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THE EFFECT OF A SMALL GROUP LIFE STORY NURSING INTERVENTION ON RURAL COMMUNITY DWELLING OLDER ADULTS AT RISK FOR DEPRESSION

by

Lillian Jones

A dissertation

submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy in the School of Nursing

Idaho State University

April 2017

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June 8, 2016

Lillian Jones
School of Nursing
MS 8101

RE: regarding study number IRB-FY2016-358 : A Nursing Intervention to Decrease the Risk of Depression in Rural Community Dwelling Older Adults

Dear Ms Jones:

Thank you for your responses from a review of the study listed above. These responses qualify for expedited review under OHRP guidelines. This is to confirm that I have approved your application.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

You may conduct your study as described in your application effective immediately. The study is subject to renewal on or before Jun 8, 2017, unless closed before that date.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Contact Tom Bailey (208-282-2179; email humsubj@isu.edu) if you have any questions or require further information.

Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

To the Graduate Faculty:

The members of the committee appointed to examine the dissertation of LILLIAN JONES, find it satisfactory and recommend that it be accepted.

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TABLE OF CONTENTS

List of Figures

List of Tables

List of Abbreviations

AOA: Agency on Aging

CDC: Centers for Disease Control and Prevention

DSM-V: Diagnostic and Statistical Manual of Mental Disorders, fifth edition

GDSsv: Geriatric Depression Scale short version

MSPSS: Multidimensional scale of Perceived Social Support

PTSD: Post Traumatic Stress Disorder

RUCC: Rural Urban Continuum Codes

NIMH: National Institute of Mental Health

WHO: World Health Organization

Abstract

Objective: To determine if a small group life story nursing intervention is beneficial to rural community dwelling older adults by decreasing the risk of depression and increasing perceived social support. Design: This study employed a pretest-posttest design and surveys. Setting: This study was conducted in thirteen rural senior facilities with a community population of less than 20,000 in two states located in the western part of the United States. Participants: This study used a convenience sample of 137 English-speaking adults over age 60 years who visited the rural senior centers. Participants were eligible for the study if they were negative for dementia and scored four or greater on the Geriatric Depression Scale short version. Of the 137 volunteers, 40 participants had depression scores of four or greater and were placed into control or intervention groups. Method: This study utilized the Geriatric Depression Scale short version and the Multidimensional Scale of Perceived Social Support to determine if a small group life story nursing intervention resulted in a decrease in reported depression scores and increased reported social support scores in the intervention groups. Result: No significant difference was noted between pretest and posttest scores based on the intervention. Surveys resulted in three main themes: social interaction, community building, and participation. Conclusion: One-on-one life story interventions may be more effective than small group life story interventions in decreasing depression in older adults. Post-intervention evaluation surveys indicated that participants perceived increased social interaction as a benefit of the small group life story intervention.

Chapter I

Introduction

Statement of the Problem

There is a great need for nursing interventions that promote mental health and wellness in rural populations, especially for the older adults living in these communities. Life story as a therapeutic intervention has been used with different age groups to promote healing and recovery in patients with mental illness (Moya & Arnold, 2012). However, there are only a few nursing studies available that have used this intervention in older adults and these have focused primarily on older adults with dementia (Karlssen et al., 2014; Subramanian, Woods, & Whitaker, 2014; Russel & Timmons, 2009). One exception to this was a study done in an urban community setting with older Chinese participants that reported decreased depression scores during a five-session intervention (Chan et al., 2013). The goal of this research is to examine life story as an intervention in rural community living older adults to determine if it is effective in decreasing the risk for a developing or worsening depression.

Because the over 60 population is growing and is predicted to reach 83.7 million by the year 2050 (U.S. Census Bureau, 2010), most people may expect to live long past the standard age for retirement. Along with increased longevity, older persons can expect to live longer with one or more chronic illness (Dexter et al., 2010). Chronic illness predisposes the older adult to depression. In addition, the medications that are used treat these illnesses can cause or increase the severity of depression (Taylor, 2014). Rural life presents additional risks to a developing or worsening depression for many reasons (Smalley, Bryant, & Rainer, 2012): lack of resources for assessment and treatment,

access and transportation issues, environmental issues, and culture can all act as barriers to obtaining adequate care (Winters, 2013).

Rural life challenges the desire of many rural dwelling older adults to stay in their homes and age comfortably in place. Besides decreased access to health care services, rural life can predispose older adults to social isolation (Nicholson, 2012). Isolation, while often considered a benefit of rural living, can also be a detriment to a person who is unaware of a developing depression (Bascu et al., 2012). Many rural older adults believe that depression is a normal part of growing old (NIMH, 2015; Kitchen Andren et al., 2013). Indeed, old age can be a time of multiple losses: of friends, spouses, and family members; and, while some grieving is normal, continuing sadness that affects a person's daily functioning or further isolates the person is not normal (NIMH, 2015). According to a 2012 Canadian study (Bascu et al., 2012) and an Australian study on rural mental health (Kelly, 2011), researchers noted that those rural adults who reported having the most social support and social connection also reported a greater sense of health and wellbeing. Therefore, health and wellbeing can be promoted by providing interventions that are designed to increase social interaction and social support.

According to rural nursing theory, the rural dweller's concept of health lies in his/her ability to work and be functionally capable mentally, physically and emotionally (Winters, 2013). This concept of health is part of a culture that holds steadfastness and self-reliance as values, and holds communities together. Rural dwellers may be suspicious of outsiders and their help is often not accepted (Winters, 2013). Furthermore, the decreased privacy of small communities and the stigma associated with mental illness

can often prevent an individual from admitting to having problems or asking for help (Kitchen Andren et al., 2013).

All these factors of rural living: the culture, environment, access to services, the availability of assessment and treatment by a mental health provider, transportation, and isolation, can affect the development, progression and outcome of a mental disorder in the older rural dweller. Considering that in 2013, the suicide rate was the first highest in the nation among adults over 45 (19.1% of all suicides), the second highest for adults older than 85 (Mental Health America, 2016), and that rural suicides outnumber urban suicides (Smalley et al., 2014), finding innovative interventions for decreasing the risk of depression in rural older dwellers is of extreme importance.

Purpose

The purpose of this dissertation study is to determine if a life story nursing intervention can benefit older adults living in rural areas. Because rural dwelling older adults are at high risk for social isolation, and consequently, a developing or worsening depression, the primary goal of this research is determining the effectiveness of an intervention in promoting social connectedness and mental well-being in the older adult.

Research Questions

Can the small group life story nursing intervention decrease the risk for a developing or worsening depression in a rural older adult population? Will the older adult report an increase in social support from this intervention?

Research Hypotheses:

This dissertation focused on these two main hypotheses:

1. There will be a significant reduction in reported Geriatric Depression Scale short form (GDSsv) scores post intervention in the treatment groups.
2. There will be a significant increase in scores on the Multidimensional scale of Perceived Social Support (MSPSS) post-intervention in the treatment groups.

Definitions

For this dissertation, older adult will be defined as 60 years and older as determined by the United Nations cutoff (WHO, 2017). Life story is a method of research which originated from history, anthropology, and recently from phenomenology for reconstructing and interpreting the life of an ordinary person (Burns & Grove, 2009). Social isolation has been defined as lacking a sense of belonging, social engagement and quality relationships with others (Dury, 2014). Loneliness or emotional isolation is a subjective component of feeling alone and involves feeling a loss of companionship (Dury, 2014). Being socially connected, a person can identify his or her relationships, support systems or belongingness to a family or group (Cornwell & Waite, 2009).

The World Health Organization (WHO), for the purposes of this dissertation, defines depression as a common mental disorder that is characterized by sadness, loss of pleasure or interest, feelings of guilt or self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration (WHO, 2016). The Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5), classifies major depression as the presence of sadness or anhedonia for two or more weeks along with five or more symptoms (American Psychiatric Association, 2013). These symptoms can include irritability, complaints of aches and pains, other somatic symptoms, and suicidal ideation in addition to those from the WHO's list (NIMH, 2015; Taylor, 2014).

The U.S. government's official definitions differ as to what is considered rural. Per the U.S. Census Bureau (2010) designation, "rural" encompasses all population, housing and territory not included within an urban area. Urban areas are defined as having a population greater than 50,000, and an urban cluster is defined as having a population of 2,500-50,000 people (US Census Bureau, 2010). The RUCC (U.S. Department of Agriculture, 2015) however, designate those areas of less than 20,000 people as non-metropolitan, with those less than 2,500 as completely rural.

Assumptions/Limitations

This research assumes adequate sample and power. In similar research, Chan et al. (2013) used snowball sampling for participant recruitment with a final participant total of 26 urban dwelling older adults. Because this study will be done on a rural population, several problems can be anticipated in the recruitment of an adequate sample. As noted by Cudney, Craig, Nichols, and Weinert (2012) in their experience of rural participant recruiting from five western states, recruitment takes longer and is costlier than urban recruitment. Recruitment strategies need to be unique and well-planned for rural areas (Cudney et al., 2012): time constraints, distance and participant withdrawal are hazards than can be solved through over-recruitment, limiting the research area, and being aware of the local rural culture that may present as a barrier.

