the women did not drink at all, there was no relationship.

Data collected in this study may be used to develop appropriate and effective interventions for this vulnerable group of women. Also, information gained has the potential to add to the

scientific body of knowledge about acculturation and alcohol use among immigrant Hispanic and Latina women.

INTRODUCTION

Hispanic and Latino Americans comprise a significant and growing population in the United States, (U.S. Census Bureau, 2008). As Hispanic and Latina immigrant women acculturate to life in the United States, changes in health status, practices and risk factors follow. One significant change found to occur relates to the women's alcohol use. Increased acculturation has been directly associated with an increased likelihood of alcohol use, as well as an increase in frequency and quantity consumed (Zemore, 2007; Raffaelli, et al. 2007; Galvan & Caetano, 2003). Addressing the health needs of these women requires an understanding of the complex factors that influence their health-related behaviors, including use or misuse of alcohol.

The **purpose** of this pilot study was to examine alcohol use patterns as they relate to level of acculturation among Hispanic and Latina immigrant women. Using the Alcohol Use Disorders Inventory Tool (AUDIT), Short Acculturation Scale for Hispanics (SASH) and qualitative interviews, information will be gleaned about the relationship and patterns of alcohol use and acculturation among this population, as well as identification and description of the reasons immigrant Hispanic and Latina women consume alcohol. These data can be used to develop appropriate and effective educational interventions and programs addressing alcohol use for this population.

Previous research has revealed that as Hispanic and Latina immigrant women become acculturated they tend to drink more than those who are less acculturated, and consume more alcohol when they do drink (Zemore, 2007). This use of alcohol often results in negative physical and psychosocial consequences (Galvan & Caetano, 2003). Previous research has not identified the reasons the women use alcohol, or determined if their alcohol use is a result of acculturation, or rather serves as a means of acculturation. A better understanding of this relationship may be used to develop culturally appropriate alcohol education interventions for this population.

The **aims** of this study are to: (1) identify and describe the reasons immigrant Hispanic and Latina women consume alcohol, (2) identify the perceived direction of the relationship between their patterns of alcohol consumption and acculturation, and (3) describe the patterns of alcohol consumption of Hispanic and Latina women prior to and after immigration.

Literature Review

As new immigrants adjust to U.S. culture they tend to modify the norms of their countries of origin and adopt behavioral patterns that are more representative of the general U.S. population (Collins, 2002). The term *acculturation* encompasses these psychological, behavioral and attitudinal changes that occur with interaction between individuals of different cultures (Cabassa, 2003; Raffaelli, et al. 2007). Among U.S. Latinos, higher levels of acculturation are associated with several negative health behaviors and outcomes (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). Previous research has found an association between increased acculturation and a greater likelihood of alcohol intake, current smoking, increased BMI, drug use, depression and other mental health problems (Abraido-Lanza, Chao, & Florez, 2005; Caetano, et al. 2008).

One notable aspect of past research examining the above changes is alcohol use among Hispanic and Latina immigrant women. Women's drinking patterns are influenced by the cultural norms and practices of the ethnic groups to which they belong, in addition to other environmental and biological factors (Collins & McNair, 2003). Among Hispanic and Latina women immigrants, higher acculturation has been consistently associated with a greater likelihood of alcohol use, as well as increased frequency and quantity consumed, binge drinking and problems such as dependence (Zemore, 2007; Raffaelli, et al. 2007; Galvan & Caetano, 2003). Among male drinkers, acculturation seems to be negatively, or not at all, associated with these same outcomes (Zemore, 2007).

Previous research has attributed these findings to two primary theories. The first suggests that an increase in alcohol use may serve as a means to cope with the stress related to immigration and cultural differences (Ayers, 2007). The second suggests that increases in women's alcohol use results from changes in cultural attitudes and norms related to alcohol. Norms regulating women's alcohol use are stricter in Latin America than in the U.S., whereas norms regulating alcohol use by men tend to be liberal in both Latin America and the U.S. (Caetano & Clark, 2003). Additionally, acculturation is believed by some to cause increased alcohol use due to the fact that it usually involves changes in socioeconomic status as indicated by income, education and/or professional occupation. This may be related in part because changes in socioeconomic status often accompany changes in the social context in which drinking occurs, for example drinking at home versus drinking in public with occupational or social groups (Collins & McNair, 2003).

Alcohol abuse and dependence are associated with medical problems such as cirrhosis and chronic liver disease. Excessive alcohol consumption also can cause social problems such as divorce or job loss, as well as legal issues such as driving under the influence (Galvan & Caetano, 2003). Additionally, U.S. Hispanics and Latinos have shown lower rates of alcoholism treatment utilization relative to whites and treatment utilization is especially low among women (Zemore, Mulia, Ye, Borges, & Greenfield, 2009).

Previous research suggests that prevention, education and other treatment programs should address each individual's level of acculturation and gender. Patterns of alcohol use and their determinants can vary greatly between Hispanic men and women, and caution should be used when aggregating both genders when addressing alcohol use (Zemore, 2007; Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005). Further research is needed that examines the multiple biological, historical, social and cultural factors that influence the drinking patterns of minority

women to develop a greater understanding of this behavior and in turn, develop effective prevention and intervention strategies where they are needed (Collins & McNair, 2003).

RESEARCH METHODOLOGY

The researchers used a mixed-method research design of both qualitative and quantitative instruments to examine alcohol use among Hispanic immigrant women. When used in combination, the qualitative and quantitative data will yield a more complete analysis of the complexity of alcohol use and acculturation for immigrant Hispanic and Latina women by exploring their subjective experiences (Ayres, 2007; Classen & Lopez, 2006; Fitzsimmons, Parahoo, Richardson & Stringer, 2003; Sandelowski, 2000). Primary data collection and analysis will be qualitative (in-depth, semi-structured interviews). Qualitative methodology allows the researcher to study real-world situations as they occur naturally by exploring and describing people's personal perspectives and experiences with a particular phenomenon (Patton, 2002).

Participants were recruited at a health clinic, located in a midwestern metropolitan city. The clinic is managed by a midwestern university clinical services organization and provides primary medical care to low-income and uninsured residents of a local community, a largely Hispanic neighborhood in a Midwest city. Inclusion criteria for study participants required that they be at least 18 years of age, identify as a first-generation Hispanic/Latina immigrant, and are able to speak and read in either Spanish or English. Patients who met these criteria were approached by researchers during their clinic visit, and received both written and verbal information regarding the attributes and purpose of the study. At no time during the study were the women questioned about their immigration status or personal identification. Due to the nature of this vulnerable population and sensitive topic of the study, implied consent was obtained by the researcher. Those who consented to participate were asked to complete the questionnaire and scales. Following

completion of the study instruments, women reporting alcohol use were asked to complete an audio-taped interview with the researcher to gain further qualitative information regarding topics addressed in the quantitative scales. Women who participated in the interviews received a \$25 gift card to Wal-Mart. Consent forms, questionnaires and interviews were completed in either English or Spanish, depending on language preference of the participant.

To establish their level of acculturation, the women completed the bilingual Short Acculturation Scale for Hispanics (SASH). This scale allows researchers to quickly and reliably identify the level of acculturation for Hispanics and Latinos. The reliability for internal consistency has an alpha value of .92 and validity of the SASH were established with male and female respondents from a variety of Hispanic and Latino subgroups including Mexican Americans, Cuban Americans, Puerto Ricans, Dominicans, and Central and South Americans (Marin, et al. 1987). The instrument measures the degree of acculturation of individuals by addressing their language use, media preference and ethnic social relations (Heilemann, Lee, & Kury, 2005; Marin, et al. 1987; Perez-Stable et al., 2001; Saitz & Maisto, 2003). Numerous studies have been carried out internationally that demonstrate the reliability and validity of using this instrument with multicultural and ethnically diverse women (Gache et al., 2005; Saitz & Maisto, 2003). The AUDIT, considered to be the 'gold standard' by clinicians and diagnosticians, was developed by a multi-ethnic panel with the World Health Organization as a screening tool to recognize problematic drinking (Knight, Stampfer, Rimm, Hankinson, & Curhan, 2003) and is considered to be the most sensitive (72%) screening tool to identify alcohol use and potential abuse in women relative to other diagnostic instruments (Cherpitel, 1997; Rastegar & Fingerhood, 2005).

