Effectiveness Of Life Story Book On Depression And Meaning In Life For Mentally Alert Residents Of Nursing Homes

by
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ABSTRACT

Almost 50% of nursing home (NH) residents have a diagnosis of depression. Meaning in life (MIL) has been shown to be a protective factor against depression. Life Story Book (LSB) is a reminiscence intervention designed to provide a person with the opportunity to review their past and capture their history, stories, and photographs into a book. LSB has had significant effects on depression and psychological well-being for persons with dementia, but there is a gap in the literature for mentally alert NH residents. For this 9-week study, a quasi-experimental switching replication design was employed with two comparable NHs (NH-A and NH-B) and 21 mentally alert residents. The GDS-12R and the MLQ were used to measure depression and MIL respectively. Participants from NH-A ($n = 11$) and NH-B ($n = 10$) had a mean age of 75 ($SD = 11.34$). Many had some college or technical training (42.9%). Most were female (81%) and widowed (52%). Over half were non-Hispanic white (52%) and 33% were African American. The majority were Protestant (76.2%) and had been a resident for one-two years (57%). A comparison of the two groups using a one-way MANCOVA found no statistically significant difference on the GDS-12R and MLQ, $F(3, 14) = 2.50$, $p = .102$; Wilks' Lambda = .652; $\eta 2 = .35$. Although the results were statistically nonsignificant, the effect size was moderate. In light of the small sample size ($N = 21$), low statistical power, and meaningful effect size, replicating the study with a larger sample size is advisable.

Keywords: Life story work, life story book, depression, meaning in life, nursing home residents

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LIST OF ABBREVIATIONS USED IN THIS STUDY

NH	Nursing Home
ADL	Activities of Daily Living
MIL	Meaning in Life
LSW	Life Story Work
LSB	Life Story Book
GDS-12R	Geriatric Depression Scale Residential (12)
PWD	Person(s) with Dementia
SIS	Six-Item Screener
NHC	Nursing Home Compare
CMS	Centers for Medicare and Medicaid Services

CHAPTER I

INTRODUCTION

Everyone has a story to tell, if only someone will ask, if only someone will listen (Anonymous).

Problem Statement and Significance

Over one-third of American over the age of 65 will need the services provided by nursing homes (NHs) in their remaining lifetime (U.S. Department of Health and Human Services, 2017; Aragon et al., 2012). Many come to a NH for rehabilitative services, but for those persons moving into a nursing home as their permanent residence, it is often a dreaded life event (Roy, Dube, Despres, Freitas, & Legare, 2018). For those persons who are mentally alert, without dementia, but require the 24-hour skilled nursing care a NH provides, most alternative options have been exhausted or are not available to them. As the U.S. population quickly ages, there will be an increased need for NHs (Hurd, Michaud, & Rohwedder, 2017).

The number of people over 65 years of age is expected to nearly double in the next 20 years (Roberts, Ogunwole, Blakeslee, & Rabe, 2018). In 2016, there were over 49.2 million people age 65 and older. Of this group, 28.7 million were between the ages of 65 to 74 and 14.3 million were between the ages of 75 to 84. One of the fastest growing age groups, those persons ages 85 and older had a 78% increase from 1990-2010. In 2016, there were over six million Americans over the age of 85. This age group is projected to almost triple to 18.9 million by the year 2050 (Administration on Aging (AoA), 2017; U.S. Census Bureau, 2018). The average age of persons who reside in NHs is 83 years of age, and the average length of stay is 13-18 months (mortality) with over 65% of residents dying within the first year (Kelly et al., 2010).

Almost 1.4 million people now live in the nation’s 15,654 NHs (U.S. Department of Health and Human Services, 2017; CMS, 2018). Nursing home use dramatically increases with age, ranging from 17% between the ages of 65-74, 26% between the ages of 75-84, and 42% over the age of 85 (Kaiser Family Foundation, 2016). NHs provide a broad range of supportive services for persons whose physical disabilities or cognitive impairment require the skills of licensed nurses or nursing aides (HHS, 2018). These facilities provide restorative, rehabilitative, and/or continuing skilled nursing care for those in need of assistance with their activities of self-care (activities of daily living [ADL]). In 2014, the National Center for Health Statistics reported that 96.4% of residents needed assistance with bathing, 91.8% with dressing, 90.7% with walking, many requiring assistance with feeding themselves, and nearly all needing help using the bathroom (HHS, 2018). Although the majority of residents require assistance with their ADLs, cognitively there is close to a 50/50 split in the number of residents who are cognitively impaired (50.4%) and those who are mentally alert (49.6%) (Harris-Kojetin et al., 2016, p. 40).

Regardless if residents of NHs are mentally alert or cognitively impaired, depression and lack of meaning in life (MIL) are major concerns. *The National Study of Long-Term Care Providers* found that almost 50% of NH residents have a diagnosis of depression (Harris-Kojetin et al., 2016, p. 40). In addition, residents have been shown to be at an increased risk for depression (Haigh, Bogucki, Sigmon, & Blazer, 2018; Luppa, et al., 2012; Mezuk, Rock, Lohman, & Choi, 2014). Residents of NHs reported more depressive symptoms and lower quality of life than older adults living in the community (Seitz, Purandare, & Conn, 2010; Tiong, Yap, Huat Koh, Phoon Fong, & Luo, 2013). While nearly half of NH residents are diagnosed with depression, depression still remains poorly recognized because it often co-occurs with other chronic medical conditions (Harris-Kojetin et al., 2016, p. 40). Untreated depression may also result in the developing or worsening of medical conditions (Aziz & Steffens, 2014; Haigh et al., 2018). The consequences of depression can be devastating and include decreased social, physical, and cognitive functioning, greater self-neglect, the risk of suicide, and an increased risk of morbidity (Aziz & Steffens, 2014; Bogner et al., 2016; Haigh et al., 2018).

NH policies and programs have emphasized a medical model of care that focuses on quality of care and pharmacological interventions (Grabowski et al., 2014; Richter, Meyer, Möhler, & Köpke, 2012; Zimmerman, Shier, & Saliba, 2014). Quality of care is extremely important; however, quality of life is also critical to health (Rondón García & Ramírez Navarrro, 2018; Shippee, Hong, Henning-Smith, Kane, 2015). Pharmacological treatments for depression are overused with residents of NHs, and despite the many undesirable side effects for older adults, they are often the first line of treatment for depression (Boyce et al., 2012; Fried et al., 2014; Holvast, Massoudi, Voshaar, & Verhaak, 2017).

The importance of improving the quality of life for those living in NHs has become a leading cause of concern as life expectancy has increased (HHS, 2018; CMS, 2018). Quality of life has been defined for NH residents as being comprised of the following domains: “individuality, functional competence, autonomy, privacy, meaningful activity, dignity, relationships, enjoyment, comfort, security, and spiritual well-being” (Kane, 2003, p. 31). Quality of life is based on the premise that people are holistically comprised of mind-body-spirit; each of these are interconnected and one affects the other (Haugan, 2014; Haugan, Moksnes, & Løhre, 2016; Miniszewska, Chodkiewicz, & Zalewska-Janowska, 2012). One of the objectives of CMS’s National Nursing Home Quality Improvement Campaign (NNHQI) is to improve the quality of life for residents (CMS, 2018).

An aspect of the quality of life domain spirituality is MIL which is of particular importance for many older adults living in NHs and at the end of life (Bernard, Braunschweig, Fegg, & Borasio, 2015; Haugan, Moksnes, & Løhre, 2016). Burack et al. (2012) found that MIL and spiritual well-being predicted overall NH satisfaction (Burack, Weiner, Reinhardt, & Annunziato, 2012). They also found MIL to be an important factor for the mental well-being of residents of NHs as well as in the very old, over the age of 85 years. Studies have found lower MIL significantly increases the likelihood of depression among older adults (Haugan 2014; Haugan, Moksnes, & Løhre, 2016; Hedayati & Khazaei, 2014; Volkert et al., 2017). It also increases the deterioration of physical health, cognitive decline, and mortality (Hill & Turiano, 2014; Jim et al., 2015; Yu et al., 2015). Haugan (2014) found that residents reported chronic pain and fatigue as their most common physical symptoms, and that symptom severity and MIL have significant correlations. In addition, he found that MIL serves as a mediating variable for both psychological and physical health.

The personalization of interventions such as reminiscence interventions have been shown to have significant effects on psychological well-being and depression (Weiss, Westerhof, & Bohlmeijer, 2016; Woods et al., 2018; Wren, 2016), as well as provide an opportunity to attribute meaning and value to one's life (Woods et al., 2018). Reminiscence has a wide range of benefits including improved cognitive function, enhanced meaning in life, increased self-esteem, increased well-being, and decreased depressive symptoms (Huang et al., 2015; Woods, O'Philbin, Farrell, Spector & Orrell, 2018; Zhang, Hwu, Wu, Chang, 2015). A meta-analysis conducted by Cody & Drysdale (2013) found that reminiscence therapy has been shown to alleviate depression in residents with dementia.

Life Story Work (LSW) is a reminiscence intervention in which life stories − information, memorabilia, history and interests − are collected and a tangible product is produced. There are many forms of LSW tangible products, i.e. videos, collages, or books. For this study, the tangible product of a Life Story Book (LSB) was created. Creating a LSB involves using reminiscence and documenting aspects of an individual's past, present, and sometimes future desires. It involves listening to a person's story and understanding their valued and diverse history, which is essential to good care. Every person has a life story and these unique stories can be used to convey who that person is to those around them. As residents' basic needs are met, there is more time to contemplate and reflect on life's meaning and purpose (Drageset, Haugan, & Tranvåg, 2017; Haugan 2014; Steger, Oishi & Kashdan, 2009). Residents of NHs need an opportunity to talk about their previous experiences, thoughts, and feelings – to communicate who they are.