This research also assumes optimal testing and intervention conditions, which can be controlled to a certain extent. Because of the possible bias that may exist towards the group leader (nurse researcher), post-tests will be administered and data collected by individuals not connected to this study. The effect of group leader on the intervention may or not be a confounding variable that will be addressed during the discussion.

However, it is felt that since the aim of this study is to increase social interaction, the effect of the leader can be considered beneficial.

Significance

This research will potentially add to the current literature concerning rural community living older adults and interventions to prevent, decrease the risk of developing, decrease symptoms, or decrease the severity of depression. Primary prevention through novel nursing interventions that increase social connectedness can result in better overall mental health outcomes. Determining whether the life story intervention is effective in rural settings can ultimately provide the rural nurse and other rural health care workers with an additional intervention that can enhance their care of older rural community dwelling patients.

Chapter II

Review of Literature

Social Isolation

Social isolation is a notable health risk to older adults and is associated with increased mortality and morbidity due to physical and psychological illness (Nicholson, 2012). Mental health and substance abuse studies have indicated that by decreasing social isolation and increasing social connectedness, the recovery and entry of an individual into treatment can be enhanced (Mericle, 2014; Moya & Arnold, 2012). Indeed, programs such Alcoholic Anonymous (AA) advocate increasing one's social network by getting a sponsor and attending meetings to aid in maintaining sobriety (Mericle, 2014). Lack of social connectedness or thwarted belongingness, as well as perceptions of increased burdensomeness, have been implicated as risk factors for increasing depression and suicidal ideation in studies with mental health outpatients (Hames, 2015), and older adults (Van Orden et al.,2014). Lastly, in their psychiatric nursing theory of depression, Feely and Long (2009) proposed that lack of social connections contributed significantly to a person's level of depression and well-being.

Depression in Older Adults

The NIMH (2015) states that depression is common in older adults, but it is not a part of normal aging. It is often characterized by feelings of sadness, emptiness, hopelessness and anxiety (NIMH, 2015). In the older adult, depression can occur with Parkinson's disease, dementia and Alzheimer's Disease, as well as many other chronic illnesses such as cancer, diabetes, and heart disease (NIMH, 2015). Often medications taken for these illnesses can cause depression as a side effect (NIMH, 2015). Untreated

depression can result in further isolating behaviors and increasing suicidal ideation, therefore therapeutic measures to increase social interaction and support is paramount (NIMH, 2015; Taylor, 2014). Because not all pharmaceutical treatment for depression is appropriate for older adults, and in fact, can be dangerous to elderly patients who are already taking multiple medications, psychotherapy and other non-pharmacological therapies are recommended as first line treatments (Taylor, 2014). If the depression is severe and non-responsive to therapy and pharmacological therapy is instituted, practitioners must be aware that age-related declines in drug metabolism can result in serious side effects (Taylor, 2014). In fact, current data on the efficacy and safety of psychotherapeutic medications in older adults is scarce, that is, many of the recent psychopharmacological studies done were conducted on young college-age adults (Taylor, 2014). Although improving nutrition, increasing activity, and increasing social support can help depressed older adults, Taylor (2014) notes that many depressed individuals have an increased difficulty with initiating lifestyle changes, presenting an additional barrier to achieving wellness.

Life Story

The process of telling one's story, or the creation of a life story book, has been used in the past as nursing interventions in the United Kingdom with people suffering from mental distress (Moya & Arnold, 2012); with dementia patients in Wales (Subramanian, Woods, & Whitaker, 2014); in Norway to promote identity and dignity in long term care dementia patients, (Haggestad & Slettbo, 2015); and to increase intergenerational understanding in a study of student health care professionals working with the elderly (Chippendale & Boltz, 2015). In a qualitative study surveying members

of Alcoholic Anonymous, storytelling was found to help members sustain sobriety and maintain social networks (Lederman & Menagatos, 2011). The life story intervention was also noted to reduce symptoms in veterans suffering from PTSD (Daniels, Boehnlein, & McCallion, 2015); and narrative therapy, a specific form of storytelling therapy that involves interpreting life events in alternative ways that remove the traumatic event from the story, has shown promise in veterans suffering from PTSD, specifically by improving retention rates in therapy and decreasing symptoms (Erbes, Stillman, Wieling, Bera, & Leskela, 2014).

In a study of using a life story intervention for reducing the symptoms of depression by Chan et al. (2013), older Chinese community dwellers with mild to severe depression reported decreased scores on the Geriatric Depression Scale short version after each session over an eight-week period. Researchers attributed part of this reported decrease to the increased social interaction the intervention provided. The authors also noted in their study that very few research studies had been done in the last ten years that support life story as an intervention to decrease depression in older adults (Chan et al., 2013). The three research studies they did find were all conducted on dementia patients living in long term facilities and not in other settings (Chan et al., 2013.).

The aim of the study by Chan et al. (2013), was to determine the efficacy of a life story intervention in decreasing depressive symptoms in older urban dwelling adults. Researchers felt that mental well-being was enhanced by the one on one interaction of the life story process which enabled the participant to express unresolved feelings and fears that may have been repressed (Chan et al., 2013). Additionally, the researchers felt that the older adults appreciated the opportunity to have the attention of someone that was

interested in listening to their stories (Chan et. al., 2013). The researchers proposed that the life story intervention used also helped to the enhance communication and social interaction between the participant, family members and friends (Chan et al., 2013).

Nursing Philosophy

The nursing philosophy of this study focuses on the need for nurses in areas that have limited access to health care services. Rural and remote areas are notoriously underserved in health care. The rural nurse may be the only provider of both health and mental health care to these populations, therefore, it is important to equip these nurses with effective and novel interventions.

Theoretical Framework

The psychosocial aspects of aging according to Erikson (1980), should be mentioned in relation to the life review process and the consequence of developing depression. Per Erikson (1980), the examination of one's life lived results in either wisdom or despair: wisdom, when a life review results in pride of accomplishment and satisfaction; and, despair when life review results in regrets or bitterness of choices not taken, and/or feelings of failure or lack of accomplishment.

Cornwell and Waite (2009) have noted that classical social disengagement theories point to older adults' loss of social roles and weakening of social bonds; however, this may not apply to rural dwellers whose sense of community is more tightly bonded and culture is set in the values of self-reliance and steadfastness. According to the rural nursing theory (Long & Weinert, 1989), the ability to work and be productive is of greatest importance and defines the rural dweller's life as well as their feelings about health and wellness (Winters, 2013). Rural culture and belief systems affect how

residents deal with crises and life events (Winters, 2013). Rural culture promotes the belief that one's problems are dealt with within oneself or one's family, and that community members pull together in times of adversity (Smalley, Bryant, & Rainer, 2012; Winters, 2013).

The beliefs about and stigma of mental illness often prevent rural residents from seeking help or getting help until they are very sick or unable to work (Smalley et al, 2012). Privacy may also be a factor to those who live in small communities where everyone knows each other's business (Winters, 2013). Lee and Winters (2012), tested the concepts of the rural nursing theory and found that their results validated the original data of Long and Weinert (1989), and agreed that the lack of anonymity and increased familiarity in rural areas can act as a barrier to seeking help. Rural nursing theory provides a framework for research concerning this unique population. The concepts of the theory help to inform the researcher about developing proper approaches and methods towards and with rural residents that will facilitate the study of this population.

This study is also based on a theory of nursing that provides a model for identification, assessment, intervention and resolution of a patient problem. Peplau's Interpersonal Relations Theory (1997) focuses on the interconnectedness of the relationships between humans, environment, health and nursing. The four phases of the nurse-client relationship proposed by Peplau's theory: orientation or introduction, identification or assessment, exploitation or intervention and resolution can occur with any nursing encounter no matter the length of the encounter. According to Peplau's theory, in the case of an older adult client, when a nurse notices that the client is not behaving normally or experiencing some psychological distress, the nurse can engage the

client to assess what might be wrong. The process involves going from being a total stranger to this person to a knowledgeable resource, surrogate, counselor or teacher. By talking through the issue with the client, the nurse is taking the relationship to the exploitation phase where the client derives comfort or a relief of symptoms. Further intervention may require referring the client to mental health services as the relationship progresses to the resolution phase. The resolution phase occurs when the client's problems are either taken care of by the nurse-client interaction or new goals are agreed upon with the client that may involve a contract for safety, attending groups or other activities. Often, the client expresses relief for just having someone to tell his/her problem to. For this study, the life story group activity presents as a key component of the interpersonal relationship in which the nurse assists clients to express themselves, gain group support, and develop connections by talking about memories that they may all have in common, or have repressed in their lifetimes.

Peplau's Interpersonal Relations Theory (1997) has been widely tested and defines the metaparadigm of nursing whereas the Rural Nursing Theory does not (Senn, 2013). Rural Nursing Theory does however, offer insight into the characteristics of the population and the challenges faced by the residents. In combination, the two can be useful for gaining greater insight on this population to develop research approaches and intervention strategies.