FINDINGS

Twenty women, ranging in age from 18 years to 72 years (mean = 33 years) completed the study questionnaires (Demographics, Appendix A). For all participants, length of time in the U.S. ranged from 0.5 years to 35 years, with a mean of 13 years. Eighty percent of the women (n = 16) were of Mexican origin. Fifty percent of the participants (n = 10) identified themselves as single; thirty-five percent (n = 7) were married, 2 were divorced and one was widowed. Level of formal education varied greatly among participants, with 3 completing up to elementary education, 7 completing middle school, 5 had completed high school or GED equivalent, and 3 participants had completed some college or a college degree. Fifty percent of the women (n = 10) were unemployed, and forty percent (n = 40) held full time positions.

Forty-five percent of the women (n = 9) reported alcohol use, and four of this group also agreed to participate in an audio-taped interview. AUDIT totals ranged from 0 to 16 (Appendix B). According to the literature, a score of 8 or more on this instrument indicates a strong likelihood of hazardous or harmful alcohol consumption. Of the nine women that reported alcohol use, three had an AUDIT score above 8. It is noteworthy these three women also agreed to participate in a qualitative interview.

Acculturation of all interview participants varied greatly. The SASH scores can be interpreted along a continuum from 12 to 60, with a low score indicating lower levels of acculturation and a higher score indicating a higher level of acculturation (Appendix E). All SASH scores ranged from 15 to 41, with a mean score of 23. Twenty-five percent of all participants (n = 5) completed study instruments in English, and seventy-five percent (n = 15) completed them in Spanish. Quantitative data were analyzed using SPSS and showed a positive relationship ($r=.683$) among alcohol use and the level of acculturation for the women who reported drinking alcohol. If

the women did not drink at all (score of zero on the AUDIT) there was no relationship. The results of the qualitative data are being completed.

The four audio-taped interviews have not yet been transcribed and analyzed at this time due to time constraints and a delay in the selection and limited availability of a bi-lingual certified transcriptionist. The audio-taped interviews will be transcribed verbatim by a bilingual transcriptionist and checked for exactness. The text of the completed interviews will be read and re-read to get a sense of the whole. Next, the data will be searched for the presence of common themes, as described by the women. During the analysis, vernacular phrases, thematic statements, and descriptive words that characterize the phenomenon under investigation are identified and will allow the researchers to make connections between the experiences of the individual women. Completion of qualitative data analysis will allow for more complete results and achieve a more thorough understanding of the complexities surrounding alcohol use as it relates to acculturation among Hispanic/Latina immigrant women.

DISCUSSION

The results of this study have implications for nurses caring for Hispanic and Latina immigrant women. When caring for this population, it is important to address the topic of alcohol use. Health care providers can use this study and previous research to recognize that highly acculturated Latinas are a group with a higher risk for alcohol use/misuse. When working with this population regarding substance abuse, interventions and programs should be tailored to individual's level of acculturation as well as gender. Analysis of qualitative data may reveal additional implications for this study.

Limitations for this study are small sample size, time constraints in data analysis, difficulty in measuring acculturation, and utilization of a self-report of alcohol use. A total of 20 women participated in the study, and all were recruited in the Kansas City, KS area, limiting the ability to generalize findings among U.S. Hispanic and Latina immigrant women. Time restrictions limited the researchers' potential to recruit a larger sample size.

Additionally, acculturation itself is a complex phenomenon influenced by numerous factors. The SASH uses measures such as language use, media use and social relationships to assess the women's level of acculturation. Although the reliability and validity of this tool has been established, it is difficult to obtain a complete picture of each woman's immigration and acculturation experience. The AUDIT measures alcohol use based on each woman's self-reported information. This information may contain inaccuracies related to a reluctance to admit alcohol use due to social stigma.

Time constraints prevented analysis of qualitative data from participant interviews at this time. Delayed selection and limited availability of a bilingual certified transcriptionist also hindered this process. The participant interviews addressed individual acculturation experiences, and analysis of these data may lead to a more complete analysis and understanding of the complex issue of acculturation and alcohol use among Hispanic and Latina immigrant women.

Recommendations for research include qualitative analysis of this study and a larger and more diverse participant sample to increase the generalizability of results. Further analysis and understanding regarding acculturation and alcohol use among Hispanic and Latina immigrant women can be used to develop culturally appropriate educational interventions and innovative strategies to reduce alcohol misuse among this population of women.

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APENDIX A

Demographic Data

Demographic Variable	Response	
Country of origin	Mexico	80%
	Honduras	10%
	Argentina	5%
	Not answered	5%
Length of time in U.S.	Range	0.5- 35 years
	Mean	13 years
Age	Range	18 to 72 years
	Mean	33 years
Marital status	Single	50%
	Married	35%
	Divorced	10%
	Widowed	5%
Number of children	0	10%
	1	15%
	2	45%
	3+	25%
Language Preference	English	0%
	Spanish	70%
	Both	30%
Formal education completed	None	5%
	Elementary	15%
	Middle school	35%
	High school or GED	25%
	Some college or degree	15%
Employment status	Full time	40%
	Not employed	50%
	Not answered	10%

APPENDIX B

AUDIT and SASH Totals

Participant Number	AUDIT Totals	SASH Totals
1	16	34
2	9	39
3	4	18
4	11	24
5	3	25
6	4	23
7	0	15
8	0	13
9	0	18
10	0	20
11	0	19
12	1	15
13	7	18
14	0	25
15	0	35
16	0	41
17	0	21
18	0	26
19	2	20
20	0	16

CULTURE CHANGE IN NURSING HOMES:
THE PERCEPTION OF LEADERS VERSUS STAFF

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Submitted to the School of Nursing in partial fulfillment of the
requirements for the Nursing Honors Program

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ABSTRACT

The elderly population in Kansas is growing, leading to an increased need for nursing home care. To improve the quality of life for residents and staff, many facilities have implemented care models called culture change that are focused on resident-centered care and staff empowerment. The *Kansas Culture Change Instrument (KCCI)* was developed using six constructs using the 2006 Commonwealth fund definition (Doty, Koran, & Sturla, 2009) as the theoretical framework. The six constructs were: *resident-centered care, a homelike environment, staff/resident relationships, staff empowerment, nursing home leaderships, and quality improvement* with an added seventh construct, *share values*. The purpose of this study was to determine: a) how leader and staff perceptions differed on the seven subscales of culture change in nursing homes; and b) whether staff and leaders scores vary differently in culture change nursing homes when compared to non-culture change nursing homes.

The study is a secondary analysis using data from the Kansas Nursing Home Project. Staff and leaders employed at 100 randomly selected nursing homes in Kansas comprised the sample. The response rate was 72% ($n=72$). Data were collected using the *KCCI*. Paired t-tests and Pearson Correlations (r) were used for data analysis. The results indicated statistically ($p < .01$) different scores between the staff and the leaders on the total culture change score and the seven subscales. Mean differences ranged from .08 to .38 on average subscales scores that ranged from 1 (never) to 4 (always). There were stronger correlations between staff and leader scores in nursing homes that had undergone extensive culture change. Collecting information from all staff and leaders in nursing homes can be time consuming and expensive. Nursing homes that had extensively implemented culture change had more consistent findings than the nursing homes that had partial or limited implementation. Consequently, it is important to assess where the nursing home is on the

continuum of culture change implementation before determining who will be involved in the data collection.