A growing body of literature has found that LSB for residents of NHs with dementia has positive outcomes on depression, autobiographical memory, quality of life, quality of relationships, and knowledge and attitudes of caregivers (Elfrink, Zuidema, Kunz, & Westerhof, 2018; Subramaniam & Woods, 2016). These studies also reported positive outcomes on aspects of cognition and mood (Subramaniam & Woods, 2016; Subramaniam, Woods & Whitaker, 2014).

Mentally alert residents are at higher risk of dementia since one of the strongest identified risk factors for dementia is age. One in 20 people develop dementia before the age of 65; one in 14 develop dementia over the age of 65; and one in 6 develop dementia over the age of 80 (Alzheimer's Association, 2016; Alzheimer's Society, 2018). It is important to listen and document the stories of older adults living in NHs while they are cognitively alert, which may improve their quality life and later inform care (Elfrink et al., 2018; Grøndahl, Persenius, Ba˚ath, & Helgesen, 2017; Subramaniam & Woods, 2014). Gridley, Brooks, Birks, Baxter, and Parker (2016) and Elfrink et al. (2018) found a consistent theme from their systematic reviews of the LSB literature for persons with dementia: The personal benefits may be better achieved before a diagnosis of dementia or earlier in the dementia journey due to the fact that the person may have a more active role in sharing their stories and producing their own LSB. Gridley, Birks and Parker (2018) found that professionals surveyed agreed that LSB would be best started early in the dementia process when people are still able to lead the process and express their own stories.

Although there is robust literature on the effects of the LSB intervention with NH residents with dementia, there is little known about LSB intervention with residents without dementia. Distinguishing residents by their cognitive impairment level is necessary because pharmacological and non-pharmacological methods for managing depression can differ accordingly. For instance, responses to antidepressants have been shown to differ significantly according to cognitive impairment status (Boyce et al., 2012; Shilyansky et al., 2016).

The need to develop effective non-pharmacological interventions that address the quality of life for all residents is essential (Degenholtz, Resnick, Bulger, & Chia, 2014). Furthermore, interventions like LSB that address multiple components of well-being, including depressive symptoms and MIL, could potentially be a vital tool for improving care and quality of life for residents of NHs who are mentally alert. Non-pharmacological psychosocial interventions are often undervalued (Richter, Meyer, Möhler & Köpke, 2012) but should be the first line of treatment with older adults (Apóstolo, Queirós, Rodrigues, Castro, & Cardoso, 2015). Many non-pharmacological interventions for depression have been aimed at residents with dementia; however, less is known about residents who are mentally alert (Simning & Simons, 2017). In particular, there is a gap in the literature regarding the effects of LSB on depression and MIL for residents of NHs who are mentally alert.

The Current Study

The purpose of this study was to examine whether LSB, a life review reminiscence intervention, would improve the quality of life for residents of NHs who are mentally alert by specifically assessing whether LSB reduced depressive symptoms and increased MIL. This study sought to expand the existing knowledge on the effects of LSB for persons without dementia.

Using a quasi-experimental switching replication design, measures were collected at three time periods. This study sought to answer the following questions: 1) What are the effects of LSB in reducing depressive symptoms for mentally alert residents of NH? 2) What are the effects of LSB in increasing MIL for mentally alert residents of NH?

Overview of Dissertation

This dissertation is organized into five chapters. Chapter I introduces the problem, the significance of the problem, and the aims of this study. Chapter II presents the theoretical model used to guide this study and a thorough review of the LSB literature. Chapter III describes the study's methodology, including sampling and recruitment, design, measurement instruments, the LSB intervention, and the procedures for the experimental and control groups. Chapter IV reports the study results. Chapter V discusses the findings, conclusions, strengths and limitations of the study, and implications for future research, theory, practice, and policy.

CHAPTER II

OVERVIEW OF LITERATURE

"To grow old is a great privilege. It allows feedback on a long life that can be relived in retrospect" (Erikson & Erikson, 1997, p.128).

There has been a growing interest in the theoretical and therapeutic benefits of LSB for enhancing the quality of life of older adults (Elfrink et al., 2018; Gridley et al., 2016; Subramaniam & Wood, 2012). Reminicence is the process of recalling past events or experiences and forms the foundation of this intervention. While much of the empirical support for LSB has been with older adults with dementia, there is little known regarding the benefits of LSB on the quality of life for mentally alert older adults living in NHs.

This chapter provides a description of the conceptual framework through an understanding of the theoretical and empirical background for LSB as well as components of well-being that affect residents of NHs. The Eriksons' life-span developmental theory (1950-1989) combined with Robert Butler's concept of life review (1963-1980) provided the theoretical background for this study. Subsequently, the strategies that were used to search for empirical literature specific to LSB with older adults in NHs is described. Next, a selection of the literature related to LSB and older adults' well-being is reviewed. Finally, this chapter will summarize the gaps in the existing literature regarding LSB with mentally alert residents of NHs and review the research questions that guided this study.

Theoretical Framework

As previously stated, reminiscence is the process of recalling past events or experiences. This seemingly ordinary experience of remembering and then sharing personal life experiences can bring understanding, new perspectives, courage, and peace to face the future (Gibson, 2018). Before exploring the LSB reminiscence intervention, the Eriksons' Psychosocial Stages of

Development theory and Butler’s Life Review theory will be expounded upon to provide a foundation for the theoretical basis of reminiscence and the framework which guided this study.

Theory of Psychosocial Stages of Development. Erik Erikson (1902-1994) and Joan Erikson (1903-1997) developed a theory on the stages of human development throughout the entire life span. According to Erikson and Erikson, there are nine stages of psychosocial crises that individuals encounter: “trust versus mistrust, autonomy versus shame and doubt, initiative versus guilt, industry versus inferiority, identity versus identity confusion, generativity versus stagnation, integrity versus despair, mistrust versus trust,” and in the ninth stage all stages are revisited (Erikson & Erikson, 1998, pp. 56-57). If a stage is successfully overcome, psychological strengths lead to hope, will, purpose, sense of competence, sense of fidelity, ability to form nurturing relationships, creating and accomplishing, integrity, and wisdom. The Eriksons’ work centers on the epigenesis principle, which is the theory that there is a predetermined order or sequence of stages through which each person must progress. Regardless of how successful the resolution of the previous stage crisis was, the emergence of each sequential stage will occur. Each stage emerges according to a biologically fixed design. Unsuccessfully resolving a stage negatively affects subsequent stages. Each stage’s crisis versus psychological strength is seen as a necessary conflict and tension through which growth, strength, and commitment is achieved (Erikson, 1997; Perry, 2015).

It is necessary to define the Eriksons’ terminology for ego integrity and wisdom to facilitate the discussion of the eighth and ninth stages of development, stages which pertain to older adults. The concept of the ego was first defined by Sigmund Freud (1856-1939) under whom Erik Erikson trained. According to Freud, there are three psychological components of the personality: the ego (reality), the id (pleasure, need, wants), and the superego (morals, ideals, conscience). The ego is defined as the psychological component that is represented by a conscious decision-making process or the component that is responsible for relating with reality. Together with integrity, ego integrity is a conscious effort to reflect on life and feel that a meaningful life was led and a contribution to society was made. The Eriksons state that wisdom is a lifelong developing process. They state that “wisdom rests in the capacity to see, look, and remember, as well as to listen, hear, and remember” (Erikson & Erikson, 1997, p. 112).

Integrity versus despair is the eighth stage of psychosocial development. This stage often begins when triggered by a life event such as facing a terminal illness, retirement, loss of a spouse, and other major changes in life. It is a time when a person reflects on their life with a sense of contentment and fulfillment or a sense of regret and despair over a life misspent. Successfully resolving this stage’s conflict results in attaining wisdom and a sense that the person’s life has had meaning (Erikson & Erikson, 1997).

The ninth stage of development (80 + years), where the majority of residents are positioned, was added by Joan Erikson when she found that there were new challenges facing a person in their 80s and 90s (Davidson Films, 1995). She deduced that a major psychological task for persons in their 80s and 90s is to achieve an acceptance of the self and a balanced view of the self in relation to the world. She labeled this stage gerotranscendence after incorporating the ideas of Lars Tornstam. Tornstam defined gerotranscendence as the final state in a natural process moving toward maturation and wisdom. Similarly to Joan Erikson, he postulates, “as people age, they transcend the limited views of life they held in earlier times” (Tornstam, 1999, p. 157).

The ninth stage crises are control, strength, and autonomy; the key psychological strengths to be gained are hope and trust. The Eriksons theorized that a person needs to circle back through life challenges in order to achieve gerotranscendence. A note of departure from Tornstam was that Erikson did not feel that any re-examining of the past needed to be done to achieve gerotranscendence, but rather that it may happen naturally or intrinsically (Erikson, 1997; Tornstam, 1989). She theorized that there is a desire to experience an understanding of the life lived as well as a focused resolve to revisit unresolved developmental crises, hence making peace with death (Erikson & Erikson, 1997).

The eighth and ninth stages of developments are primary for achieving wisdom, hope, and trust. Wisdom is the final achievement in the pursuit of ego integrity. It is exemplified when a person accepts themselves with all their flaws and failures. Further, wisdom is manifested when there is a sense of coherence, purpose, and meaning even with adversities and constant change (Wong, 2014). Success leads to feelings of wisdom, while failure leads to remorse, resentment, depression, and despair (Davidson Films, 1995; Erikson & Erikson, 1997). A key component for attaining wisdom is a review of the life lived or the recalling of life events in order to integrate these events into a coherent life story.