Conclusion

Depression in older adults is common and sometimes goes undiagnosed and untreated in rural environments where culture, stigma, environment, transportation, lack of resources, and lack of anonymity can act as barriers. Isolation, which is characteristic

of rural areas, also increases the risk of worsening depression and is associated with poorer health outcomes. These barriers can become increasingly problematic in older adults who suffer from depressive symptoms and suicidal ideation. Increasing social connectedness through novel nursing interventions may help decrease the risk of a developing or worsening depression. Only a few nursing studies have been done using life story as a nursing intervention for decreasing depression, and most were done on patients with dementia. There has been only one research study that looked at community dwelling older adults, and this was done in an urban setting. Research is needed to determine if this intervention could be useful in a rural or remote setting where health care choices and mental health providers are scarce. Rural nursing theory can help guide the process of research by employing the concepts that explain the culture and beliefs of the residents.

Chapter III

Method

Design

This study started with a 2 x 8 ANCOVA design, with a target of 16 groups total, eight groups nested under the control condition and eight groups nested under the treatment condition. Insufficient numbers of eligible rural individuals aged 60 and older willing to participate in the study reduced the total groups to three per condition and did not allow for randomization. After further attrition of participants, a pretest-posttest design with a convenience sample was implemented (see Figure 1). Qualitative data included field observation and post-intervention surveys.

Sample and Sampling Procedures

After obtaining Institutional Review Board approval, this study utilized a convenience sample of volunteers recruited through on-site advertising at rural community facilities that serve older adults. These senior facilities were in areas designated as rural by the RUCC code and consisted of towns with populations of less than 20,000. Participants were English-speaking adults 60 years of age and older. After obtaining informed consent, participants were screened by a nurse assistant for cognitive function with the Mini-Cog Assessment (Borsen, 2000) and for depression using the GDSsv (Yesavage, 1988). Those with positive dementia screens were immediately excluded, and those with scores 4 or greater on the GDSsv were asked to participate in the intervention group (see Figure 1). Scores four or greater on the GDSsv were used to determine eligibility previously in the study by Chan et al. (2013), and indicate a possible risk for depression. Participant eligibility was based on the pre-screening GDSsv score,

those participants that refused the intervention group were placed in the control group (see Figure 1). The MSPSS (Zimet, Powell, Farley, Workman, & Berkoff, 1990), was also completed during pre-screening, but did not affect a volunteer's eligibility.

Participant recruitment was conducted at the investigators designed portable booth near the entrance to the lunch room of the senior centers. The booth consisted of several tables and chairs to allow for inquiries and volunteer sign-ups. All volunteers, (N = 137), were first assigned participation numbers for identification then screened by the nurse assistant at a private table in a quiet location. Demographic data was collected and consisted of age, gender, marital status, and race or ethnicity. Participants were informed that this information would be used only to describe the study sample. Participants agreeing to be in the intervention also agreed to be videotaped during the sessions. All participants were asked to supply phone contact information and their address for follow-up posttests. The posttests consisted of the GDSsv and the MSPSS and were done two months after the initial screening. Participants that were not available on the posttest day, were mailed their posttest along with a letter of instruction and a stamped, addressed, return envelope. The nurse assistant was responsible for assigning participant numbers, collecting the demographic information, and screening the participants at each facility.

Instrumentation

The Mini-Cog Assessment screening for dementia takes approximately 3 minutes, and combines a three-item recall with a clock drawing test (Borsen, 2000). The GDSsv consists of 15 items with yes/no answers and takes five to ten minutes (Yesavage, 1988). A score of zero to five is considered within normal limits, while scores greater than five

indicate probable depression (Yesavage, 1988). As previously mentioned, similar to the study by Chan et al. (2013), this study used the score of four or greater to determine eligibility for participation in the groups. The GDFsv has been found to have a 92% sensitivity and 89% specificity when evaluated against diagnostic criteria, with the reliability and validity validated by research and clinical practice (Greenberg, 2012). The GDSsv was also found to have a high correlation ($r = .84$, $p < .001$) in differentiating depression from no depression in older adults (Greenberg, 2012). The MPSS consists of a 12-item questionnaire on a Likert Scale ranging from 1-very strongly disagree to 7-very strongly agree. The items in the test are divided into three factor groups relating to the source of the social support: family, friends, and significant others, and has a reported alpha of .88 for internal consistency (Zimet et al., 1990). The possible scores for this test range from 12 to 84, with 84 indicating maximum perceived social support.

Intervention

The intervention groups met for one hour per week for four weeks. The initial session consisted of the description of the activity and the conditions of participation which included: notifying the group leader of any conflict with attending the sessions, courtesy for the speaker, confidentiality about group sessions and participant's stories heard during the sessions, and the goal of making all sessions a positive experience for all. The group members were made aware of the precautions in place should a participant react negatively to any content, this included the participant being escorted to a private room by the nurse assistant. Information about local mental health resources was made available for all participants. A follow-up call from the researcher was made 24 hours

after all adverse events requiring a participant departure from the group and those participants were excluded from the study.

The intervention groups involved multiple centers. Participants in these groups were told that the group activity consisted of storytelling, specifically stories from their lives. The group sessions addressed participants' memories about childhood, and progressed through adolescence, adult years, to current day. The sessions were recorded by a video recorder. While most life story interventions have involved written journals or photograph collections, Lal (2015) proposed a digital format for research which was implemented in this study.

A video collage presentation of group members' stories was presented at the last session. After viewing the presentation, group members were asked to complete a survey evaluating the small group life story intervention. Participants were asked the following open-ended questions:

1. What type of benefit did you receive from this activity?
2. What did you like or dislike about the activity?
3. What would you do differently?

This survey was used to obtain the participants' opinion about what they felt were the benefits and problems of the intervention. These surveys helped to determine the value and feasibility of future small group life story interventions in older adult populations.

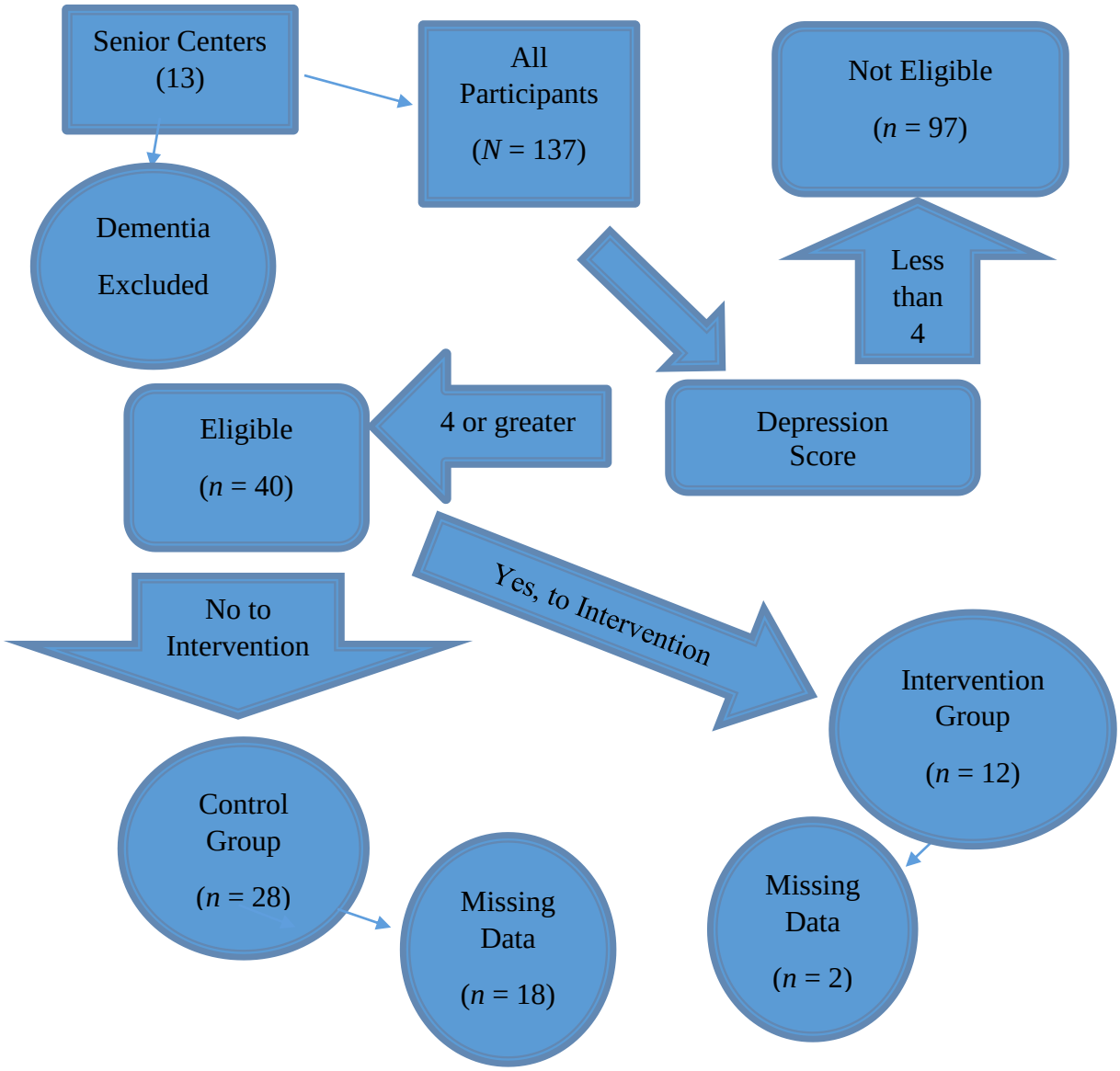

Figure 1: Participant recruitment.