INTRODUCTION

The elderly population in Kansas is increasing, leading to an increased need for nursing home care. With the increasing numbers of residents being cared for in nursing homes, the focus is shifting to providing quality of life for residents and quality of work for staff. Currently in nursing homes most decisions are made at the administrative level and direct care staff are rarely asked to express their opinion about problems they encounter when providing care. Similarly, residents are placed on schedules that have little to do with how they lived their lives before entering the nursing home. Robinson and Rosher (2006) report that, “many nursing homes maintain schedules for eating, bathing, sleeping and other activities, often putting the task before the individual” (p. 19).

To improve the quality of life for residents and the quality of work for staff, some nursing homes have broken away from the institutional environment and have implemented a care model called culture change. Culture change is focused on allowing residents to make decisions regarding their activities of daily living, such as when they wake up and go to bed, what they eat, and when they shower. Additionally, the model incorporates direct-care staff members being involved in decision making about their daily work and planning the care for the residents.

Problem and Purpose

In 2007 the number of Americans over the age of 65 was 37.0 million, which is 12.6% of the US population (Administration on Aging, 2008). This percentage has tripled since 1990. Not only is the elderly population growing, this population is now older in general. “In 2007, the 65-74 age group (19.4 million) was over 8.8 times larger than in 1900, but the 75-84 group (13.0 million) was 17 times larger and the 85+ group (5.5 million) was 45 times larger” (Administration on Aging, 2008). This increase in growth is expected to continue to increase over time, which would result in an increased need for facilities to provide for this generation once they can no longer care for

themselves. According to the Administration on Aging (2008), the population of those 65 and older is projected to be 72.1 million in 2030, nearly double that which it was in 2007. They also reported that 15.1% of those 85 years or older lived in an institutional setting in 2007.

The cost of caring for these elders is high for the state. In the fiscal year 2007 almost 42%, 893 million dollars, of Medicaid spending in Kansas was toward long-term care (Kaiser Family Foundation, 2009). This stresses the importance of families, future residents, and healthcare providers having accurate data that represents the quality of care provided in nursing homes throughout Kansas. When collecting data from homes, it is important to see whether it is sufficient to just collect data from leaders, or if direct care staff need to be included to provide more accurate results regarding culture change in nursing homes.

The purpose of the study is to determine how leader and staff perceptions differ on the constructs of *culture change* in Kansas's nursing homes. This study was driven by two research questions: a) will scores on the subscales of culture change differ between staff and leaders, and b) do staff and leaders' scores vary differently in culture change nursing homes from non culture change nursing homes?

Literature Review

Culture change in nursing homes, the benefits of culture change, and how culture change can be implemented are discussed extensively in *Pioneering Change* (Norris-Baker, Doll, Gray, & Kahl, 2003). Issues that lead to the need for change include that fact that elderly people live in their homes as long as possible to avoid being put in a nursing home. Also, children are helping their parents find nursing homes and are expecting their loved ones to be given the resources to attain a "superlative quality of life for as long as possible" (Norris-Baker et al, 2003, p. 9). Many benefits are seen in homes that have implemented one of the culture change models including: a one-third reduction in the use of anxiolytics and antidepressants administered for anxiety and depression,

almost a two-thirds reduction of in-house decubitus ulcers, a one-fourth decrease in the cumulative rate of bedfast residents, a one-fifth decrease in use of restraints, more than 40% drop in staff absenteeism” (Norris-Baker et al., 2003). Norris-Baker and associates state, “Currently culture change for nursing homes does not have much of the ‘what might happen when you do’ information available. That makes it important that each of the organizations committed to making change also commit to evaluating those changes to document their anticipated and unanticipated impacts” (Norris-Baker et al., 2003, p. 80).

The goal of nursing home care and of most healthcare professions in general is to ensure patients have positive outcomes and are satisfied with the care provided. If culture change is indeed a positive change for nursing homes, one would hope that resident and family satisfaction would increase in nursing homes that have undergone culture change. The *Eden Alternative* is a social model of care designed to transform the current medical model of nursing care in nursing home to a culture change model. The *Eden Alternative* is exemplified by the inclusion of animals, plants, and children that assist in combating resident loneliness, helplessness, and boredom with the core philosophy being a resident-centered approach to care and the resident’s right to choice and decision making. Rosher and Robinson (2005) conducted a study to determine the impact of the *Eden Alternative* model on family satisfaction with the nursing home care. The research team surveyed thirty-seven families prior to *Eden Alternative* implementation and then two years after implementation. This study found a significant ($p < .001$) improvement in family satisfaction after the implementation of the *Eden Alternative* model, with the most exciting finding being an improvement in families’ perceptions of respect given to elders by staff (Rosher & Robinson). Many aspects seen with culture change involve providing residents with more options regarding their own daily cares and their lives. Giving residents these options is a means of showing them respect, and it follows that families would sense that staff have respect for their loved ones as well.

A facility must change its organizational structure as well as the mindsets of staff and leaders in order to undergo the long process of culture change. Scalzi, Evans, Barstow, and Hostvedt (2006) conducted a study to identify the barriers and enablers that nursing homes met when changing their organizational structure. Data were collected from staff and families from three nursing homes that had implemented culture change. The barriers that were identified included not including nurses in culture-change activities, perceived corporate emphasis on regulatory compliance, a focus on the 'bottom line,' and high turnover rates of administrators and direct care staff (Scalzi, Evans, Barstow, & Hostvedt, 2006). The study also identified the need for a critical mass of 'change champions' in the organization, consistency between the administration, staff, and residents in shared values and goals, resident and family participation, stable tenure of administrators, and empowerment of staff at the facility level to be enablers of culture change in nursing homes (Scalzi et al.).

Another study conducted by Robinson and Rosher (2006) also identified barriers to culture change and provided recommendations to deal with the barriers. There are four key points that resulted from this study. First, the authors suggest that prior to implementation of a culture change model, nursing homes should identify and analyze potential barriers, such as staff turnover, and identify interventions to overcome these barriers. Education and empowerment are important components of culture change that can be useful in dealing with barriers. If culture change education and empowerment are occurring in a home that has greater than 100% turnover annually, one can see that it would be very difficult to maintain proper education and provide residents with consistent high quality care. Second, the infusion of culture change is dependent on a major change in organizational structure, with the elders making decisions regarding the facility. This can be accomplished by providing Certified Nurse Aides (CNAs) and other care providers with the knowledge and resources they need to allow residents to make choices regarding their care. The third key point is that the study revealed decreased incidence of depression in elders and

increased family satisfaction following the implementation of culture change. However the authors state that confounding variables, such as a change in administrator and an increase in staff/resident ratio, may have led to this conclusion (Robinson & Rosher, 2006). Finally, the fourth key point of this study, it is necessary to frequently evaluate the progress of culture change by qualitative techniques. The authors recommend surveying staff every three to six months throughout culture change implementation. This way if a change is detected the situation can be evaluated at that point to attempt other variables that could be causing the change (Robinson & Rosher, 2006).

Quality of life for residents and quality of work for staff are important components of culture change models. In addition to assessing resident's satisfaction with their quality of life as well as the family's satisfaction with the care the resident receives, it is important to assess how staff perceives the quality of their work life in the nursing home. Since the process for the implementation of culture change models in the nursing home can be lengthy, it is important to determine where nursing homes are in process as well as if there are differences between nursing homes that have implemented culture change and those that have not.