Butler's Life Review. In 1961, Robert Butler presented the concept of life review and continued to build upon the concept over many years (Butler, 1963; Butler, 1974). He first coined the concept of life review which he characterized as a gradual resurfacing of past experiences to consciousness, particularly unresolved conflicts. These conflicts could be reviewed again, resolved, reorganized, and then reintegrated (Butler, 1974). He postulated that an older person's life may gain new significance and meaning if reconsideration of previous experiences and the meanings attributed to them were revised and understanding was expanded. This reintegration of memories, if successful, may ease fears or anxieties and prepare the person for death (Butler, 1974; Webster & Haight, 2014).

Butler asserted that reviewing the life in old age is more intensive and frequent (Butler, 1974). The older adult realizes their own mortality, and there is a renewed ability to recall the past to consciousness (Webster & Haight, 2014). He saw life review as the primary mechanism for achieving ego integrity. An important outcome for a life review is finding MIL. Many view MIL as the foundation of well-being and a primary motivation in life for most people (Heintzelman & King, 2014).

Overview of the theories. The Eriksons' and Butler's theories are both similar in regard to the following six aspects: First, a review of life is precipitated as death draws near; second, reviewing the life can be a form of reminiscence; third, a restructuring of the personality could occur with a positive resolution from a life review; fourth, positive reintegration or restructuring is seen as wisdom; fifth, MIL could be attained through reviewing the life; sixth, a negative resolution of a life review would result in despair (Butler, 1974; Erikson & Erikson, 1997).

Together the theories provide a lens to view reminiscence behavior. Both theories postulated that past experiences naturally resurface with age. Butler claimed older adults have an increased, intense, and frequent ability to recall the past. If a NH resident has the opportunity to review their life, this may provide an occasion for them to gain new significance and meaning in their life. What is happening naturally in older adults is an opening for interventions to encourage the acceptance of themselves and support the reminiscing.

The Eriksons believed it was important to recall life events in order to grasp the whole life story. They felt the major question to be answered by older adults was, "Did I live a meaningful life?" (Erikson & Erikson, 1997). Similar to the Eriksons' premise, Butler believed many depressed older adults may be 'stuck' in a stage of life or view their life as meaningless or a waste (Butler, 1963; Erikson & Erikson, 1997). They believed that current problems or crises may prompt a reviewing of the past, for example, the death of a spouse, relocation to a NH, or increased morbidity.

Without meaning, depression ensues. Steger, Oishi, & Kashdan (2009) defined MIL as “the extent to which people comprehend, make sense of, or see the significance in their lives” (Steger et al., 2009, p. 1). Residents of NHs already have to adjust to the loss of established interpersonal relationships, deterioration of health, loss of identity, loss of personal control, and lack of meaning, which have been identified as contributing to depression (Davison, McCabe, Knight, & Mellor, 2012; Haigh et al., 2018). The restoration or increase of MIL for these residents may be critical due to losses in physical functions and/or social relationships (Korte, Cappeliez, Bohlmeijer, & Westerhof, 2012).

Over the past 50 years numerous studies have been conducted on life review and other forms of reminiscence which have generated new ideas on theories, research, therapies, and interventions. Life Story Work (LSW) is one such intervention (Huang et al., 2015; Pinquart & Forstmeier, 2012; Westerhof & Bohlmeijer, 2014; Woods et al., 2018).

Life Story Work

LSW is an intervention which uses reminiscence to encourage a person to reflect both chronologically and thematically upon their lives. It provides an opportunity for a person to review their past and capture their story into something tangible. It involves another person listening and a compilation made of the person’s history, stories, information, and any available photographs, texts, memorabilia, audios, or videos (Gibson, 2011; McKeown, Ryan, Ingleton, & Clarke, 2006). The product may be created into a variety of potential formats such as a book, collage, life story box (containing photographs, objects and/or documents), or a digital media. LSW’s premise is that every person has a story - a personal history - with events, people, circumstances, actions, feelings, insights, thoughts, learning, and milestones that define who they are (Gridley et al., 2016; McKeown, et al., 2006; McKeown, Clarke, Ingleton, Ryan, & Repper, 2010). Life stories may be recounted in chronological order, from childhood to their current age, and illustrated with pictures (Birren & Cochran, 2001; McKeown, et al., 2006; Murphy, 2000). This tangible product is now a reminder or visual aid of the individual's life history and used to benefit the person in their present situation (Murphy, 2000).

LSW has been used in a variety of healthcare settings in order to make it possible for people to communicate their life stories. For example, it has been used with children (Cook-Cottone, 2007; Philpot, 2004; Ryan & Walker 1985, 2007; Wrench, 1972); ex-prisoners with intellectual disabilities (Ellem & Wilson, 2010); people who have profound learning disabilities (Hewitt, 2000; Moya, 2009); community dwelling older adults (Lai, 2018); and persons with dementia (Elfrink, et al., 2018; Gridley et al., 2016; McKeown et al., 2010).

LSW may be created through life review sessions and provide a person with the opportunity to reflect on their life lived. For mentally alert residents of NHs, this may be a pivotal opportunity due to their cognitive abilities to recall memories and review and reassess these memories into a story where new significance and meaning can be attributed to them (Butler, 1974; Erikson & Erikson, 1997; Haight, Coleman, & Lord, 1995). According to Wills and Days (2008), the process of creating an LSW gives older adults the opportunity to reflect on their lives and positively affirm themselves while enhancing their overall well-being. Additionally, LSW provides an occasion to explore present interests, hopes and dreams, and future wishes (Clarke et al., 2000; Gridley et al., 2016).

LSW as a reminiscence intervention involves another person listening and assisting the person to review and sometimes evaluate their life (Thompson, 2011). Lai et al. (2018) found that LSW eliminates the rigid structure of many interventions and allows a person to share or tell their story in a relaxed manner, as in engaging in a conversation with another. The Eriksons maintained that reviewing the life is best accomplished with another individual (Erikson & Erikson, 1997).

Reminiscence Approaches

This study used LSW with a book format (LSB). LSB can use a variety of reminiscence approaches: simple reminiscence, structured life review, autobiographical or narrative reminiscence. Although life review and reminiscence are often used interchangeably, they are not the same construct. In order to conceptually clarify reminiscence in its variety of forms, Webster and Haight (2014) have sought to identify similarities and differences of selected approaches to reminiscence by contrasting them alongside five dimensions. The five dimensions are: *spontaneity* (unprompted recall), *structure* (purposeful, planned, some order), *evaluation* (a self-evaluation or taking a second look at life and coming to terms with how life turned out), *frequency* (how often it occurs), and *comprehension* (inclusiveness or completeness of one memory or a life) (Webster & Haight, 2014). Table 2.1 is a visual display of each approach across the five dimensions.

Table 2.1

Five Dimensions of Recall

Type of recall	Spontaneity	Structure	Evaluation	Frequency	Comprehension
Reminiscence	High	Low	Medium	High	Low
Life review	Medium	High	High	Low	High
Autobiography	Low	High	Medium-high	Low	Medium
Narrative	Medium-high	Low-medium	Low	Low-medium	Low

Simple Reminiscence. Simple reminiscence usually happens spontaneously and there is little structure. The reminiscer may skip from one memory to another from any time period of their life. The spontaneity of it can be fun, and one person's memory may spark another person's memory, making it ideal for group work (Haight & Dias, 1992). Although evaluation may happen, internally or shared, it is not a fundamental aspect of simple reminiscence. The frequency of reminiscing varies greatly per individual, but on average is high across age groups and gender. Since there is no logic, sequence, or theme, simple reminiscence is low on comprehensiveness. There is not an attempt to understand the memory within a broader life as a whole perspective (Haight & Webster, 2014, p. 276).

Structured Life Review. Although Butler described life review as spontaneous, it is no longer spontaneous when used as an intervention. The frequency of reminiscing is low (Haight & Burnside, 1993), and there are fewer triggers and specific prompts required to elicit memories. Life review is more structured and comprehensive, more apt to be systematic or sequential (from childhood to the present), and includes a component in which a person reflects on their life as a whole. There is an effort to evaluate memories, which entails working through positive as well as painful memories, and evaluating recalled memories to gain a sense of purpose and meaning (Webster & Haight, 2014).

Autobiography. The process for writing an autobiography is frequently a planned event. Specific triggers can prompt the writing of an autobiography, and therefore the dimension of frequency is low. Autobiography is a highly structured endeavor and usually covers major life themes, but it does not have to follow a developmental or chronological order. Although it is not required, evaluation usually occurs when a person reviews their life story along with the life choices they made. Autobiography is comprehensive and looks at themes across the lifespan (Birren & Schroots, 2006). Similar to life review, autobiography allows a person to view their entire life in some context which usually contributes meaning to their life (Brewer, 1986; Webster & Cappeliez, 1993)

Narrative. Narrative is an approach for passing down facts, information, and/or telling a story. It can be spontaneously motivated by the individual, a listener, or prompted by an external event. Its structure conforms to patterns sanctioned by society, such as heroes and villains, beginning and ending, and encounter and resolution. These stories can be shaped and reshaped to fit the desired format, such as comedy, adventure, or misfortune. The frequency of narrative depends on the need or desire of the individual. In addition, the narrative approach may be comprehensive about a single incident but is not comprehensive of the life as a whole (Webster & Haight, 2014).

In summary, the comparison between these four types of reminiscence approaches provides some conceptual clarity and shows the levels of depth of reminiscence (Garland & Garland, 2005). Each approach uses memories and recall and each can also be used for specific reminiscence protocols (Webster et al., 2010). To reiterate, reminiscence is no longer spontaneous when used as an intervention because the reminisince is guided. When the reminiscence is directed, there needs to be another person involved as the listener (Haight & Burnside, 1993).