Analysis

Data analysis was done using the SPSS v22 (IBM, 2013) program. Descriptive statistics were used to describe the participants. A preliminary analysis was conducted to determine if comparisons could be done on control and intervention groups. Pretest-posttest scores were analyzed by t-tests and the effect sizes measured. The control group consisted of a pseudo group without a group leader. All tests were run with a significance level of $p < .05$.

Chapter IV

Results

This study was undertaken to determine if a small group life story nursing intervention could benefit rural community dwelling older adults who are at risk for a developing or worsening depression by increasing socialization. The research questions focused on whether participation in the intervention decreased the risk of a developing or worsening depression, and whether there was an increase in social support reported post-intervention. The study hypothesized that 1) Geriatric Depression Scale short version scores (GDSsv) would decrease, and that, 2) Multidimensional Scale of Perceived Social Support (MSPSS) scores would increase in participants who took part in the four-session intervention. The results of the analysis are described in this chapter.

Descriptive Statistics

Recruitment was planned to occur over a six-month period. Thirteen senior centers with written consent obtained from their directors, and subsequently institutional review board approval obtained. Centers visited were located in rural communities with populations of less than 20,000 people, and had senior lunch programs with greater than 20 people attending daily. The rural towns chosen were situated in a large geographical area over two states in the western United States. The economy in most of these areas consisted of farming, ranching, mining, prison, and tourism industries. See Table 1 for rural center information.

Table 1

Rural Center Demographics (N =13)

Center	Town Population	Economy	Average Daily Attendance
1	8458	Farming/Military	40-50
2	1878	Mining/Prison/ Farming	30-40
3	19418	Retail/Warehousing	50-75
4	1903	Retail/Tourism	20-30
5	8964	Retail	50-75
6	5656	Retail/Ranching	75-200
7	3064	Farming	50
8	3269	Mining/Military	30-40
9	15247	Ranching/Prison	20-30
10	16299	Tourism	30-50
11	7887	Farming/Mining	100
12	18297	Ranching/Mining	100
13	4134	Ranching/Mining	30-50

Note: Population from 2015 US Census Estimates, US Department of Commerce, at www.suburbanstats.org; average attendance from senior center director reports; economic data from www.city-data.com.

Recruitment activities occurred before, after and around the senior lunch, Monday through Friday, for one to two days. One to two centers were visited for recruiting purposes per week, the only exception being when an intervention group was scheduled

for that week. Typically, if one center had enough qualifying participants for an intervention group, the group would start the next week at that center and continue for four weeks for an hour session each week with the goal of finishing, pending center and participant availability, within an eight-week period.

Senior center staff were asked to announce and publicize the study to their members prior to and the day of the recruiting visit. Recruits were also offered small gifts and raffle tickets for a $10-20 gift card in exchange for completing the questionnaires. Table 2 and Figures 2 to 5 depict the sample demographics of those who volunteered for the study by filling out the questionnaires. Participants were predominantly single, female, in their 70's, and Caucasian. Male participants only accounted for 20% of the total; married, a little more than 30%; 7% were Native Americans; 7% Hispanics; and people over 90 years of age accounted for only 2% of the total.

Table 2

Participant Demographics (N= 137)

Demographic	Category	%
Gender		
	Male	20
	Female	80
Age		
	60-69	36
	70-79	39
	80-89	26
	90+	2
Marital Status		
	Single	69
	Married	31
Race/Ethnicity		
	Caucasian	86
	African American	0
	Hispanic	7
	Native American	7

Note: Participant demographics are not reflective of the average senior center attendance.

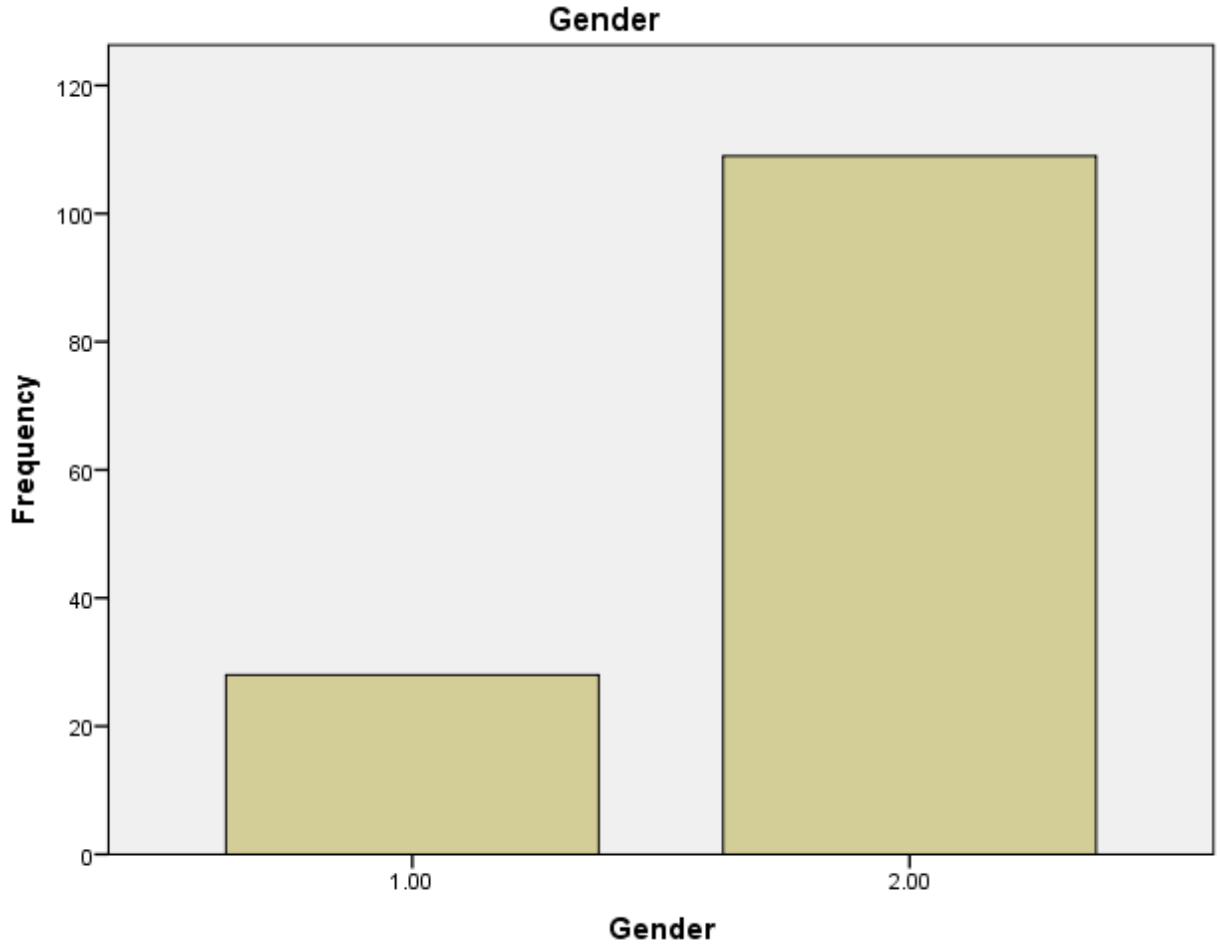

Figure 2. Frequency distribution of participants by gender, 1 = male, 2 = female.