RESEARCH METHODOLOGY

The study was a secondary analysis using data from the Kansas Nursing Facility Project. The aim of the Kansas Nursing Facility project was to establish a valid and reliable culture change instrument and to examine the relationship between the elements of culture change and quality of nursing home care in the state of Kansas (Bott et al., 2009). The study recommends annual collection of data from culture change homes in Kansas in order to make this information available for nursing home leaders and staff and to determine where Kansas stands on culture change implementation. The purpose of this secondary analysis was to determine if there were differences between nursing home leaders and direct-care staff on the subscales of culture change, and if there were differences between culture change nursing homes and non culture change nursing homes.

Sample and Setting

The sample was comprised of nursing home leaders and staff employed at 100 randomly selected nursing homes in Kansas. The random sample was stratified on regional population density proportional to size to ensure that no area of the state had a decreased chance of inclusion. From the 100 nursing homes in Kansas selected, data were provided by 72 nursing homes (response rate = 72%). The facility demographics show that the median number of beds in the nursing homes surveyed was 58 (range = 16 to 178 beds). The average percent of days paid by Medicaid was 54% (range = 5 – 90%). More than half (59%) of the nursing homes were non-profit organizations, and more than two-thirds (69%) were located in rural areas.

A total of 2,717 leaders and staff participated in data collection ($n = 457$, leaders; $n=2,260$, staff). Nursing home leaders included: administrators, directors of nursing, and department heads. The roles of the direct care staff surveyed included: Registered Nurses, Licensed Practical Nurses, Certified Nurse Aids, Certified Medication Aides, and Rehab personnel. The support staff that responded included dietary, activities, housekeeping, maintenance, and business office personnel.

The response rate for staff in the nursing homes ranged from five to 100% with an average response rate of 70%. Table 1 shows the sample demographics. In summary, the majority of the leaders surveyed were department heads that had been employed at the nursing home for more than five years and were educated with a technical or associates degree. The majority of the staff that completed the surveys was Certified Nurse Aides (CNAs) and Certified Medication Aides (CMAs) that had been employed at the facility one to five years with a high school diploma being the highest education achieved.

Measures

To collect data from staff and leaders the *Kansas Culture Change Instrument (KCCI)* was utilized. Bott and associates (2009) developed the *KCCI* that was comprised of six constructs from the 2006 Commonwealth fund definition (Doty, Koran, & Sturla, 2009) that provided the guiding framework (See Figure 1): *resident-centered care, a homelike environment, staff/resident relationships, staff empowerment, nursing home leaderships, and quality improvement*. In the development of the *KCCI* a seventh construct, *share values*, was added. The seven subscales also were averaged to create a total culture change score. Average scores were created that ranged from one (never) to four (always) for all subscales except the *Quality Improvement* subscale that ranged from one (strongly disagree) to four (strongly agree).

Two versions, leader and staff, of the *KCCI* were developed- and were comprised of 78 and 66, respectively. Cronbach's alphas ranged from .74 to .94 for leaders and from .73 to .94 for staff across the seven subscales (See Table 2).

The subscale *Resident-Directed Care and Activities* was defined as care and all resident related activities that were directed by the resident. This included nine items that specifically look at the following areas: residents choosing when they ate and bathed; residents helping themselves or having what they wanted to eat; residents determining how they bathed; care plans based on resident's requests; residents waking up and going to bed when they'd desired; designing activities for residents with memory problems; and allowing residents to dress themselves if they were able.

The *Home Environment* was defined as a living environment that was designed to be a home rather than an institution. This 13-item subscale included items that looked at the following specifics: residents living in small households or neighborhoods in private rooms; residents getting outdoors without help; residents decorating their own rooms; a small group of residents sharing a living room and dining room; residents having pets and live plants inside the home; communities

being involved; spur of the moment activities occurring; and residents' personal items displayed in common areas.

The subscale *Relationships with Staff, Family, Resident & Community* was defined as close relationships existing between residents, family members, staff and community. The ten items that comprised the *Relationships with Staff, Family, Resident & Community* subscale were related to staff working with the same group of residents; families knowing the staff; involving the community in nursing home activities as well as having community volunteers; families visiting; acknowledging and remembering residents who died; encouraging residents and staff to discuss feelings about a resident's death; and residents spending time with each other.

The *Staff Empowerment* subscale was defined as work organized to support and empower all staff to respond to residents' needs and desires. The 10-item subscale was focused on direct care staff having input into resident care planning; knowing when care plan changes were made; staff creating their own work schedules and covering shifts for each other; cross-training staff; rewarding staff growth and education through raises, etc; involving direct care staff in quality improvement teams; staff contacting a resident's family about a resident's need; and staff growing as individuals.

The *Nursing Home Leadership* is a 9-item subscale that was defined as management-enabling, collaborative, and decentralized decision-making. For this subscale staff and leaders were surveyed on the following areas: leaders valuing team members from all departments; teams involving direct care staff in decisions; leaders hiring staff who really care; leaders improving working conditions; leaders not ignoring ideas from staff and asking questions with open-minds; leaders being available to talk to staff and making use of their ideas; and supervisors treating aides with respect.

The 8-item subscale, *Quality Improvement*, looks at the following areas: co-workers have been at the home a long time; homes evaluate services to make improvements; home having plan to lower turnover rates; nursing home tries to retain employees; staff updated on budget and cost changes; direct care staff have input into the budget of care for their residents; and staff ideas are used to reduce wasted time/effort. A concise definition of *Quality Improvement* is systemic processes that are comprehensive and measurement-based, and that are utilized for continuous quality improvement.

The final subscale, *Shared Values*, was added to the KCCI by the Kansas Nursing Facility team. *Shared values* was a 7-item subscale that included leaders and staff sharing values and common goals related to homelike environment, choice for residents, respect for residents and co-workers, decision making, quality of life for residents and quality of work for staff.

Two additional questions were asked on the leader version of the KCCI. The first question was is your nursing home currently involved in culture change? Response options ranged from one (no discussion around culture change) to five (culture change has completely changed the way that we take care of residents in all areas of the organization). The second question was how many years has your nursing home been involved in culture change? The response options included the five categories; not involved in culture change; less than one year; one to two years; three to four years; five or more years, and don't know. The 'don't know' category was recoded to one. Using the average scores of the two questions, a cluster analysis revealed three groups; no or limited culture change; partial culture change homes, and extensive culture change homes. Table 3 provides a detailed definition of each group.

Procedures

Following institutional Human Subjects Committee (HSC) approval, the administrators of the 100 randomly selected nursing homes were contacted by mail and asked to participate in the

study. Each facility was sent a box containing an instructional letter for the administrator, return shipping envelopes with pre-paid postage, and questionnaire packets for leaders (leader version) and for all staff (staff version). Each questionnaire packet contained an instructional letter, instructions for completing questionnaires, a sealable envelope, and the questionnaire. Follow-up calls were made to identify a study coordinator in each nursing home. All 100 of the homes were contacted by phone except for two that had closed (Bott et al., 2009).

Nursing homes that decided to participate were provided with detailed data collection instructions and also provided the current number of staff in the nursing home. This number was used for calculating facility response rates. Bott and associates (2009) developed the following exclusion criteria for participation by staff: a) all agency and hospital personnel, and b) any PRN staff member who worked less than three shifts per month. Staff and nursing homes leaders were encouraged to complete the questionnaires in separate locations, and names or individual identification codes were not included so that the staff could be assured their responses were anonymous. Staff members were instructed to turn in their completed questionnaires in a sealed envelope to a central person with a neutral role. All completed questionnaires were returned via mail in sealed envelopes.

Each of the nursing homes was sent a reminder postcard. All homes that did not return questionnaires were contacted by phone. All completed surveys received by the research team by mail were electronically scanned, audited, and compiled into a file for analysis (Bott et al., 2009).