LSB with Semi-Structured Life Review

This study used a semi-structured life review process in which the person's story was compiled into a LSB. The book format provides a tangible reminder of a lifetime of memories and future desires for the person and for others (Gibson, 2018). Again, when reminiscence is guided and there are specific measurable outcomes, it further distinguishes reminiscence from spontaneous to therapeutic reminiscence.

Literature Search Description

A range of databases covering the fields of social work, health, nursing, psychology, and mental health were used for this review of LSB with mentally alert residents of NHs: CINAHL Complete, Cochrane Library, PsycINFO, MEDLINE, AgeLine and Socioindex. The literature search also included searching with Google Scholar and OneSearch (a search engine for UH library holdings). The key search terms included were life story OR life review OR life history AND book or work AND elderly or aged or older or elder or geriatric AND nursing home, long-term care, or residential care, or nursing homes NOT dementia or Alzheimer's within the title or abstract.

The search generated so few studies of LSB with older adults without dementia and living in nursing homes, that mild dementia and community dwelling older adults were included in the search terms. The following were the inclusion criteria of the literature search: (1) English-language only; (2) no limit on date; (3) peer-reviewed; (4) any country; (5) types of participants included older adults either with mild to no dementia; (6) empirical research; (7) created a product; (8) full text available. This search yielded 26 papers. Using the inclusion criteria, the abstracts were screened and 15 were excluded.

Abstracts were again reviewed for life stories told by the older adult (family members or caregivers could assist with the writing of the stories), older adults with mild to no dementia, and if a book was produced. After reviewing all of the articles, only five articles were chosen to evaluate. There were no studies found that specified mentally alert NH residents. Table 2.2 summarizes the research.

Table 2.2

Research Utilized to Explore Life Story Book

Reference	**Population**	**Research Setting**	***N***	**Design**	**Outcomes Measured**	**Type of Reminiscence Approach**
Willis & Day (2008)	≥ 80 unknown dementia	Nursing home	6	Qualitative descriptive exploratory	Narrative themes	Narrative/ Auto-biographical
Chung (2009)	≥ 65 and/or mild dementia	Adult day care centers or participants' homes	49 with 117 youth	Pre-post one group design	Quality of life (QoL-AD) mean change = -1.9; Depression (CGDS) mean change 1.86	Auto-biographical
Chan et al. (2013)	≥ 60, no dementia	Community dwelling	26	Repeated measures, RTC,	Depression (GDS) IG -5.4, CG -1.0; p < .001 (week 8)	Narrative
Chan et al. (2014)	≥ 60, no dementia	Community dwelling	29	RTC, repeated measures	Depression (GDS) IG -4.0, CG -1.5; p < .001 (week 8)	Narrative
Lai et al. (2018)	≥ 60, no dementia	Community dwelling	57	Quasi-experimental	General mental well-being (GHQ) NDG - .20, DG .244; p < .005	Auto-biographical

CGDS, Chinese Geriatric Depression Scale; GDS, Geriatric Depression Scale; QoL-AD, Quality of Life-Alzheimer's Disease; IG, Intervention Group; CG, Control Group; NDG, Not Depressed Group DG; Depressed Group

These five studies were appraised and collated for their methodological approaches. One qualitative study was conducted with residents of NHs (Wills & Day, 2008). It was not specified if the participants had dementia or were mentally alert, but it was stated that the residents narrated their own stories and participated in making their own LSB. Four of the studies were conducted with community dwelling older adults, with one study having participants who had mild dementia (Chung, 2009). Three of the studies (Chan, Ng, Tien, Man Ho, & Thayala, 2013; Chan, et al., 2014; Chung, 2009) found the LSB significantly reduced depressive symptoms. Chung's study (2009) showed significant results on improving quality of life, and Lai's study (2018) was close to reaching significance on general mental well-being (p >.052). Overall, it appears that LSB has potential benefits for older adults living in the community and possible implications in the care of NH residents. However, in order to further understand the benefits of LSB and the methodologies these fives studies used with the LSB intervention, a more in-depth account of each will be described.

Wills and Day's (2008) qualitative, descriptive, exploratory study recruited six residents of NHs and their families to compile a LSB together over a three-month period. The NH staff supported this effort by typing up stories and scanning and laminating photographs and memorabilia. After this process, focus groups were held and interviews were conducted with the participants. Each participant was asked about their LSB and about engaging in the LSB project. In addition, each participant's LSB was reviewed by the research team to identify patterns, themes, differences, and commonalties between each participant. Four themes emerged: the social construction of the participant's lives; religious influence and social roles; sense of self; and relationships and loss.

This study found that LSB took participants to significant life memories and stories that provided an understanding into each person's unique identity. All participants recounted details of their social roles related to their past occupations. Each felt a sense of importance for their contribution to society. Spirituality and religion had an important influence in each participant's past and present life. A holistic view of the person, which included the importance spirituality and religion played in their life, allowed others to see the person within the context of their past rather than within the context of the NH. Reviewing memories through stories, photographs, and other meaningful objects provided the participants an opportunity to validate their self-identity. Lastly, the participant's past experiences were influenced by their relationships with other people and with their families. LSB fostered relationships between families, other residents and the NH staff. It also provided a process and product revealing what made that person unique and gave each resident an opportunity to narrate their own story.

Chung's (2009) study was conducted with 49 community dwelling older adults and 117 youth volunteers. All of the adults had a medical diagnosis of early stage dementia and were recruited from community day care centers. The youth were recruited from community youth organizations. Two or three youths were assigned to each older adult for a 12-session intergenerational reminiscence program. The youths used props and interactive old-time activities to prompt the recall of memories from the older adult. Memories were shared and a personalized LSB was created based on the older adult's chosen reminiscence topics. Measures were taken prior to the intervention and within two weeks after the intervention. Significant findings were found for quality of life and depressive symptoms. The author made note that the intervention provided the older adults with a nonthreatening avenue for communicating their past life experiences. Other plausible reasons for the improvements in mood and quality of life may be the social nature of the reminiscence intervention itself, and that the process of sharing memories provoked the older participants to feel that their lives had been worthwhile. There were minimal details provided for how the LSB was actually created except that the older adult was supported in the creation of their LSB.

Chan et al. (2013) eight-week study was conducted with 26 older community dwelling Chinese adults over the age of 69 years with a diagnosis of depression. The purpose of this study was to examine the effects of the process of creating a LSB through life review on depressive symptoms. Participants were randomly allocated to the intervention group-LSB or the control group. LSBs were created in three sessions in the participant's homes with the researcher guiding the older adult through memories from childhood through the present. Geriatric Depression Scale (GDS) scores were collected five times throughout the intervention and posttests, with the researcher meeting with the control group weekly to only collect the GDS scores. Lower levels of depression scores were shown for the intervention group than the control group ($X^2 = 4.33$, P = 0.037). Depression scores were significantly reduced in the intervention group from baseline (mean 7.9 [SD 3.0]) to week eight (mean 2.5 [SD 1.7], x2 = 15.25, p < 0.001). This study found that the creation process of building a LSB helped reduce depression scores. They, like Chung (2009), speculated that the social aspect of the intervention between narrating and someone listening helped the participants feel appreciated and provided an opportunity for them to be heard. Choosing what stories and photographs to be included in their LSB provided some autonomy for these older adults. Further, creating a LSB provided an outlet to express unresolved feelings and fears.

Chan et al. (2014) eight-week study was conducted with 29 older community dwelling Malaysian adults over the age of 60 years with a diagnosis of depression. The purpose of this study was to examine the effects of life review (LSB) on depressive symptoms. Participants were randomly allocated to the intervention group-LSB, or the control group. LSBs were created in three sessions, in each participant's home, with the researcher guiding the older adult through memories from childhood through the present. GDS scores were collected five times throughout the intervention and posttests, with the researcher meeting with the control group weekly to only collect the GDS scores. The intervention group had significantly lower levels of depression scores at week eight compared with the control group ($X^2 = 14.61$, $P < 0.001$). Depression scores were significantly reduced in the intervention group from baseline (mean 5.9 [SD ± 2.3]) to week eight (mean 1.9 [SD ± 1.6]) compared with the control group (mean 5.0 [SD ± 1.3] to week eight (mean 3.5 [SD ± 1.5]). This study supported the previous study conducted with Chinese community dwelling older adults in which the LSB development process reduced depression scores. They suggested several plausible explanations for these reductions. First, the experience of sharing stories from the past and present contribute to feelings of being recognized and contribute to self-worth. Second, the quality of the social interaction between the participant and the researcher may have added meaning to the participant's life. Similar to their previous study, they felt that the choosing of stories, photos and mementos in the LSB contributed to a sense of autonomy which may have further reduced depressive symptoms.

Lai et al. (2018) conducted a quasi-experimental designed study to examine whether the production of a LSB would lead to higher levels of self-esteem, mental well-being (general health questionnaire-GHQ), and life satisfaction between two groups based on their depressive symptoms. The GDS was used to measure depressive symptoms with the community dwelling older adult participants. Based on their scores, they were allocated to the group with depressive symptoms, or to the group without depressive symptoms. A trained student nurse helped each participant produce a LSB, using life review, in four-to-six semi-structured sessions. There was a significant interaction effect on GHQ scores between the two groups at Time 1 ($\beta = 0.244$, $p < .005$). When the two groups were combined, mean GDS scores were reduced ($X^2 = 5.912$, $p = 0.052$). There were no improvements in self-esteem and life satisfaction.