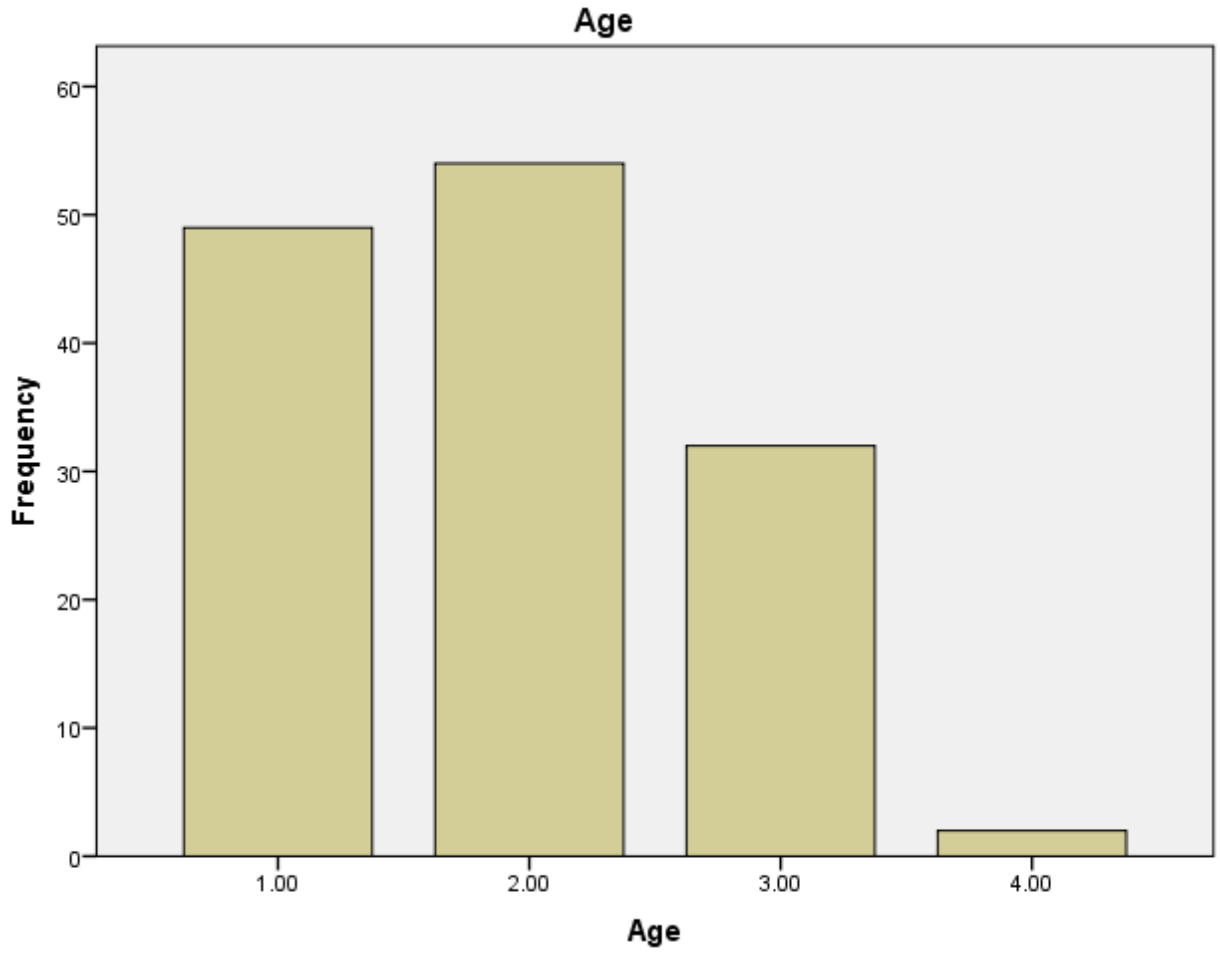

Figure 3. Frequency distribution of participants by age, 1 = 60-69, 2 = 70-79, 3 = 80-89, 4 = 90+.

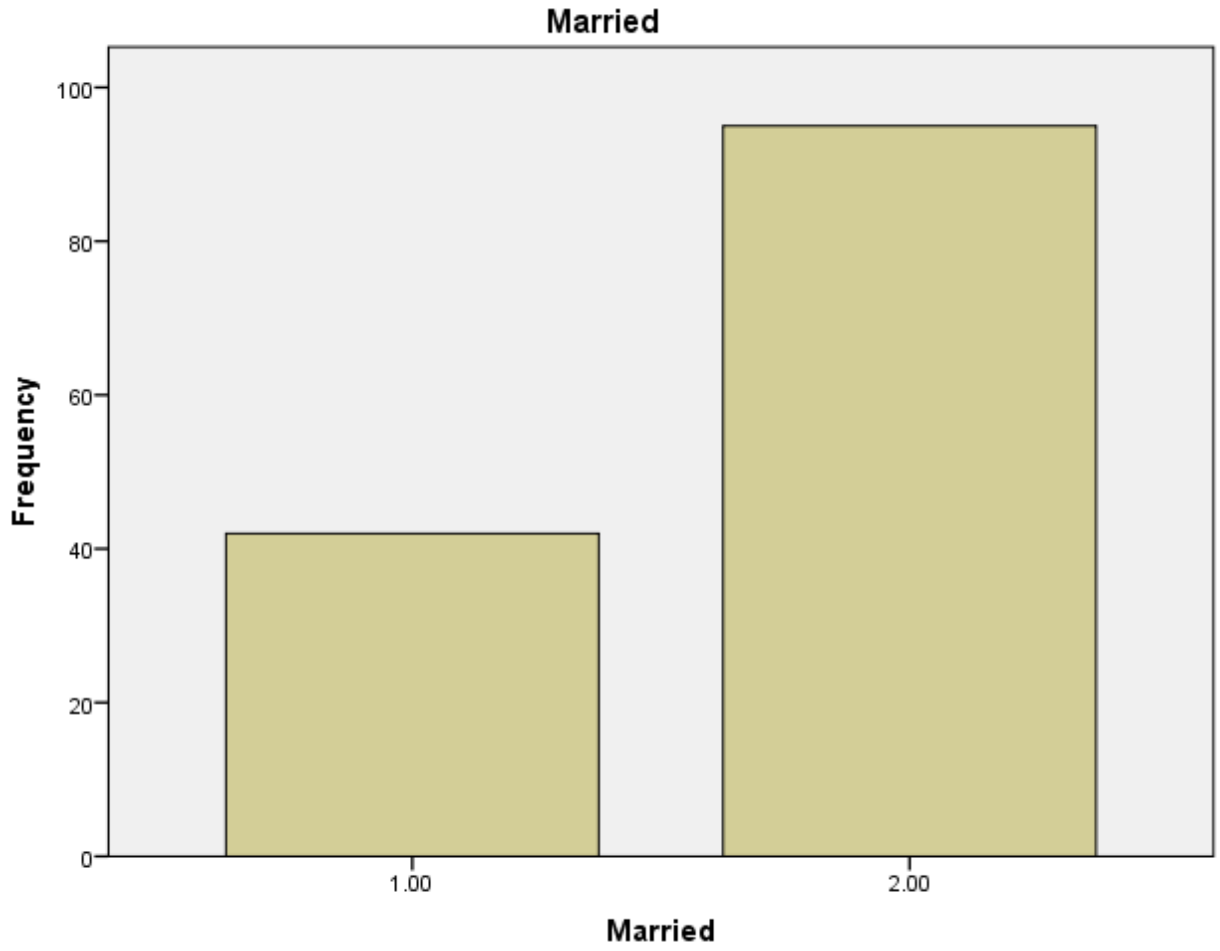

Figure 4. Frequency distribution of participants by marital status, 1 = married, 2 = single.

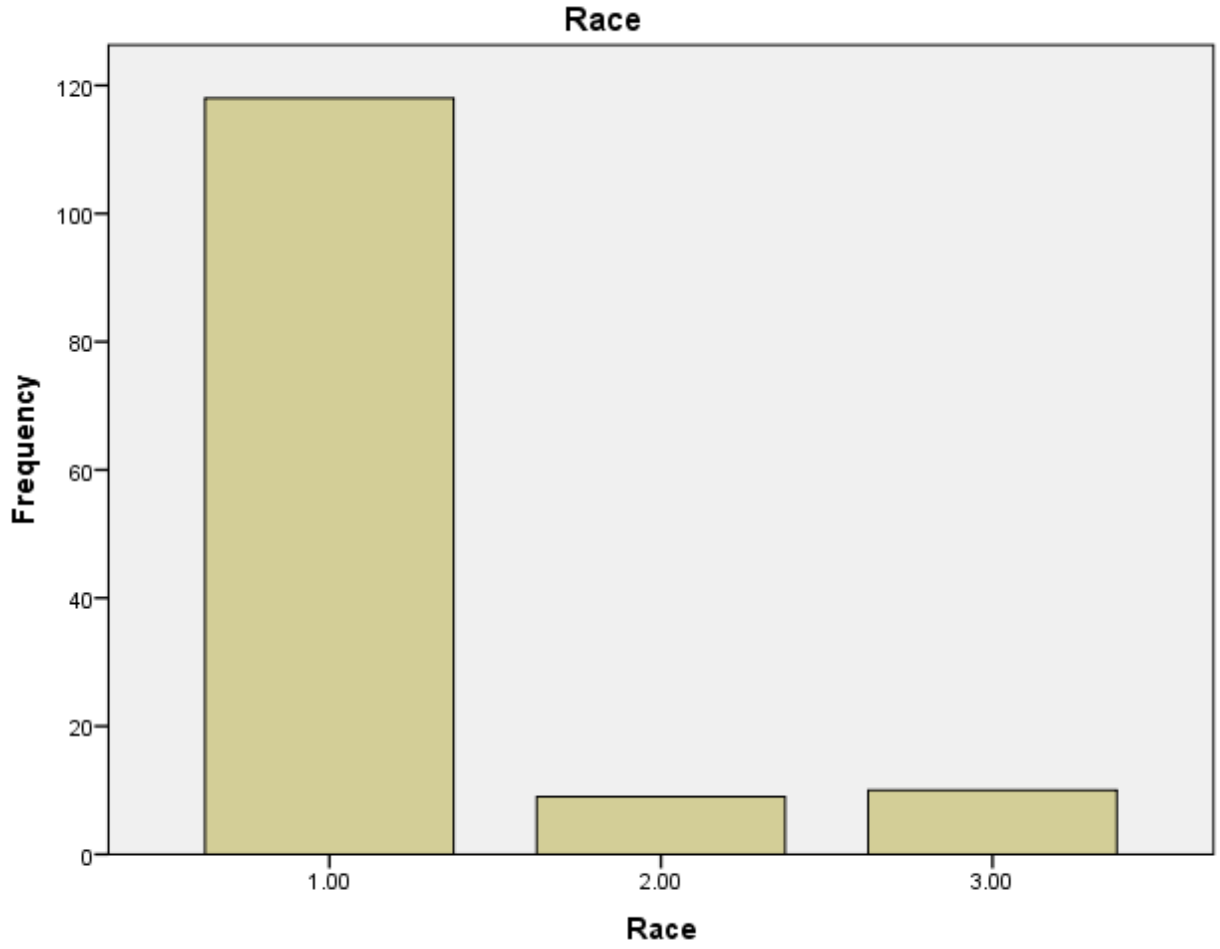

Figure 5. Frequency distribution of participants by race/ethnicity, 1 = Caucasian, 2 = Hispanic, 3 = Native American.