Data Analysis

Data were stored on a secured file server at University of Kansas Medical Center. Data analysis was done using SPSS 16.0. T-tests were used to determine if leaders and staff scores on the subscales of culture change vary. To control for Type I error, the *p* value was set at .01. Pearson

correlations (r) were conducted to analyze whether staff and leaders scores vary differently in culture change homes as opposed to non-culture change nursing homes.

RESULTS

Means for leaders and staff for the total culture change score and the seven subscales are provided in Table 4. The means across the subscales ranged from 2.49 ($SD = .38$) to 3.09 ($SD = .36$) for leaders and from 2.53 ($SD = .31$) to 2.85 ($SD = .35$) for staff.

The first research question was to determine whether scores on the subscales of culture change would vary between leaders and staff. T-test results revealed there were statistically ($p < .01$) different scores between the leaders and staff on the seven subscales (See Table 4). The *Leadership* subscale has the largest mean difference of .38 and the *Home Environment* subscale has the smallest mean difference of .08. Additionally, there was a statistically ($p < .001$) significant difference between leaders ($M = 2.85$; $SD = .30$) and staff ($M = 2.85$; $SD = .28$) on the *Total Culture Change* score.

Research question two was to explore whether leader and staff scores would vary differently in culture change than non-culture change nursing homes. Correlations ranged from .38 to .83 across the seven subscales for the extensive culture change nursing homes; from .29 to .60 in the partial culture change homes; and from .30 to .67 in the limited culture change homes. There were higher correlations between staff and leaders scores on *Total Culture Change* score and all subscales in nursing homes that had extensively implemented culture change group with the exception of *Staff Empowerment* and *Quality Improvement*. Nursing homes that had partially implemented culture change had lower correlations for all subscales except *Resident Care* and *Quality Improvement* than nursing homes in the limited culture change group (See Table 5).

DISCUSSION

Implementation of culture change models is a grassroots movement that is impacting how residents are cared for in nursing homes and how staff are involved in the decision that impact their daily work life and the care that residents receive. Evaluation of the impact of culture change care models in terms of the quality of life for residents and the quality of work for staff is an important step in the process. Having a valid and reliable measure that represents the constructs of culture change is imperative in the evaluation process as well as a determination of the appropriate nursing home personnel that should be providing information about the culture change process.

Although we found statistically significant differences between the leaders and staff on the total and subscale scores of culture change, the differences were small and not necessarily meaningful. It could be anticipated that we might find more similarities in nursing homes that either had not begun the process of implementing a new care model such as culture change or had fully implemented the new care model. Those that were somewhere in the middle of the continuum might be less similar. Our findings did in fact support this as there were higher associations between staff and leader scores in nursing homes that were in the extensive culture change group, that is they had been involved in culture change activities for more than one year and culture change had extensively or completely changed the way residents were cared for in some or all areas.

Also we found more consistency in the nursing homes that had not or had limited implementation of the culture change model. In nursing homes that had partially implemented culture change, the associations between staff and leaders varied on the different subscales of culture change, indicating that staff and leaders had different viewpoints. This may be indicative that the nursing home was in the process of change and all aspects may not have been clearly communicated to the staff or had not been implemented. The nursing home leaders were either more informed about upcoming changes or had not implemented all aspects of the model just

because they were in the process of change. Two of the areas that reported very similar findings were related to resident care and home environment. Often, providing residents more choices in their daily routines as well as making their rooms and living spaces more home-like are the easiest aspect to implement, where other areas such as staff empowerment and decentralized decision making involve more complicated changes.

Collecting information on culture change from both staff and leaders in nursing homes can be time consuming and expensive. This study provided partial support that collecting information from only leaders in nursing homes would be representative of that nursing home's culture change environment. Assessing where the nursing home is on the culture change continuum may be important in determining what nursing home staff should be involved in providing information in nursing homes that have undergone the process of changing to the culture change care model.

The limitations of this study is that findings cannot be generalized beyond the Midwestern state where data was collected and further research would be warranted in other regions of the country. Continued data collection across years to assess changes in the scores for nursing homes in Kansas would be important in further evaluation as well.

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APENDIX

Table 1*Sample Demographics*

Characteristics	Leaders (n = 457)		Staff (n = 2,260)	
	Category	%	Category	%
Years in NH	<1 year	19.1	<1 year	32.6
	1-5 years	35.1	1-5 years	40.0
	>5 years	45.8	>5 years	27.4
Role in NH	Administrator/ Assistant	13.1	RN/LPN	13.8
	Director of Nursing/ Assistant	17.2	CNA/CMA	44.4
	Department Heads	51.8	Dietary/Activities/ Social Services	15.8
	Other	17.9	PT/OT/ST/ Restorative Aides	3.2
			Other	22.8
Education	Some High School (HS)	2.3	Some High School (HS)	11.2
	HS Diploma	21.8	HS Diploma	43.6
	Technical/AD	46.0	Technical/AD	38.4
	Bachelors or higher	19.9	Bachelors or higher	6.8
Primary Shift Worked	Days	83.0	Days	46.1
	Evenings	4.8	Evenings	26.1
	Nights	0.9	Nights	9.3
	Other	11.3	Other	18.5
Gender	Male	15.2	Male	12.7
	Female	84.8	Female	87.3
Race/ Ethnicity	Caucasian	92.4	Caucasian	76.1
	African American	1.8	African American	10.9
	Hispanic	3.1	Hispanic	6.6
	Other	2.7	Other	6.4

Table 2

Cronbach's Alphas for the Seven subscales of the Kansas Culture Change Instrument for Leaders and Staff

Subscales	<i>α*</i> Leaders	<i>α*</i> Staff
Resident Care	.85	.85
Home Environment	.74	.73
Relationships	.83	.80
Staff Empowerment	.87	.95
NH Leadership	.91	.92
Quality Improvement	.90	.90
Shared Values	.94	.94

*Cronbach's alpha

Table 3*Definitions of Nursing Home Culture Change Groups with Cut points.*

Group	Definition	Cut point
Limited	The nursing homes had either not been involved or involved for less than one year in culture change activities and culture change had not changed or had had limited impact on the way residents were cared for in some areas.	< 2.5
Partial	The nursing home had been involved in culture change activities for at least one year and culture change had partially changed the way residents were cared for in some or all areas	2.5-3.49
Extensive	The nursing home had been involved in culture change activities for more than one year and culture change had extensively or completely changed the way residents were cared for in some or all areas	≥ 3.5

Table 4*Culture Change Subscale Scores for Leaders and Staff*

	Leaders		Staff		<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Total Scale & Subscales					
Total Culture Change Score	2.85	.30	2.68	.28	<.001
Resident Care	2.89	.40	2.73	.38	<.001
Home Environment	2.78	.32	2.70	.30	<.01
Relationships	2.97	.30	2.85	.26	<.001
Staff Empowerment	2.49	.38	2.84	.30	<.01
NH Leadership	3.09	.36	2.71	.32	<.001
Shared Values	3.07	.38	2.85	.36	<.001
Quality Improvement	2.67	.32	2.53	.31	<.001