Four of the five studies provide evidence for the benefits of LSB in reducing depressive symptoms, improving quality of life, and general mental well-being for community dwelling older adults. The fifth study provided insight into the contribution that LSB provides for the personal needs of older adults living in NHs (Wills & Day, 2008). LSB provided these older adults with an opportunity to share their memories and have someone listen. Several of the studies (Chan, et al., 2013; Chan, et al., 2014) suggest that LSB contributed to a sense of autonomy for the participants. NH residents have few opportunities to assert control over their lives and choosing what stories and photos they choose to include in their life story may impact their depressive symptoms. All five studies suggest that the social experience of sharing stories through LSB improved outcomes for the participants.

Chung (2009) speculated that LSB allowed the participants to feel that the lives they lived were worthwhile. Wills & Day's (2008) qualitative study added not only themes that emerged from the LSB but also depth from the participants' quotes such as, "*As I look back on my life, I feel much fulfilled"* (Wills & Day, 2008, p. 550). Although MIL was not measured, Steger et al., 2009 asserted that the extent that a person comprehends or sees significance in their life contributes to their life having the presence of meaning (MIL).

The methodologies used in the LSB intervention varied. Compiling the LSB varied from three hours to three months. A life review approach was used with three of the studies (Chan et al., 2013; Chan et al., 2014; Lai et al., 2018). Two of the studies compiled a LSB with stories over the lifetime; one with a narrative approach and the other with an autobiographical approach. As is key to the LSB intervention, all of the studies had a listener or a person who listened and shared in the recollections. Gibson (2011) wrote that it enriches and extends the reminiscence process by sharing memories with another person. Two studies (Chan et al., 2013; Chan et al., 2014) examined the effects of the LSB process and found it effective at reducing depression scores. Gibson (2011) also emphasized that "producing a tangible product must always remain less important than the reminiscence relationship and communication on which it is founded" (Gibson, 2011, p. 128).

Expanding the Literature Search

The LSB literature, with persons with mild to no dementia, provided sparse understanding of existing evidence for LSB. Therefore, an examination of systematic reviews, literature reviews, and meta-analyses for LSB with persons with dementia (PWD) was conducted to evaluate the reported outcomes. There were four reviews identified: Elfrink et al., 2018; Gridley et al., 2016; Grøndahl, Persenius, Ba˚ath, & Helgesen, 2017; and Subramaniam & Woods, 2012. Each of these reviews were inspected for studies where LSB was the primary intervention. In addition, a clear description of LSB had to be communicated, and the LSB had to contain autobiographical elements or memories and not only biographical facts. Further, each of these reviews were inspected for studies that included an individual (not group) reminiscence intervention that produced a tangible book. Additionally, the studies were inspected for outcomes as a result of the use of LSB. After removing duplicates, full text studies in English were assessed for eligibility. From this expanded review of LSB with PWD, a total of five peer-reviewed studies using quantitative, qualitative or mixed methods were included. The five studies were conducted by: Haight et al., 2003; Haight et al. 2006; McKeown et al., 2010; Morgan & Woods 2010; and Subramaniam, Woods & Whitaker, 2014.

PWD can be affected psychosocially just by carrying the label − PWD. This highly stigmatized label can be a threat to a person's sense of identitity or self. Woods (2001) asserted that relationships and social settings are capable of creating and maintaining personhood or diminishing it. Kitwood defined the concept of personhood as the following: "A standing or status that is bestowed upon one human being by others, in the context of relationship and social being" (Kitwood, 1997, p. 8). The concept of personhood is not exclusive to PWD but includes all persons, including mentally alert residents of NH. Acknowledging someone's personhood involves recognizing that person's emotions, needs, wants, personality, need for relationships, as well as recognizing their life story. Discounting someone's moods, behaviors, background, and individual concerns often coincides with decreasing cognitive skills until that individual's recognition as a perceiving and responding person is lost (Palmer, 2013).

Models of LSB with Persons with Dementia

Before examining the five studies, it is beneficial to understand a summation of the models of LSB used with PWD. The literature reviews by Elfrink et al. (2018) and Gridley et al. (2016) found that there were two predominant models of LSB for PWD. The first model is when LSB is focused and led by the PWD and is often biographical or narrative. This model tries to improve depression, mood, quality of life, and/or autobiographical memory. It also helps to strengthen a sense of identity and promote satisfaction in life. The second model is more focused on relationships, involves family or other caregivers of the PWD, and is less likely to involve the PWD. This LSB often contains aspects and information (i.e. likes/dislikes, photographs, memorabilia) about the PWD that may aid in communication and understanding of that person. It may also be used to reduce behavioral issues such as anxiety (Haight et al., 2003; Haight et al., 2006). This model is almost entirely care-focused as would be with someone with advanced dementia (Gridley et al., 2016).

Various components of the LSB intervention were noted in the literature regarding what worked, what did not work, what should be done, and what should not be done. Gridley et al. (2016) specifically reviewed the literature toward the purpose of compiling good practice points for LSB. They looked for publications that provided information on the following issues:

"format of a life story, contents to include in a life story, contents to be excluded or avoided, style to be used, who should be involved in a LSB, when LSB should be done, and ethical issues" (Gridley et al., 2016, p. 8). Additionally, the publications were searched for anything stated about "organizational context." Finally, they also searched for issues surrounding the "culture of care settings, leadership and management support, resources and time commitment, support for staff in settings where LSB was being done, training or preparation for staff or volunteers doing LSB, and incentives that might encourage LSB to be undertaken" (Gridley et al., 2016, p. 8). Through their review of the literature, they compiled good practice learning points for conducting LSB with PWD (see Appendix A) (Gridley et al., 2016, p. 107). Although these "good practice points" were compiled for LSB constructed with PWD, they provide valuable insight for conducting LSB with mentally alert residents of NHs as well.

The first model of LSB, when the participant leads the process, would work well for mentally alert residents. For residents who are mentally alert but struggle with decreased functional abilities, there is a heightened vulnerability that impacts their satisfaction or well-being (Chehregosha, et al., 2016). These residents could tell their own stories, which may serve to strengthen their sense of identity and support their life satisfaction or well-being.

Empirical Support

The five empirical studies that met the above criteria and were focused on outcomes as a result of the use of LSB, are displayed in Table 2.3. Each of these studies examined the impact of LSB on various outcomes for the PWD, their caregivers, and/or family carers. Some of the studies used case studies, qualitative interviews, and/or randomized controlled trial studies. Each had small sample sizes. The qualitiative findings demonstrated the benefits of LSB in improving relationships and stimulating memories for the PWD. The quantitative results found significant improvements in depression, quality of life, mood, and autobiographical memory compared with no treatment or care as usual. The following review summarizes the results of these studies, beginning with the quantitative results and followed and supported by the qualitative results.

Table 2.3

Research Utilized to Explore Life Story Book with PWD

Reference	**Population**	**Research Setting**	***N***	**Design**	**Outcomes Measured**	**Objective**
Haight et al. (2003)	Persons w/Alzheimer's and their carers	Home settings	22 dyads PWD and caregiver	Mixed method Three group design	• Burden Interview • Mood of PWD • FAST	Delayed Institutionalization LSB made with carer and PWD
Haight, Gibson & Michel (2006)	Residents with diagnosis of dementia	Six assisted living facilities in N. Ireland	30 PWD ages 60-99 yrs.	Quasi-E.	• MMSE • CSDD • AMS neg • MS post • FIM • COS • MBS	Test effectiveness of life review with LSB process
McKeown et al. (2010)	PWD various care settings w/willing carers	Care settings in UK	4 PWD & family and/or care staff PWD $\bar{X}$ 84.5 (SD 3.2)	Qual-Multi-case study	Experience of • PWD • Family carers • Care staff	LSW approach with PWD and experienced by all participants
Morgan & Woods (2009)	Recently admitted to NH	Care homes North Wales	17; 8 LSB; 9 CAU $\bar{X}$ 80.5 (SD 5 .75)	Quasi-E.	• GDS-SF • AMI	Life review with LSB on mood & AMI
Subramaniam, Woods & Whitaker (2014)	NH residents	Care homes in North Wales	23; 12 created own LSB; 11 gift of LSB $\bar{X}$ 84.5 (SD 6.7)	Quasi-E.	• QOL • GDS-12R • AMI • Staff Attitudes • Quality relationship relative/PWD	Pathways for developing LSB for PWD

Note. AMS neg = Alzheimer's Mood Scale Negative; (MS pos) = Alzheimer's Mood Scale Positive AMI = Autobiographical Memory Interview; COS = Communication Obseration Scale for Cognitvely Impaired; CSDD = Cornell Scale for Depression; FAST = Functional Assessment Staging; GDS-SF = Geriatric Depression Scale-Short Form; MBS = Memory and Behavior Problems; MMSW = Mini Mental Status Exam; QOL = quality of life

Each of these studies examined the impact of LSB on various outcomes for the PWD, their caregivers, and/or family carers. Some of the studies used case studies, qualitative interviews, and/or randomized controlled trial studies. Each had small sample sizes. The qualitiative findings demonstrated the benefit of LSB in stimulating memories and in improving the relationship with the PWD. The quantitative results found significant improvements in depression, quality of life, mood, and autobiographical memory compared with no treatment or care as usual. The following review summarizes the results of these studies, beginning with the quantitative results and followed and supported by the qualitative results.