Effect of the Intervention

One hundred thirty-seven adult participants over age 60 were asked to fill out two questionnaires that measured mood and perceived social support to determine eligibility for the small group life story nursing intervention. Table 3 depicts the means and standard deviations for all participant scores for the two questionnaires used: the Geriatric Depression Scale short version (GDSsv) and the Multidimensional Scale of Perceived Social Support (MSPSS). One center that scored the highest mean with greatest standard deviation also had the highest number of qualifiers (see Table 1, center #7). Participants were eligible for the intervention group if they scored four or greater on the GDSsv. Figure 1 indicates that of the $N = 137$ volunteers, 71% of these did not qualify for either group; and, while 29% of the volunteers did qualify, only 30% of those agreed to participate in the intervention group. Table 4 represents the means and standard deviations of the scores of those participants that were eligible and agreed to be in an intervention group.

Table 3

Means and Standard Deviations of all Participant Baseline Scores by Center

Center	GDSsv *M(SD)*	MSPSS *M(SD)*	Eligible Participants	Intervention Participants
1	1.25(0.50)	84.00(0.00)	0	No
2	1.88(2.50)	68.29(24.18)	5	Yes, Group 1
3	3.64(3.80)	71.91(16.81)	5	No
4	2.67(3.33)	78.67(13.06)	1	No
5	2.09(2.34)	83.73(0.65)	2	No
6	2.13(2.45)	77.53(17.09)	3	No
7	4.15(4.30)	67.69(25.64)	7	Yes, Group 2
8	1.38(1.51)	82.00(5.66)	1	No
9	1.00	65.00	0	No
10	2.11(2.51)	76.42(16.95)	5	Yes, Group 3
11	2.36(2.44)	77.79(12.86)	3	No
12	3.36(4.30)	63.91(23.03)	4	No
13	3.86(3.85)	54.29(21.09)	4	No

Note: GDSsv = Geriatric Depression Score short version (Yesavage, 1988); MSPSS = Multidimensional Scale of Perceived Social Support (Zimet et al., 1990). For this study, participants scoring 4 or greater on the GDSsv were eligible for group assignment. Scores for the MSPSS range from 12 to 84, higher scores reflect greater individual perceived social support.

Table 4

Means and Standard Deviations for Intervention Groups (N = 3)

Group	Pretest 1 *M(SD)*	Pretest 2 *M(SD)*	Posttest 1 *M(SD)*	Posttest 2 *M(SD)*
1	5.00(2.00)	48.00(24.26)	7.00(3.00)	38.00(22.70)
2	5.75(1.50)	71.25(15.39)	2.50(1.91)	79.25(9.50)
3	5.75(1.71)	68.25(13.94)	2.67(2.52)	79.33(8.08)
Total	16.50	187.50	12.17	196.58
Grand	5.50(0.43)	62.50(12.65)	4.06(2.55)	65.53(23.84)

Note: Pretest, Posttest 1 = Geriatric Depression Scale short version (Yesavage, 1988); Pretest, Posttest 2 = Multidimensional Scale of Perceived Social Support (Zimet et al., 1990).

The means and standard deviations for intervention groups 1 to 3 are shown in Table 4. Preliminary analysis did not allow for comparisons of control and intervention groups due to many missing posttest scores (see Figure 1), a differential loss of participants (mortality) that created a threat to the internal validity of the experiment. This resulted in a comparison of before and after group means for the three groups in the intervention condition. Paired sample t-tests were conducted on the baseline (pretest) means and 2-month follow-up (posttest) means of the three intervention groups to determine if there was a significant difference between mean scores before and after the intervention. The level of significance was set at $\alpha = .05$ for these tests.

On the GDSsv measure, the mean difference ($M = 1.44$, $SD = 2.98$) from pretest means to posttest means was not statistically significant, $t(2) = 0.84$, $SE = 1.72$, $p = .49$, Cohen's $d = 0.48$. On the MSPSS measure, the difference ($M = 3.03$, $SD = 11.39$) from

pretest means to posttest means was also not statistically significant, $t(2) = 0.46$, $SE = 6.58$, $p = .69$, Cohen's $d = 0.27$.

The fewer than planned number of intervention groups caused a lack of power in this study. However, the intervention itself was not shown to make a significant difference between pre-and post-intervention depression scores or perceived social support scores, and may not have been significant with more groups. The effect sizes of less than $d = 0.50$ were not considered meaningful.

Effect of the Intervention: Participant Response

The intervention.

All intervention sessions took place during a time at each center when no other senior activity was scheduled and followed a similar process: at the first session for every intervention group, the leader (nurse researcher) provided the guidelines for group sharing and an example story for sharing. To start the sharing process, the leader also provided photos from the period that was to be talked about that session, these included popular movie stars, automobiles, or TV shows. These photos tended to spark the interest and memories, and start the process of sharing. For example, given a photo of Elvis, one woman during group was inspired to tell her story about the time she had met Elvis in person, and this evolved into a story telling session about famous people the other members had met.

The progression of the group session was designed to move along a life time line from childhood to older age. Because of time constraints, and to allow for full participation from all members, participants were asked to recount only one or two stories that best stood out in their memory and/or reflected a happy time in their life during the

session. The group leader acted as a mediator and time keeper to allow for equal sharing. As the goal of the intervention was to provide a positive experience for those involved in the group activity, some topics were put on a taboo list (i.e. no politics, religion or confidences that mandated nurse reporting).

Participants of the intervention groups were recorded during the sessions, but only part of the time due to technical issues with the camera at certain locations. All participants were given the opportunity to watch their video stories at the last session before filling out the evaluation form and posttests. Some participants also provided informal feedback after each session:

1. Several of the seniors felt that even though they were anxious or suspicious about the group at first, after participating in the group the first day, they stated they felt better about participating and really enjoyed the activity.
2. Many wished more people would get involved.
3. Many wished they had more time to talk, or that group time was longer so they could hear more stories.
4. One participant stated she listens to many seniors at the center talking about their lives, and believes there are many that could benefit from the group. But it was also her opinion that these seniors would prefer to talk privately than to a group.
5. One participant stated he referred to the group as his "memory group" when family and peers asked about it.

Evaluation.

At the last session, participants were asked to complete a survey that consisted of three open-ended questions:

1. What type of benefit did you receive from this activity?

2. What did you like or dislike about the activity?

3. What would you do differently?

These open-ended questions were then analyzed for predominant themes using word coding (see Figure 5). These three themes emerged:

1. social interaction;
2. community building;
3. participation.

The first and second questions had some crossover of content, specifically, benefit and what a person liked about the study produced similar answers. The only dislike comment made was from a participant that stated she had a hard time "opening up" (participant #15) to people she did not know. The third question had outliers that occurred probably because people interpreted the question in different ways. In retrospect, this could have been remedied by using specific wording in the question that referred to the group activity only. Such answers as: he/she wished his/her mom was still alive, that he/she should have come to group instead of his/her medical appointment indicated that the reviewer was not referring to the group process in his/her evaluation. Aside from these, the third question produced suggestions for better participation and keeping people on topic.

Social interaction.

The main theme of the evaluations, and purpose for this study, was increased social interaction. One intervention participant mentioned isolation in his/her evaluation, "I feel isolation is a bad thing for people especially as they age" (participant #15); one stated that the people at the center "saved his life" (participant # 47); other group members stated that the people at the center were "family" (participants #s 47, 43, 14, 149). Almost all participants mentioned that the group provided some type of social interaction: from learning about others, to making new friends, to being motivated to get out more and meet new people.

The group provided a legitimate, scheduled reason for the participant to socialize, much like a doctor's appointment. In this case, the participants were aiding the cause of research. Some participants who admitted that they did not "get out much" (participants #s 169, 177) said the group provided a reason to socialize and meet people that they would not normally interact with at the center. Additionally, the small group life story intervention gave the participant the permission to talk extensively about themselves and have the rapt attention of their peers for that session. In this sense, the group functioned to increase the participant's quality of life by allowing for verbal expression, reinforcement of personal identity, and social connection.

Community building.

Sharing stories can be an activity to build community within a group. Much like a weekly card game, members form bonds with each other even if only for a short while because they are involved in a common activity. From field notes (2016):

> … one member did not show up this session and the other members became concerned, phone calls were made, inquiries made with the office, and messages left. It turns out that the 88-year old had fallen and was in hospital. Thankfully, no broken bones.

Increased support systems, opening new worlds and friendships were the other benefits that were mentioned. These are all aspects of building social connectedness within a community. From field notes (2016):

> … one member talked about his day volunteering: he played chess with one patient at the local long term facility then read to the children at the boys and girls club. Two other group members asked about volunteering at the hospital, and another talked about visiting sick seniors. The group members felt that volunteering was a way to help them feel productive and less isolated, plus they were doing something that helped the community.