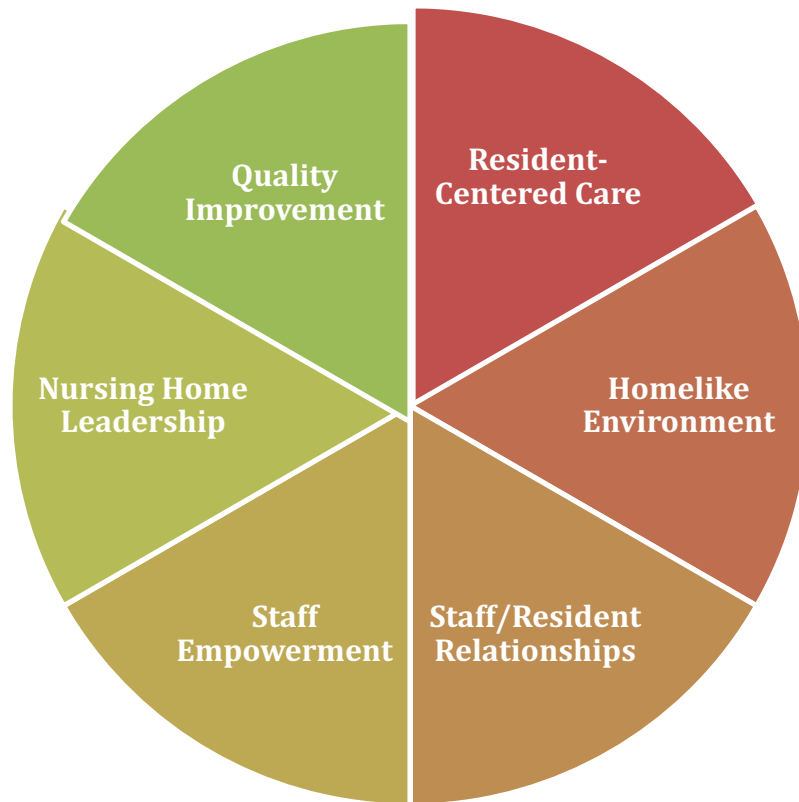
Table 5*Pearson Correlations (r) between Leaders and Staff for Culture Change Subscales*

Total Scale & Subscales	Total	Limited ^a	Partial ^b	Extensive ^c
	r	r	r	r
Total Culture Change Score	.63***	.49	.49**	.63**
Resident Care	.72***	.58*	.60***	.72**
Home Environment	.68***	.67**	.58***	.72***
Relationships	.67***	.61*	.36*	.83***
Staff Empowerment	.62***	.66**	.57***	.39
NH Leadership	.42***	.30	.32	.47*
Shared Values	.49***	.42	.29	.61**
Quality Improvement	.52***	.35	.53**	.38

^aLimited Culture Change nursing homes^bPartial Culture Change nursing homes^cExtensive Culture change nursing homes* $p < .05$ ** $p < .01$ *** $p < .001$

Figure 1

Theoretical Framework using the 2006 Commonwealth Fund Definition of Culture Change



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PILOT STUDY: BRIEF EDUCATIONAL INTERVENTION
FOR MOTHER-BABY NURSING STAFF ON ASK, ADVISE, AND
REFER FOR TOBACCO CESSATION

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Submitted to the School of Nursing in partial fulfillment of the
requirements for the Nursing Honors Program

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ABSTRACT

Purpose: Maternal smoking is the greatest modifiable risk factor for the prevention of tobacco-related adverse health outcomes to both the infant and the mother. While nurses working in maternal care units are primed to deliver appropriate patient-centered communication that focuses on the skills required by pregnant women and new mothers to successfully attain smoking cessation, communicating that message is complicated by the many competing demands that nurses experience at work. The purpose of this study was to provide brief educational training to nurses on how to efficiently assess, advise, and refer pregnant women and new mothers who smoke for smoking cessation services.

Theoretical Model: The theoretical model used to develop the training program was derived from the national Prescription for Change Model developed and used by interdisciplinary health care professionals.

Design: This pilot study used a one-group pre-test, post-test pre-experimental design.

Setting: Two maternal care units at a Midwestern University Medical Center Hospital.

Participants: A convenience sample of 17 maternal child nurses.

Methods: A 10 minute educational training was provided during an in-service session for the nursing staff. The educational training included information on: a) Ask, advise, and refer, and b) use of a reminder card to be used by the nursing staff. A baseline survey was given with the initial training session, and a second survey was sent out eight weeks post-training.

Results: Four nursing staff completed the baseline survey and three completed the second survey. The nurses who completed the surveys were female, with a mean age of 39 years, and had

worked on the unit for an average length of 5 years. Nurses reported being highly confident in their abilities at delivering tobacco cessation services.

Conclusions: Issues of nurse participation in educational research identified in this study are discussed. In the future, modifications will be made to the educational training program to enhance nurses' participation in this type of practice-based research.

INTRODUCTION

In 2005, 10.7% of pregnant women continued to smoke during their pregnancy, with higher smoking prevalence rates reported among disadvantaged women (Center for Disease Control, 2007). This is a concern to health care providers because maternal smoking is causally linked to poor health outcomes for the woman including ectopic pregnancy, premature rupture of membranes, abruptio placentae, placenta previa, spontaneous abortion, as well as for the fetus (e.g. preterm delivery, stillbirth, neonatal mortality, low birthweight, and sudden infant death syndrome) (Surgeon General's Report, 2001).

Nurses are well positioned to help their patients with smoking cessation because they are the largest group of health care professionals, are well respected, and have more contact with hospitalized patients than any other health care professional group (Barta, S.K. et al., 2005; Haddock & Burrows, 1997; Rice, 1999). Although nurses are in a strategic position to participate in smoking cessation interventions, they are not prepared for health promotion counseling. Limited knowledge and training, insufficient skills and confidence, perceived lack of patient motivation, and a shortage of time are all reasons why nurses are inadequately engaging in smoking cessation activities (Barta, S.K. et al., 2005; Griebel, Wewers, & Barker, 1998; Johnson et al., 1999; Wewers, Ahijevych, & Sarna, 1998; Williams, Spence-Laschinger, & Weston, 1999).

Review of Literature

Published research on nurses ability to deliver tobacco cessation information to patients reveals a major theme--nurses, regardless of training or practice location face many barriers that result in inadequate engagement in smoking cessation activities with their patients.

Barriers to Smoking Cessation Counseling Among Nurses

Smoking status of the nurse has been found to be a potential barrier to providing smoking cessation counseling to their patients. Nursing students who do not smoke have been found to feel that it is their professional responsibility to help smokers quit, whereas nursing students who do smoke felt that it is not their professional responsibility to help smokers quit. Nursing students who smoke were more likely to report agreement with the psychoactive benefits of smoking than nursing students who do not smoke. As well, nursing students who smoke reported less agreement with the negative aspects of smoking compared to nursing students who do not smoke (Lenz, 2008).

Common barriers to counseling pregnant patients who smoke among nurse-midwives was lack of time (14%) and not knowing where to send pregnant smokers for treatment (14%) (Price, Jordan, & Dake, 2006). The majority of nurse midwives (74%) reported that nicotine replacement therapy would be useful in helping pregnancy smokers stop smoking, but only 26% of the nurse midwives were confident in their ability to prescribe/recommend nicotine replacement therapy.

Predictors of tobacco use assessment and smoking cessation intervention by office-based nurses found that nurses who had not had tobacco-related continuing education within the previous year or had less than five years of nursing practice were less likely to assess patient tobacco use. Results of this study also supported that nurses were less likely to assess tobacco use if they were not a nurse practitioner. The authors concluded that continuing education, skills development, and improved understanding of tobacco cessation facts may increase nurses self-efficacy towards delivering tobacco cessation information to patients (Wetta-Hall et al., 2005).

Sarna and Bialous (2005) report on similar barriers identified by nurses certified in oncology with respect to helping patients with smoking cessation. The authors reported that appropriate knowledge and skills in tobacco cessation, along with a sense of accountability and expectation were identified by nurses as reasons for not engaging in assisting oncology patients

with stopping tobacco use. The authors reported that “lack of clinical interventions, limited research, an absence of professional policies, and minimal nursing leadership have diminished the critical role that nurses can play in confronting this epidemic” (Sarna and Bialous, 2005, p. 21).