Haight et al. (2003) study, using a structured life review with a LSB, was carried out over several months with a PWD and their caregiver. Twenty-two dyads were recruited for this study. There were three groups in the study design. In the first group both the care receiver and the caregiver participated in the care receiver’s life review with LSB; in the second group only the caregiver received the intervention; the third group received no treatment. These were preliminary findings with qualitative descriptions from two case studies. In this 2003 article, the effects of LSB on the care recipient and the effects on the caregiver’s burden were presented. The caregivers assessed the mood of their care receivers who participated in the LSB process. Outcome measures for mood were significantly improved ($F = 3.96$; $p < 0.04$) in these dyads. Caregiver burden was reduced shown by the significant results in both the dyadic group and the caregiver only group ($F = 3.30$; $p < 0.06$). The caregivers who participated in the LSB were as not troubled by the PWD’s problem behavior; their concerns were decreased. Behavioral concerns of the PWD increased significantly for caregivers who did not participate in the LSB ($F = 4.14$; $p < 0.05$).

Haight et al. (2006) conducted a randomized control trial (pilot) to examine the effectiveness of LSB using a structured life review. They recruited a sample of 30 PWD living in six different assisted living facilites in Northern Ireland. Each facility manager volunteered PWD. The researchers randomly assigned PWD to the experiemental (*n*= 15) or the control group (*n* =15). The intervention was delivered to the experimental group by the facility staff, while the control group received care as usual. There were six outcome measures tested with four of these measures showing significant differences. They found significant improvements in communication (Communication Observation Scale) ($F = 23.36$, $p < 0.005$); depression (Cornell Scale for Depression) ($F = 7.54$, $p < 0.015$); positive mood (Alzheimer's Mood Scale) ($F = 9.47$, $p < 0.008$); and cognition (MMSE) ($F = 20.77$, $p < 0.0005$). Although not measured, Haight et al. (2006) stated that the care staff and families remarked on the changed mood of the PWD.

Morgan and Woods' (2010) randomized control trial study was conducted with PWD living in care homes in North West Wales. Seventeen PWD were randomly assigned to the experimental (*n* = 8) or the control group (*n* = 9). The experimental group participated in a structured life review with the culmination of a LSB, while the control group received care as usual. Two outcome measures were assessed: depression (GDS-SF) and autobiographical memory (AMI). There were significant improvements in depression scores (GDS-SF) ($F_{(2,15)} = 13.97$, $p = 0.009$) and autobiograhical memory ($F_{(2,15)} = 5.92$; $p = 0.007$). The process and impact of the life review was presented in case vignettes. Again, care staff and families regarded the LSB positively and were surprised at how much the PWD remembered, and staff were surprised at what the PWD had done in their life.

Subramaniam et al. (2014) studied the effects of different approaches for developing a LSB for PWD in residential settings. They randomly assigned the PWD to participate in either the 12 individual life review sessions and co-create a LSB with another person (*n* = 11) or assigned them to have a LSB created for them by their relatives as a gift (*n* = 12). They found that the process of a life review resulting in a LSB was associated with improved autobiographical memory (AMI) ($F_{(1, 20)} = 19.92$, $p < .001$), compared with LSB given as a gift. Improvements were noted in the person's memories of events and factual information. Quality of life had a significant improvement after the life review/LSB ($F_{(1,20)} = 5.11$, $p = 0.035$), but six weeks after receiving their LSBs there were no differences between QOL scores in the two groups ($F_{(1,20)} = 0.08$, $p = 0.77$). Improvements in depression (GDS-12R) were not identified ($F_{(1,20)} = 093$, $p = 0.34$). Their research showed that although a person may have an irreversible progressive condition such as dementia, that person may still be able to improve their autobiographical memory and improve their quality of life.

In addition, the quality of relationships rated by the relative of the PWD showed a significant improvement ($F_{(2,39)} = 19.37$, $p < 0.001$). They found there were improvements in the staff's attitudes and knowledge about the PWD after they received the LSB ($F_{(2,74)} + 14.31$, $p < 0.001$). They also noted that the impact of LSB on staff had been rarely evaluated (Subramaniam et al., 2014). The LSBs provided new information that was not known about the PWD to the staff and management. Subramaniam et al. (2014) proposed that LSB provided a tool for activity directors, care staff, and other professional care staff to improve and maintain cognitive function and quality of life for PWD in residential facilities.

None of the qualitative findings from these LSB studies reported any negative effects. However, the findings do add depth of understanding to the quantitative findings. McKeown et al. (2010) study added rich data to the use of LSB for enhancing person-centered care. Person-centered care affirms the uniqueness of each person. By listening to the story of a resident, that person can be seen as an individual, which increases others' understanding of them and compassion may be developed or increased. NH clinical assessments provide no depth of understanding for who the person is because they only assess the person by their present capacities. LSB allows for the details or depth of a person's life to be told and provides a fuller picture of the person. It also illuminates the person's values, what they used to do, be like, what they desired, and it enables staff to understand who the person is now by understanding who they were.

A reflective account from a staff member following the LSB intervention demonstrates the power of LSB in facilitating the idea of personhood as defined by Kitwood (1997).

"I've learned a lot about her. I mean to me she came in she was a patient she was very confused, very distressed-but when she started opening up you could see the type of person she was (support worker)" (McKeown et al., 2010, p. 153).

This staff member replaced the word patient with person, suggesting that she was now seeing the resident differently. In addition, staff were able to use the LSB to distract an anxious PWD and learn more about him as a person.

"It made me understand more about him…with his aggression he wasn't that type of person before he was quite friendly helpful he was very helpful apparently…" (McKeown et al., 2010, p. 153).

Across the studies, the use of LSB contributed to the "maintenance of the person with dementia as a whole person rather than a demented patient" (Grøndahl et al., 2017, p.4). For example, McKeown et al. (2010) study found a common theme that emerged – the maintaining of the personhood of the PWD. They found that LSB helped the staff to see the PWD as a person rather than a person demented. Second, it enabled the PWD to be heard. Third, it enabled relatives to see their relative as a whole person. Finally, it enabled the staff to better understand the PWD.

McKeown et al. (2010) study also sought to investigate how LSB is experienced by all persons involved. The LSB projects were led by family members. The researchers described LSB as an opportunity for the family to showcase the personhood of their family member. Some family members wanted to include photos that they hoped would influence the way their ‘Mum’ was seen by the staff. One family member expressed,

“I just wish they could have seen my Mum a few years ago before the dementia to really be able to see the person she was (daughter)” (Mckeown et al., 2010, p. 153).

Additionally, LSB can empower NH residents who may feel ignored. Another staff member commented,

“People were very interested and were saying ‘who’s this’ and so we were hearing a lot more from Eileen about…it sort of pushed her into the limelight a bit (nurse manager)” (McKeown et al., 2010, p. 153).

In Haight et al.’s (2003) study, one participant continually remarked how guilty she felt that she was not with her husband when he passed away. Through the LSB process she was able to resolve this conflict and then sought to encourage others to make their own LSBs. According to Butler (1963), a life review may stimulate a person to move toward new things and live without constraint for the remainder of their life. Gibson (2011) noted as people age many of them become increasingly aware of unresolved conflicts, unfinished business, and/or past difficult or painful experiences. One resident recalled how her husband had died after only a few years of marriage. She never remarried. After making her LSB she commented, *"When I look back at my life (long pause)...I have no regrets…all looks fine..I'm happy..no need to change anything..only one thing..my husband…he died…what can I do? Can we do anything? Overall I'm happy with my life.*" (Subramaniam et al., 2014, p. 372).

Morgan and Woods (2010) found that LSB supported self-worth and increased pride in life. One staff member commented,

"People had been coming into her room to see it (LSB) and her son had been so pleased that he wanted to keep it after she had died. He also said that he was very proud of her and all of the things that she had done with her life." (Morgan & Woods, 2010, p. 9).

McKeown et al. (2010) also found that the PWD experienced pride in their story. One resident, genuninely moved by his LSB, commented,

"Can I have 10,000 copies made?" (McKeown et al., 2010, p. 154). Another commented,

"*I was noticing her expressions 'Oh yes it was me' when other people commented 'Oh was you a school teacher' and I didn't know you ran a pub' and Yes, it's me…*" (McKeown et al., 2010, p. 155).

Morgan and Woods (2010) noted that residents seemed to be uplifted by the LSB and by the response of family, friends and staff**.** They speculated that the significant results on autobiographical memory at the six week follow-up may be the tangible book (LSB) which may extend the reminiscence effects and serve as a tool for maintenance. Subramaniam and Woods (2012) also speculated that the book itself (LSB) may explain the improvements in mood in follow-up testing.

"The book sets things off in my head, it helps me remember all sorts of things and reminds me of things I had forgotten." (Morgan & Woods, 2010, p. 11).

"Now, I can see my life again…lots of good memories…the book triggers and stimulates my memory…nice to have one (the book)." (Subramaniam et al., 2014, p. 372).

In addition, quality of relationships and communication between participants and caregivers significantly improved (Haight et al., 2003; Haight et al., 2006; Morgan & Woods, 2010; Subramaniam et al., 2014). LSB helped residents to create new relationships and friendships. In sharing their LSB, residents discovered common ground or people who have had similar experiences. Gridley et al. (2016) found that PWD valued the LSBs and enjoyed the company when sharing their books.

The impact on families participating or building the LSB with their PWD relative had multiple benefits. Haight et al. (2003) found that using LSB with the dyadic family improved the caregivers view of the PWD. The caregivers also reported that the mood for the PWD had significantly improved. Grøndahl et al. (2017) review showed that families of PWD bonded over the process of building a LSB with their loved ones. These families came together and engaged in supportive roles in the NH. The LSB process also provided a time for the grieving process for families as their PWD transitioned into the NH. These families were able to recover some of the memories with their loved ones and a portion of their own history. These life stories became a part of the PWD's NH care plan. For family members and carers, LSB provided an effective way for them to engage with their relative within the NH or care environment, which also included enhanced communication and more meaningful involvement in care planning. After the LSB, one participant said,

"I had a chance to revisit my life with my mother again" and

"*The book helps me to spend quality time with my mother. Now we engage in meaningful conversation. Every visit she would tell me new information from the book" (*Subramaniam et al., 2014, p. 372).