Participation.

Most of the participants made comments about wanting more people to join the group, wanting more time to tell stories, and encouraging more people to tell their stories. Participants felt the informal atmosphere of sitting in a circle or around a table was beneficial to story-telling and group participation. One participant noted he/she tended to get off on tangents and appreciated when the group leader interrupted to keep the group focused.

Theme interrelatedness.

The evaluation themes were interrelated (see Figure 5). Participation increased social interaction, social interaction built community, community increased participation,

and so on. The themes support increased perceived social interaction by the participants as the primary benefit to the intervention.

Post-intervention survey results indicate that the small group activity was an enjoyable experience for the participants and worked to increase social interaction among group members. By increasing interaction, the small group life story intervention functions as an innovative tool decreasing isolative behaviors, and subsequently decreasing the risk of a developing or worsening depression.

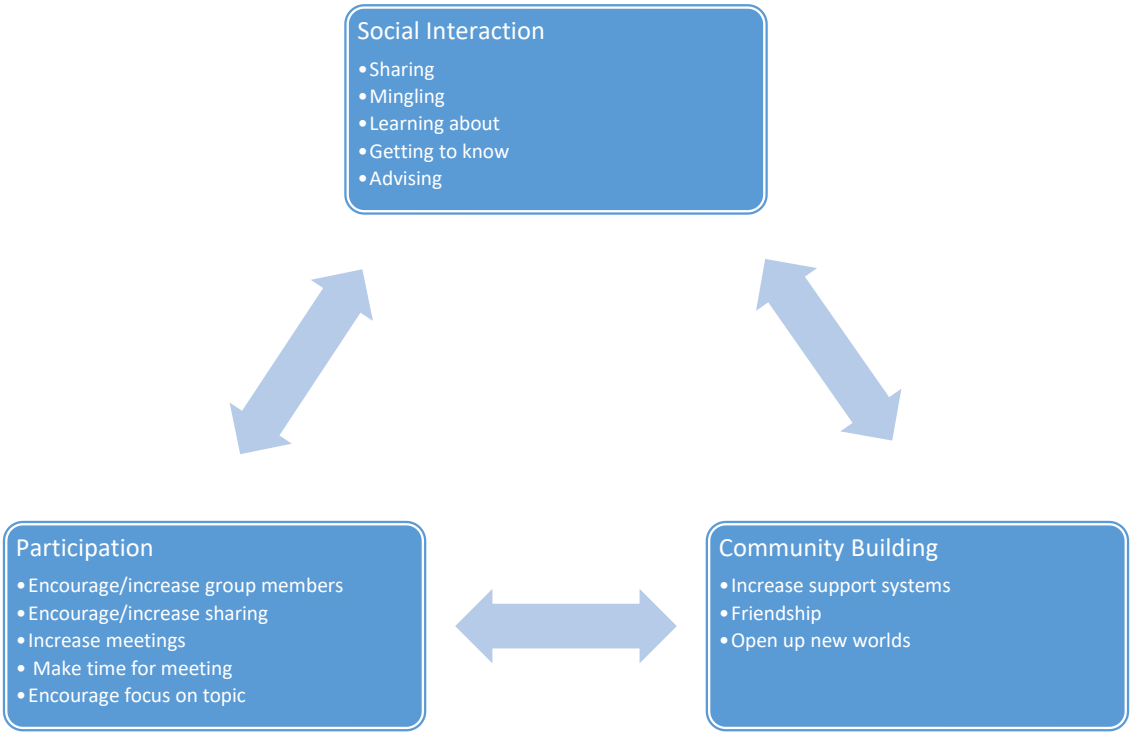

Figure 5: Word coding and theme interrelatedness.

Chapter V

Discussion

This study implemented a novel nursing intervention with rural community dwelling older adults. It is the first study that utilized a small group for a life story intervention, and it is the first, and only, life story group intervention done on non-institutionalized, rural community dwelling older adults. Past studies have all utilized one on one life story interventions, and have involved adults in long term care or mental health facilities, and have not used videotaping as a method to record the stories (Russel & Timmons, 2009; Thompson, 2011; Subramanian et al., 2012; Heggestad and Slettebo, 2014; Moya & Arnold, 2012; Karlssen et al., 2015). Only one study utilized a one on one life story intervention with urban community dwelling older adults (Chan et al., 2013), and other studies used poster or book formation as a method to record an individual's stories (Moya & Arnold, 2012).

This study validates previous rural studies that have noted that rural recruitment is difficult, time consuming and costly (Cudney et al., 2012); and, that rural culture can act as a barrier to getting and receiving help (Long & Weinert, 1989; Smalley, Bryant, & Rainer, 2012; Winters, 2013). These rural factors contributed to many issues faced in the field during this study which affected both recruitment and data collection.

This study contributes knowledge supporting the psychiatric nursing of depression as proposed by Feely and Long (2009). Feely and Long theorized that a lack of social connection worsens depressive symptoms in individuals. This lack of connection, or lack of social interaction results in even more isolative behaviors in depressed individuals. Studies done by Bascu et al. (2012), and Kelly (2011) concur, and

noting that rural older adults who increased their social connections reported greater health and wellbeing. The novel small group life story nursing intervention provides increased connection, increased social interaction, thereby decreasing isolative behaviors, and the risk of worsening depressive symptoms.

The purpose of this study was to determine if a small group life story nursing intervention could be used to promote social connectedness and mental well-being in the rural community dwelling older adult, as evidenced by decreased depression scores and increased perceived social support scores. In their longitudinal study, Chan et al. (2013) noted decreasing depression scores after each one on one life story intervention involving the urban older adult. In comparison, this study only used one posttest after four group intervention sessions and did not note a statistically significant difference between pre- and posttest scores. However, the study by Chan et al. (2013) only measured depression and did not look at increases in social support as this study did. The authors did note that it seemed that the intervention helped to improve social interactions for the older adult between family and friends. It is suggested then, that the activity, whether one on one or in a group, has utility in older adult populations. For rural populations, with the goal being to increase social connection, the small group may be a more efficient way to reach many individuals in large geographical area in a short amount of time.

Sample Characteristics

According to Burns and Grove (2009), the external validity or the generalizability of study can be affected by the number of participant refusals. Participant refusals create a sample that is composed of a certain group of individuals. In this case, volunteers were predominantly Caucasian, female, single, and in their 70's. Since WHO 2015 statistics

indicate a greater longevity for women over men, one can assume that women outnumber the men who attend senior centers; however, this study cannot confirm this or be generalized to senior center populations.

Limitations

A limitation of this study is the lack of comparisons between group conditions. Loss of participants threatened internal validity and made it no longer possible to compare participants that did not take part in the intervention to those that did. The decreased number of groups affected the study as well by decreasing the power and increasing the probability of a type II error.

Participant bias.

The issue of bias is ever present in situations where a bond is formed between participants and the researcher; in this case, there was increased familiarity with the researcher because the researcher was also the group leader. However, this was anticipated from the outset and determined to be beneficial in promoting social interaction. With the overall goal of increasing social connection, the researcher acted to encourage participants' interaction with each other and support storytelling. Therefore, a bonding or feeling of connection may have developed towards the group leader. This in turn could have affected the participants' responses to both the questionnaires and the final survey reflecting this bond and perhaps the subconscious desire to "help" the researcher succeed. This could explain the greater amount of positive versus negative comments on the written evaluations.

Because of this bias, observation was used to verify participant comments. Field observations can confirm a participant's like or dislike of an activity. Increased absences,

little or no active participation during the session, and frequent excuses to leave or not attend group would indicate a person's dislike of an activity. However, these behaviors were not observed and for the most part the participants appeared to enjoy the activity.

Issues related to rural recruitment and rural culture.

This study confirms Cudney et al.'s (2012) finding concerning rural recruitment. The long distances between recruiting sites and the research base ranged from thirty minutes to five hours one way. This resulted in a limited number of centers that could be visited for recruiting purposes weekly and a limited number of intervention groups that could be conducted daily.

One problem with intervention groups being located far from the recruiting base are no-shows. Besides creating unnecessary costs for the researcher, no-shows threaten group viability. After discussing this with one senior center director, it was suggested that reminder calls be made by the researcher as well as reminders given by the director to all group members. Reminder calls proved to be necessary for all facilities and intervention groups. These calls prevented needless costs of time and travel to far destinations.

Poor attendance may result when groups are voluntary and rely solely on the benefit perceived from attending by the participant. If the group is enjoyable, or the participant feels they are benefiting themselves or others, they are more likely to not miss a session. Absences threatened group viability in all the intervention groups. Reminder calls helped to decrease absences and unnecessary travel costs. Often, the absences were due to medical reasons, which were unplanned and unavoidable. However, these missed sessions were easily rescheduled.

Some recruitment issues that were experienced can be attributed to rural culture. This study validates previous studies that note that rural culture values self-reliance and tends to be suspicious of help or intrusion by outsiders (Smalley et al. 2012, Winters, 2013). While most of the older adults attending, the senior centers were polite and inquisitive about the research booth and what the research entailed, many were suspicious and reluctant to volunteer, give any identifying information (including demographic information), or sign the consent. Suspicion continued to linger despite detailed explanations about the study, the purpose of the study, even after participating in an intervention group. One participant phoned the researcher twice after the intervention sessions to verify the study's legitimacy, about the need for personal information, and how older adults would benefit from the study.