Supporting Sarna and Bialous comments, Whyte, Watson, and McIntosh (2006) report that in order for nurses to participate in a health-promoting role for patients who smoke, they need knowledge of the physical and psychological effects of smoking, as well as smoking cessation strategies.

Changing Behavior through Education

Evidence-based practice (EBP) is defined as using the best proven information when making clinical decisions. EBP is especially important for intervening with tobacco-dependent patients. Research has found EBP to improve patient care and healthcare outcomes, yet nurses are still not prepared to embrace an EBP culture. It is important to narrow the gap between EBP and tobacco cessation interventions. In order to do so, awareness about the value of EBP must be raised, empowerment to access and use EBP resources by nurses must occur, support from healthcare and academic leaders must be present, and nursing policies must be changed in the academic and clinical area. This may include requiring EBP training and supporting internet access availability and requiring competency evaluation of EBP tobacco knowledge and skills (Heath & Andrews, 2006; Mazurek-Melnyk & Fineout-Overhold, 2004; Heath, 2004)

Research supports that when evidence based smoking cessation counseling is offered by nurses, the outcomes are very positive. Smokers who were offered advice by professional nurses found to have an increased likelihood of quitting by approximately 50%. This has been found in various clinical settings and among both healthy smokers and those with tobacco-attributed illnesses (Wewers, Sarna, & Rice, 2006).

Advanced practice nursing students who attended smoking cessation counseling workshops during their program of study showed a significant increase on tobacco cessation knowledge and

self-efficacy in providing tobacco cessation counseling on post-training measures (Heath et al, 2006; Kelley, Heath, & Crowell, 2006).

The Prescription for Change Model (Rx for Change), evolved from the Transtheoretical Model of Change, incorporates evidence-based material and is an educational model aimed at helping a variety of health care professional assisting all patients with tobacco cessation. The Rx for Change Model has been tested among pharmacists, nurses, and physicians. One of the benefits of the Rx for Change model is that it is a comprehensive educational program, but different components of the model can be used and tailored for specific educational needs. In the original Rx for Change model, the 5 A's are listed and are: Ask, Advise, Assess, Assist, and Arrange (used interchangeably with Refer).

The Rx for Change model was used to train nurses who worked on an oncology unit. The nurses had good to very good ratings of their overall ability to help patients quit tobacco despite not having previous training in tobacco cessation with only 49% reporting that the information was new. Six months after the training session, all respondents had counseled or referred at least one patient to a smoking cessation program. However, the study indicated that knowledge gains were not maintained over 6 months. The authors acknowledged that improving the performance of nurses to deliver tobacco cessation advice may require the addition of brief reminders of how to help patients stop smoking (Matten, Chung, Rutledge, & Wong, 2007).

These studies collectively found that lack of knowledge and lack of time were the two main reasons cited by nurses as reasons for not actively assessing and counseling patients on tobacco cessation. As well, these studies revealed the positive outcomes that take place when nurses are provided education on how to participate in smoking cessation counseling. However, there is limited information as to whether a brief educational training session on tobacco cessation will assist nurses in the maternal child in-patient setting in providing tobacco cessation services to

pregnant women and new mothers. It is unclear if a brief educational intervention on how to efficiently and effectively assess, advise, and refer pregnant women and new mothers who smoked would improve the self-efficacy of the nurses in regards to their tobacco cessation skills. The purpose of this study is to evaluate if a brief educational intervention using the Rx for Change model improves the knowledge and attitudes towards tobacco cessation skills among nursing staff employed in a maternal care unit.

METHODS

Design

This pilot study used a one-group pre-test, post-test pre-experimental design.

Instruments

The Smoking Cessation Counseling Self-Efficacy Scale (SCCSES) was used to test baseline and post-intervention knowledge and attitudes. The original SCCSES was developed to be completed by BSN students (Edwards, 2005). The original SCCSES contained 20 items and focused on the following six domains: Ask, Advise, Assess, Assist, Arrange, and Motivational Intervention. The SCCSES uses a Likert format with 1 being “not confident at all” to 5 being “very confident”. For the purposes of this study an abbreviated version of the SCCSES scale was used (Appendix A). In the abbreviated scale, there were nine questions that focused on the subject’s knowledge and attitudes of asking a patient about tobacco use, advising a patient to quit using tobacco, and arranging follow-up help with tobacco cessation. In addition, the stem of the question was modified to address the specific population of this study, pregnant women and new mothers. An example of a question was “How confident are you right now that you would be able to ask a new mother/pregnant patient on admission if they use tobacco?” Currently there are no reported reliability for this scale as it is being developed (L. Edwards personal communication, 10 November, 2009).

A brief demographic questionnaire was developed for the study (Appendix B). The one page questionnaire included information on tobacco history in addition to age, gender, level of education, and information on work experience in the maternal child nursing area.

Sample

The participants were a convenience sample of registered nurses employed in two maternal child care units located in an academic hospital. All of the respondents in our study were female, with a mean age of 39.5 years (SD=11.6). The educational level of the respondents revealed that two of the respondents were prepared at the associate's degree level, one subject had a bachelor's degree in nursing, and one respondent had a master's degree in nursing. The average length of time working on the unit was 5 years.

Procedures

Human Subjects approval was granted prior to the delivery of the educational intervention. Nursing leaders from a midwestern academic medical center hospital's maternal care units met with the research team to discuss the focus and timing of the educational intervention. Based upon their input, the research team developed a brief face-to-face educational intervention that could be delivered in conjunction with a scheduled staff meeting. A cover letter was given at the time of the intervention in order to inform the participants about the study. At the agreed upon staff meeting, a member of the research team presented a 10 minute power point presentation to those nurses in attendance at the meeting. The information was given to them about Ask, Advise, Refer from the Rx for Change model.

Along with the presentation, miniature reminders were provided to the staff that reinforced what was introduced during the educational session. The reminder cards contained information on Ask, Advise, and Refer (Appendix C). The reminder was a double sided laminated badge, specifically

developed for this intervention; that could be placed on the nurses' name badge to remind them what was covered in the presentation. On the front side of the badge was how to Ask a patient about their current smoking use. On the back side of the badge was how to Advise a patient to quit smoking using a clear, strong, or personal manner and how to Refer a patient for further assistance.

Following the training session a demographic questionnaire and the Smoking Cessation Counseling Self-Efficacy Scale were placed on the unit with a request to the staff to return them to the unit manager. Three months following the initial training, respondents were asked to complete a follow up SCCSES. In addition, they were asked to complete 3 questions related to the usefulness of the educational intervention. The first question asked "Did the program meet your educational needs"? The second question asked "Have you had the opportunity to practice your skills in helping women stop smoking"? The third question was "Did you find the reminder cards helpful in reminding you about the steps to take to help with tobacco cessation"? Gift cards were provided to respondents who completed the second SCCSES.

RESULTS

Of the 17 members of the maternal child nursing units who attended the brief educational training session, 4 completed the baseline surveys and 3 completed the post-intervention surveys. In the sample of nurses who completed the baseline demographic questionnaire, one nurse reported having received tobacco cessation treatment training prior to the educational training, but the majority of RNs had not received any previous training. In addition, respondents were asked if they had received any tobacco cessation treatment in their nursing curriculum and all respondents stated that they had not received any training in helping a patient to stop smoking. At the time of the educational intervention, none of the respondents reported to be current smokers.