Subramanian and Woods (2012) found that tailoring the LSB in an individualized approach – that tailors to the specific preferences, needs, and interests of the person – may support personhood and promote well-being. Haight et al. (2003) also found that the personalized reminiscence approach of the LSB offered a tangible product of the life review process. Follow-up evaluations for mood continued to improve for those that conducted a life review with a LSB, which McKeown et al. (2006) again speculated was due to the therapeutic value of the book.

Existing Literature

This expanded review of the literature of LSB with PWD provides empirical evidence for numerous psychosocial benefits of LSB. In the quantitative studies, there were significant improvements in depression, quality of life, mood, and autobiographical memory. These findings supported what earlier reviews and meta-anlyses have shown for reminicence activities with PWD. Reminicence activities can reduce depressive symptoms, contribute to congitive functioning, and improve quailty of life (Pinquart, & Forstmeier, 2012; Woods et al., 2018; Zhang, Hwu, Wu, & Chang, 2015). Furthermore, the qualitative findings have shown that participants, care staff, and relatives found value in the use of LSB for improvements in relationships, communication, engagement, and social interaction.

Gaps in the Existing Literature

As described above, there is strong research evidence linking LSB with postive outcomes for PWD. Yet, there were no LSB studies specifically targeting mentally alert residents of NHs.

Researchers have yet to study the effects of LSB on depressive symptoms and MIL for residents of NHs who are mentally alert. Furthermore, Bohlmeijer, Westerhof and Emmerik-de Jong (2008) conducted one of the few studies on the effects of reminiscence on MIL, but there were no studies found that studied the effects of LSB on MIL for NH residents – mentally alert or with dementia.

There has been increasing attention towards the use of LSB with PWD. The majority of the studies conducted were with PWD, many conducted in NHs. There are similarities to the NH environment for both the mentally alert and the PWD. Unless a PWD is living in a locked unit, the mentally alert and the PWD live altogether. They are cared for by the same NH staff and live in the same environment. As stated earlier, mentally alert residents make up almost 50% of the NH population. They too need evidence-based interventions that maintain their health and well-being. The positive results of LSB with PWD suggest that mentally alert residents may benefit from LSB as well.

This study is essential for gaining insight into the effects of LSB for mentally alert NH residents. This study seeks to address these gaps in the literature by asking the following questions with their corresponding hypotheses:

R.Q.1: What are the effects of LSB on depressive symptoms for mentally alert residents of NHs, as measured by GDS-12R scores?

H_{a1}: There are significant reductions in depressive symptoms, as measured by the GDS-12R, between those residents who participated in LSB and those residents who received care as usual.

H_{01}: There were no significant reductions in depressive symptoms, as measured by the GDS-12R, between those residents who participated in LSB and those residents who received care as usual.

R.Q.2: What are the effects of LSB on presence of meaning (POM) for mentally alert residents of NHs, as measured by Meaning in Life Quesionnaire (MLQ)?

H_{a2}: There are significant increases in POM, as measured by the MLQ, between those residents who particpated in LSB and those residents who received care as usual.

H_{02}: There are no significant increases in POM, as measured by the MLQ, between those residents who participated in LSB and those residents who received care as usual.

R.Q.3: What are the effects of LSB on search for meaning (SFM) for mentally alert residents of NHs, as measured by MLQ?

H_{a3}: There are significant increases in SFM, as measured by the MLQ, between those residents who participated in LSB and those residents who received care as usual.

H_{03}: There are no significant increases in SFM, as measured by the MLQ, between those residents who participated in LSB and those residents who received care as usual.

Chapter Highlights

This chapter provides a description of the theoretical and empirical background for LSB and two components of well-being (i.e. depression and MIL) that affect residents of NHs. The Eriksons' theory of Psychosocial Stages of Development and Robert Butler's theory of Life Review provide the theoretical background for this study. A systematic review of the literature offered robust empirical evidence for LSB with residents of NHs who have dementia as well as community dwelling older adults. No studies were found that examined the effects of LSB for residents of NHs who are mentally alert. Specifically, it is not known whether LSB will decrease depressive symptoms and increase MIL for this group of residents. This study is essential for gaining insight into improving the quality of life for mentally alert NH residents. Furthermore, this study supports the National Institute on Aging's (NIA) mission to seek to develop interventions that maintain the health and well-being of older adults (NIA, 2016).

CHAPTER III

METHODS

Listening validates the storyteller and affirms that their story matters-that they matter.

Overview

This nine-week study tested the effectiveness of LSB for reducing depressive symptoms and increasing MIL with twenty-one mentally alert residents of two NHs using a quasi-experimental switching replication design. Two NHs were randomly allocated to be NH-A or NH-B, indicating which NH began LSB first. Analyses were conducted using MANCOVA to examine the overall effects of the LSB intervention and the differences between the groups on the outcome measures (GDS-12R and MLQ). In addition, the lasting effects of LSB were examined with additional outcome measurements.

Study Design

A quasi-experimental switching replication design was utilized to examine the effects of LSB on depressive symptoms and MIL for residents of NHs who are mentally alert. Two NHs were randomly allocated to either the experimental group (intervention) or the control group with parallel pretests and posttests. The roles were then switched, and the intervention group became the control group while the control group became the experimental group. Participants in the same NH received the same intervention. The two-group study had three time periods for measurements.

There are many strengths to the switching replication design. First, this design helps to detect whether outcomes may be due to selection bias (Rubin & Babbie, 2017). Second, both the NHs eventually receive LSB, which provides another opportunity to test outcome measures and allow for two independent implementations of the LSB intervention, which may enhance external validity. Third, in comparison to other randomized designs, this is one of the more ethically feasible designs because all participants receive the intervention. Finally, the lasting effects of LSB may be examined by the collection of measures for NH-A at one month. *Figure 1* gives a visual depiction of the design model.

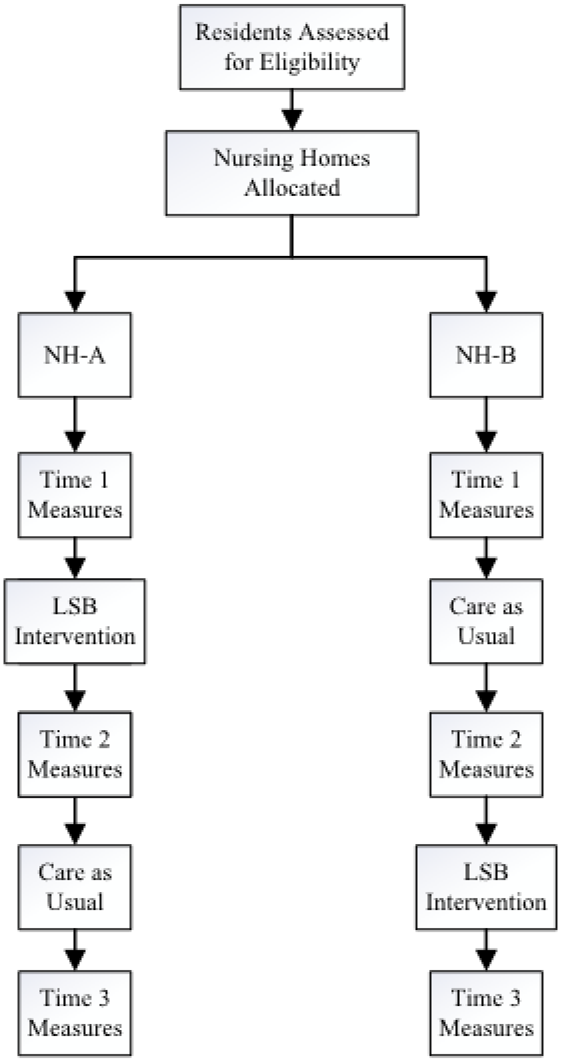

Figure 3.1. Design Model

Description of the Intervention

An individualized approach that engages residents was utilized for this study. The LSB intervention was conducted by trained "Listeners." Haight and Haight (2007) first coined this term and stated that the main requirements of a Listener were to ask probing questions, listen attentively, and respond appropriately.

Listeners. For this study, two college-educated assistants were hired and trained as research assistants and Listeners. One Listener was a retired registered nurse and the other Listener was a master level social work student. Each Listener attended the same one-day training in research fidelity, interviewing techniques, learning to display a genuine interest in interviewing, skills for working with frail older adults, and acquiring specific skills for LSB. In addition, each learned how to compile a LSB. The training ensured that the Listeners conducted the intervention in the same semi-structured manner.

Training. The PI, a Licensed Master of Social Work (LMSW) certified in Reminiscence and Life Story Work, conducted the one day, 7-hour training. The objectives of this training module included the following:

1. Demonstrate an understanding of professional behavior, ethical conduct, confidentiality;
2. Demonstrate an understanding of research basics and the importance of research fidelity;
3. Demonstrate an understanding of the fundamental knowledge and skills for working with older adults;
4. Demonstrate an understanding of reminiscence;
5. Identify the basics of LSW and its supporting research evidence;
6. Demonstrate interpersonal communication skills (e.g., attending, encouraging, reflecting, active listening, providing feedback, and empathic and meaningful communication);
7. Demonstrate basic interviewing skills, including preparation and probing techniques for elaboration and clarification;
8. Demonstrate how to handle disturbing or upsetting memories;
9. Demonstrate skills in story gathering, including note taking, audio recording and fact checking;
10. Demonstrate necessary skills for making a LSB, including templates, story organization, handling of photos/memorabilia as well as scanning, printing, and assembly.