While suspicion may be the reason for some refusals, other aspects of rural culture can cause the participant to disqualify themselves. The values of self-reliance and steadfastness, resistance to accepting help from outsiders, and the stigma of mental illness may prevent individuals from admitting to a problem, or can perpetuate the belief that depression is normal and to be expected with old age. Therefore, rather than admit to any symptoms of depressed mood, the individual may refuse to participate for fear of being labeled, or may participate to get a gift and answer the questionnaires dishonestly. Because the questionnaires rely on a certain amount of honesty on the part of the volunteers, it is not totally improbable that many questionnaires contained untruthful answers.

Issues related to recruitment sites.

Other reasons for low recruitment numbers were booth location within the center and recruitment booth appearance. After spending two days trying to recruit at one center, it was noted that the director had requested that the recruitment booth stay on one side of a center that had two entrances, this allowed attendees to bypass the recruitment booth entirely. At subsequent centers, efforts were made to locate the recruitment booth next to where the seniors were checking in for lunch.

The lackluster appearance of the booth that was initially used was regarded as an issue deterring recruitment because the seniors were not drawn to it and attempted to avoid it. Therefore, efforts were made to make the booth both visually appealing and interesting to older adults to draw them in. Eye-catching baskets, small gifts, photos, and seasonal decorations helped to double the sign-ups. Other recruitment strategies included talking individually to the seniors at their tables, making announcements prior to lunch, and participating with the seniors in other activities prior to setting up the booth. Participating in the senior activities also helped to decrease suspicion about the recruiters and increase interest in the research study.

Lastly, low recruitment numbers may be the result of the decision to use senior centers as a recruitment setting. In the words of one center's director, "older adults who visit senior centers are not depressed, those that are depressed don't visit" (from field notes, 2016). Most senior centers offer multiple opportunities for the older adult to connect socially: daily meals, bingo, card games, exercise classes, support groups and weekly outings. However, because of the need to recruit many seniors on one day, recruitment sites were limited to places that reported a substantial daily attendance.

Issues related to attrition.

While suspicion may have affected the recruiting phase of the study, mortality affected the posttest phase of the study. Those participants that were not present on posttest days, were mailed their posttests along with a letter of instruction, and a return addressed stamped envelope. The rate of posttest return was only about 50% and insufficient to support a comparison between control and intervention groups. The low response rate might be attributed to continuing suspicion, to a lack of incentive, to an actual change in one's circumstances that the participant does not want to disclose, or to feeling of being intruded upon. One person who returned the envelope without the questionnaires, wrote "mind your own business" on the envelope, indicating that he/she did not welcome this intrusion into his/her life. Another participant, when given a reminder call, stated she did not want to return the questionnaires because she had become ill and did not want to submit a worse score to the researcher.

Issues related to small groups.

In the study by Chan et al. (2013), older Chinese adults living in an urban community were given the one-on-one opportunity to tell their life story to the researcher over five sessions. The one-on-one approach works with many individuals who are reluctant to talk during group. Small groups are problematic for individuals who are shy, protective of their privacy, suspicious of others, and fear self-exposure. Small peer groups can represent a threatening situation; something to be avoided by many people. The feeling of threat can be real or imagined and can be due to fear of judgement or rejection by peers. One group member did admit that he/she had trouble "opening up" to the group about her life for fear of rejection, and needed group member encouragement to

tell her stories. In these cases, one-on-one interventions may be the only therapeutic recourse, and although small groups can be used to increase social interaction, the life story intervention may be more successful as a one-on-one intervention as previous studies have shown (Russel & Timmons, 2009; Thompson, 2011; Subramanian et al., 2012; Chan et al., 2013; Heggestad and Slettebo, 2014; Karlssen et al., 2015).

Theoretical Framework: Peplau's Theory and the Small Group Intervention

Peplau's Interpersonal Relations Theory (1997) was used to guide nursing engagement and the small group intervention with rural community dwelling older adults. The nurse's function, according to Peplau, can range from knowledgeable resource to surrogate, to counselor, and/or teacher. In this study, the nurse researcher played all roles as group leader encouraging the older adults to open up and tell their stories as well as discussing their present-day concerns on health and the limited access to resources that rural residents experience.

In Peplau's theory, the patient derives benefit from nurse-patient relationship. The primary benefit from the small group intervention per the participants' evaluations was increased social interaction. Increasing social interaction is paramount to promoting mental wellbeing.

Implications for Nursing

Storytelling has therapeutic value, even if the story is fiction. Many current therapies focus on providing alternative stories to replace bad memories (narrative therapy), as a way to cope with tragedy in one's life, to get past a bad time, and live a more healthier existence (Erbes et al., 2014). For example: one group member frequently told stories about her life as a rodeo trick rider and how this led to meeting famous

people. It was obvious from some of her peers' reactions, that many of them were tired of her stories, and frequently turned their attention elsewhere. One group member suspected the stories were fabricated. However, this member's stories, whether true or false, had served a function in her life and provided her with an identity. The maintenance of identity in old age is important. Old age is a period, according to Erickson (1980), when people start to feel a loss of their identity due to retirement, loss of income or status, illness, hospitalization, or institutionalization. In a society that glorifies youth and beauty, there is a tendency to forget that there is a remarkable person inside that older body. Storytelling is a way to affirm one's personal identity.

The survey results in this study indicate a benefit derived from the small group activity. Small groups conducted by nurses can provide participants with an outlet to relieve boredom, support self-worth and identity, provide an outlet to express concerns, and give older adult participants the attention they need. Additionally, while many health and mental health experts have advocated increased activity for health promotion and wellbeing in older adults, according to Kitchen-Andren et al. (2013), it is not the activity, per se, that provides the most benefit to the older adult, but the increased social interaction that comes with the activity.

Future Research

Future research on the small group life story intervention may need to focus on combining a "hands on" project with storytelling. Such a project could involve an art project and storytelling. Moya and Arnold (2012) used poster creation with their one on one patients in the pilot study for the online Life Story Toolkit resource. Poster making,

collage-making, or even playing a game can be combined with the storytelling intervention.

Because of the difficulties and rural barriers experienced in recruiting and conducting research on rural older adults, further research may need to focus on members of a pre-existing support group or perhaps go to assisted living facilities where depression rates can be quite high (Allen, 2015).

Summary

This study implemented a novel nursing intervention with older adults living in rural areas. Although the results were not significant in decreasing the depression scores of the participants, the small group intervention has utility in increasing social interaction in rural community dwelling older adults. For nursing, finding novel interventions that increase social interaction and work to decrease social isolation, a major risk for depression, is important to the promotion of health and wellbeing among rural community dwelling older adults.

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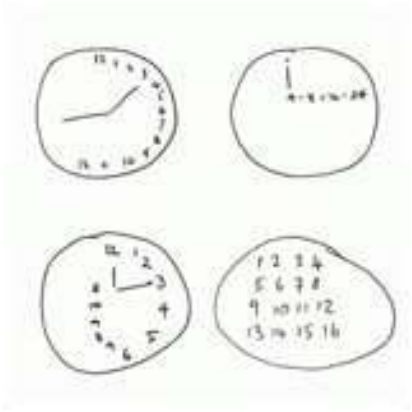
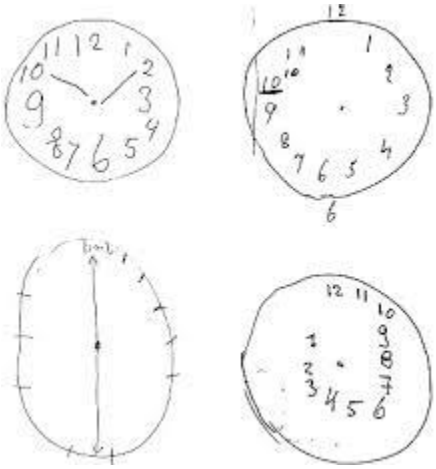
Appendix A

Mini-Cog Assessment Screen for Dementia: Example Clock Drawings





Source: MiniCog Assessment, (Borsen, 2000)

Appendix B

Demographic Information

Participant Number_____

Gender_____

Age_____

Marital Status_____

Race/Ethnicity_____

Appendix C

Geriatric Depression Scale (short version)

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

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

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

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

4. Do you often get bored? **YES** / NO

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

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

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

8. Do you often feel helpless? **YES** / NO

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

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

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

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

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

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

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

Answers in bold indicate depression. Score 1 point for each bolded answer. A score > 5 points is suggestive of depression. A score ≥ 10 points is almost always indicative of depression. A score > 5 points should warrant a follow-up comprehensive assessment.

Source: http://www.stanford.edu/~yesavage/GDS.html

This scale is public domain.

Appendix D

Multidimensional Scale of Perceived Social Support

Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2.	There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
3.	My family really tries to help me.	1	2	3	4	5	6	7
4.	I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6.	My friends really try to help me.	1	2	3	4	5	6	7
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7

Source: Zimet et al., 1990