The total scale mean score of the SCCSES at baseline was 39.5 (SD =5.0). The total scale mean score of the SCCSES at the post-intervention period was 45 (SD=0). Due to the lack of variability in the total scale score at the 8 week post-intervention time, a one-sample T-test could not be computed. Of the nine items in the modified SCCSES, the two items that addressed asking a new mom or pregnant woman about her tobacco use showed no change in the mean item scores from baseline- to post-intervention. The other seven items of the SCCSES showed higher mean item scores at the post-intervention time relative to the baseline (Table 1). Respondents (N=3) who completed the post-intervention questionnaire did report that the program met their education needs on how to address tobacco cessation with pregnant women and new mothers. In addition, all respondents at the post-intervention time period reported having interactions with pregnant women and new mothers about tobacco cessation and felt the reminders were helpful in developing their skills in delivering tobacco cessation advice.

LIMITATIONS AND RECOMMENDATIONS

There were significant limitations to our study. Two of the major limitations of our study were related to our sample. First, a convenience sample was used in the study instead of a randomly selected group of nurses. Although randomizing the nursing staff into a control group and an intervention group would have significantly improved the design of the study, it would have been difficult to enact. The second significant limitation was the small sample size. The third noteworthy limitation of the study was the lack of reliability data on the SCCSES instrument that was used for this study. Although the SCCSES is a valid tool for measurement of the intervention delivered to the nursing staff, it lacks any published reliability data to support its use.

In retrospect, the research team discussed the types of decisions that were made in the development of the project, and how those decisions impacted the overall implementation of the project. While considering the design for our study, the research team met with key leaders from

the mother/baby and labor and delivery units. Major decisions about the study involved the input of the key leaders. However, the target of the study was the staff nurses. In hindsight it may have been more beneficial to obtain input from the staff nurses before making decisions about the design of the study.

It may have also been beneficial to provide the brief education intervention in a different format. A larger sample of nurses may have been recruited to participate if the educational intervention had been delivered in a more accessible manner, for example an online tobacco cessation tutorial. In addition, the educational intervention was provided only once, which limited the number of nurses who attended the training session. If the educational intervention had been offered on different dates and times of day, it is possible that the overall sample size would have been adequate to detect a difference in tobacco cessation self-efficacy from baseline to post-intervention.

The questionnaires could also have been delivered in a different format. Instead of using a paper and pencil format, questionnaires could have been sent electronically. The current method of paper and pencil questionnaires left on the unit for completion has the potential to diminish the value of the study. The use of paper and pencil questionnaires may have been one of the key reasons why the response rates were so low at baseline- and post-intervention.

The layout of the academic year may have also contributed to our small sample size. The educational intervention was given at the end of the research team's academic semester, before a five week break. Normally we would try to avoid breaks in semesters in order to prevent a delay in data collection. Earlier email reminders to the nursing staff might have improved the response rate.

No one questions the importance of having maternal child nurses deliver effective smoking cessation counseling. It is assumed that behavior change is most likely to occur when knowledge, skills, and attitude related to that behavior change are addressed. Results of this study indicate that

changes in knowledge about advising and referring new mothers and pregnant women about tobacco cessation improved, although we saw no change in nurse's confidence in their knowledge and skills at asking new mothers and pregnant women about their tobacco status. While the results of the pilot test are promising, methodological issues that arose in this study must be addressed in future research to increase nursing's participation in practice-based research.

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APPENDIX A

Table 1. *Mean Item Scores on Modified SCCSES at Baseline and Post-Intervention*

Item	Baseline <i>M</i> (<i>SD</i>)	Post- Intervention <i>M</i> (<i>SD</i>)
1. Ask a new mother/pregnant patient on admission if they use tobacco.	5(0)	5(0)
2. Ask a new mother/pregnant patient about her tobacco use in a non-threatening manner.	5(0)	5(0)
3. Advise a new mother/pregnant patient who uses tobacco to quit in a clear manner.	4.5(.58)	5(0)
4. Advise a new mother/pregnant patient who uses tobacco to quit in a strong manner.	4(.82)	5(0)
5. Advise a new mother/pregnant patient who uses tobacco to quit in a personalized manner.	4.25(.96)	5(0)
6. Discuss the benefits of stopping smoking with a new mother/pregnant patient.	4.25(.50)	5(0)
7. Provide practical counseling about stopping smoking to a new mother/ pregnant patient.	4(.82)	5(0)
8. Encourage a new mother/pregnant patient to ask for support from family and friends when quitting smoking.	4.25(.96)	5(0)
9. Arrange follow-up assistance for a new mother/pregnant patient who wants to quit smoking.	4.25(.96)	5(0)

Code Number:

Date:

Smoking Cessation Counseling Self-Efficacy Scale

Below is a list of nine situations that focus on the tasks of Ask, Advise, and Arrange when helping a new mother/pregnant woman stop smoking. Please read each question and answer the best you can.

How confident are you right now that you would be able to:	not at all confident	not confident	neutral	somewhat confident	very confident
1. Ask a new mother/pregnant patient on admission if they use tobacco.	1	2	3	4	5
2. Ask a new mother/pregnant patient about her tobacco use in a non-threatening manner.	1	2	3	4	5
3. Advise a new mother/pregnant patient who uses tobacco to quit in a clear manner.	1	2	3	4	5
4. Advise a new mother/pregnant patient who uses tobacco to quit in a strong manner.	1	2	3	4	5
5. Advise a new mother/pregnant patient who uses tobacco to quit in a personalized manner.	1	2	3	4	5
6. Discuss the benefits of stopping smoking with a new mother/pregnant patient.	1	2	3	4	5
7. Provide practical counseling about stopping smoking to a new mother/pregnant patient.	1	2	3	4	5
8. Encourage a new mother/pregnant patient to ask for support from family and friends when quitting smoking.	1	2	3	4	5
9. Arrange follow-up assistance for a new mother/pregnant patient who wants to quit smoking.	1	2	3	4	5

APPENDIX B

**A BRIEF EDUCATIONAL INTERVENTION FOR MOTHER-BABY NURSING STAFF ON
ASK, ADVISE, AND REFER FOR TOBACCO CESSATION**

Demographic Questionnaire

Code Number: _____

Date: _____

1. What is your gender? Male Female

2. What is your educational level (mark all that apply)?

LPN

RN

BSN

Other

3. Age as on the present day (please write): _____

4. Have you participated in smoking cessation training in the past?

Yes

No

5. Did you have smoking cessation education in your nursing curricula?

Yes

No

6. Are you a smoker?

Current

Ex-smoker

Never

7. How long have you worked on either unit 54 or 56 (please write out)? _____

APPENDIX C

ASK

Indicate current smoking status.

- I have NEVER smoked, or have smoked LESS THAN 100 cigarettes in my lifetime.
- I stopped smoking BEFORE I found out I was pregnant, and I am not smoking now.
- I stopped smoking AFTER I found out I was pregnant, and I am not smoking now.
- I smoke some now, but I cut down on the number of cigarettes I smoke SINCE I found out I was pregnant.
- I smoke regularly now, about the same as BEFORE I found out I was pregnant.

ASK

Indique su situación actual con respecto a fumar.

- NUNCA he fumado, o he fumado MENOS DE 100 cigarrillos en toda mi vida.
- Dejé de fumar ANTES de enterarme que estaba embarazada, y no fumo ahora.
- Dejé de fumar DESPUES de enterarme que estaba embarazada, y no fumo ahora.
- Fumo un poco ahora, pero reduje la cantidad de cigarrillos que fumo DESDE que me enteré que estaba embarazada.
- Fumo regularmente ahora, aproximadamente la misma cantidad que ANTES de enterarme que estaba embarazada.

Advise

Be clear, Be strong, and make it personal

- Emphasize that quitting smoking is the most important change she can do
- Emphasize the benefits of quitting for her and her baby
- Use positive language

Arrange

Follow up to monitor her progress with smoking cessation

- Provide and identify support
- Notify U-Kan-Quit
- Counsel the patient about potential relapse