Life Story Book. LSB provides a person with the opportunity to share their life experiences and memories (Haight et al., 2006). These biographies can be produced in many formats, but for this study the book format was produced (McKeown et al., 2006). The LSBs included a combination of written information, photographs or images of significant people, places or events, and personal narratives from the stages of life that each participant wanted to include.

Each resident was guided by a Listener through memories of their life using extracted questions from the Life Review and Experiencing Form (LRF) created by Haight & Haight (2007) and based on Erik Erikson's life stages model (See Appendix B). The purpose for using these questions was to achieve some structure for gathering memories across the life span. While the Listener had the list of questions to guide the participant through life stages, they used the questions as prompts or suggestions. The Listeners listened closely and responded to their participants while encouraging them to lead the dialogue and continue talking and recalling (Birren & Cochran, 2001; Haight & Haight, 2007).

The duration of the intervention was three 1-hour visits, not including the visits for the pretest and the posttest measures (GDS-12R and MLQ) that were collected. The Listeners remained flexible in regard to the length of time per visit for the sake of the older participants. For example, two 30-minute sessions could be used to allow for rescheduling for health issues, or other creative ways used to accommodate the needs of the participant as much as possible. The three-hour intervention included: The first visit reminiscing about early childhood, family, and home; the second visit reminiscing about adolescence and young adulthood; and the third visit reminiscing about later adulthood and a summary or overview of life (Haight & Haight, 2007) (See Appendix B). Reviewing life from childhood until the present enabled the participant the opportunity to think about recalled and reconstructed memories, related facts, and significant experiences (Haight & Haight, 2007). Birren & Cochran suggested (2001) reminding the older adults of their five senses–touch, sight, taste, hearing and smell- for obtaining details of a story. For example, at a holiday event was there food? Dancing? Singing? The three-hour intervention also provided the participant time to review their life as a whole.

The Listener acted as a scribe but also used an audio recorder. The use of the audio recorder freed the Listener up to listen attentively and respond appropriately to their participant’s stories. Audio recording also aided the Listener in accurately typing the stories. Any pictures or memorabilia chosen by the participant were scanned by the PI at the NH using a portable scanner. This ensured that no photos or memorabilia were removed from the participant’s NH. The photos from the scanner were printed and inserted into the participant’s LSB. The Listener helped their participant to create short captions, if desired, to be placed under each photo. The scanning time was not included in the intervention time.

Participants were given the option of the research team contacting their families to assist with the collection of newspaper clippings, photographs, and/or other memorabilia. None of the participants requested this. Only three participants on their own sought photos from their family members. Substitute photos of relevant places were located on the internet by the PI. All posttests were administered by the PI, followed by both the participant and the Listener reviewing the LSB for any clarifications or corrections. In addition, anything offensive to the participant was removed. The book was then edited and finalized by the Listener and returned to the participant within a few days. Each participant owns their LSB and had the last say of what was or was not included in their book (Thompson, 2011; Wills & Day, 2008). To ensure that the LSB could be added to and/or updated, an expandable scrapbook album was used with additional blank sleeves added for any additional stories or photos the person would like to add at a later date. As Gridley, Birks, and Parker (2018) noted this reflects that a person's life story is not over yet.

Recruitment

The recruitment of older adults living in NHs poses an additional layer of complexity that requires approval at the institutional level or with the decisional bodies (Cleary, 2003). Before approaching residents for recruitment or consent, researchers must first obtain consent from the facility itself in a process called gaining entrée (Mitchell et al., 2006). This may be viewed as gaining consent at the community level or institutional level. Community or institutional consent is the process by which a researcher must seek approval to conduct research within a community or institution before recruiting at the individual level (Dickert & Sugarman, 2005; Lingler et al., 2009).

Many residents execute a health care plan, including a durable power of attorney when they enter a NH and may appoint a family member or someone else to act on their behalf if they lack decision-making capacity. A durable power of attorney is someone who has been authorized to engage in specified transactions on behalf of the person (The Law Dictionary, 2018). Although the recruitment of participants was for mentally alert residents, it may be necessary to obtain informed consent from their designated durable powers of attorney if they have given durable power of attorey to others (Cleary, 2003; CMS, 2017; Texas Health and Human Services, 2017). There was only one participant for whom a durable power of attorney was contacted and consent obtained.

Participant population. In 2016, Texas had over 1,200 certified nursing facilities or NHs and over 92,000 older adults living in them (Kaiser Family Foundation, 2016). A convenience sampling of NHs near Houston, Texas, was the location from which residents were recruited. Houston is the second most ethnically diverse cities in the nation (McCann, 2019). Using the Nursing Facility Directory from the Medicare Nursing Home Compare (NHC) website, a master list was created in Excel of NHs from the Houston Metropolitan Area (U.S. Centers for Medicare & Medicaid Services, 2019).

NHs are defined by the National Institute of Aging (NIA) as a facility that is licensed by the state to provide 24-hour supervision, ongoing nursing care, assistance with everyday activities, and three meals a day. Although some people stay for only a short period of time after a hospital stay, most live in NHs as a permanent residence due to their need for ongoing physical or mental care (NIH, 2018). This study recruited from freestanding NHs or ones that are not a part of a hospital or a continuing care retirement community.

There are considerable variations between NHs themselves, which may pose a problem for a multi-site study (Cleary, 2003). One way to address this concern is to compare the NHs on multiple dimensions using the NHC data. The NHC data was developed by CMS in 1998 as an informational source of mandated information on every nursing home certified by Medicare and Medicaid in the United States (Castle, 2009; CMS, 2018). Using this data, NHs were compared on the following seven aspects: not in a continuing care retirement community, number of long-stay residents, overall rating, staff rating, type of ownership (profit, non-profit), participates in Medicare and Medicaid, and facility size (number of certified beds). NHs from the Houston Metropolitan Area were sorted and selected using this comparison methodology.

Nursing home settings. From this selection, NH directors were contacted beginning with the first NH listed. The PI made telephone calls to the NH administrators, which were then followed up with an email describing the study and attached study flyers. A total of seven homes were contacted. Six of the NH directors were met with face-to-face. For these face-to-face meetings, Mody et al. (2008) suggests providing informative flyers with simplified research procedures and relevant prior research. This information was provided at these meetings. Two of the NHs did not have enough mentally alert residents and two could not secure corporate approval. The contacting of NH directors, or administrators, continued until two NHs agreed to participate.

Cleary (2003) advises to involve as many of the management team as possible during the early stages of the protocol to avoid misunderstandings and encourage cooperation. Meetings were then held with the social workers and/or activity directors from the NHs. Discussions at these first meetings included full disclosure of roles, responsibilities, resources, and time commitments for everyone involved. The management teams were assured that the facility would not incur any monetary costs and very limited time would be required from the staff. The NHs were informed that every effort would be made to recognize the NH’s contribution to the study including: A plaque given for participation, a presentation of the results of the study, and a LSB toolkit donated for continued use with other residents (Cleary, 2003; Mody et al., 2008).

Letters of cooperation were obtained from each NH director and submitted to the University of Houston Institutional Review Board. The PI designated the two NHs to be NH-A and NH-B. This indicated which NH would receive LSB first or care as usual. The PI observed that the residents in NH-A appeared frailer and made the decision to start the intervention in that home first.

Both NHs were located in the Houston Metropolitan Area and met the inclusion criteria of the following: stand-alone NH, facility size 100+ beds, for-profit ownership, and Medicare and Medicaid certified (See Table 3.1). NH-A, located in Houston, Texas, had approximately 73 residents. They had an overall NHC rating of 3, and staff rating of 2. NH-B located in Richmond, Texas (still in the Houston Metropolitan Area), had approximately 99 residents. They had similar overall NHC ratings and staff ratings of 2.

Table 3.1

Nursing Home Inclusion and Comparability

Nursing Home	Medicare + Medicaid	NH Not CCRC	Facility size # of Beds	Number of residents	Overall Rating	Staff Rating	Type Ownership
NH-A	Yes	Stand Alone	134	73	3	2	For-profit
NH-B	Yes	Stand Alone	118	99	2	2	For-profit

Upon consent, administrators were asked for the name of a staff member who would serve as an on-site point of contact or site coordinator. NH-A's site coordinator was the staffing coordinator for the facility. NH-B's site coordinator was the social worker for the facility. These site coordinators were the research team's point of contact for scheduling, data collection, and other communication between the research team, participants, and the facility. NH staff have many demands for their time, so each site coordinator was given a stipend of $300.00; $150.00 halfway through the data collection (at posttest 1) and $150.00 when the data collection was complete (at posttest 2).

Sample size and power. To determine a sufficient sample size a power analyses for a MANOVA, with 2 groups and 3 dependent variables, was conducted in G*Power Version 3.1.9.2 (Faul, Erdfelder, Lang, & Buchner, 2007). Using an alpha (ɑ) of .05 and a large effect size of d = 0.94 (Pinquart & Forstmeier, 2012), a sample size of 20 could achieve a power of 90% to detect between group differences. If the effect size is large and the results are not significant, it may indicate that there might be a meaningful effect and repeating the study with a larger sample size may be advisable.

In determining the effect size, Pinquart and Forstmeier (2012) meta-analysis of the effects of reminiscence interventions found that those with chronic diseases have a large effect size of g = 0.94. The largest improvements were with those who received life-review therapy (g = 1.28) and with individuals who had a diagnosis of depression (g = 1.09). Weiss, Westerhof, and Bohlmeijer's (2016) found that reminiscence interventions had an overall effect size of 0.54 on psychological well-being in older adults. This study was conducted with frail older adults so an effect size of 0.94 was used in the power analysis (Cohen, 1988; Cohen, 1992; Pinquart & Forstmeier, 2012).

The proposed sample size of 20 participants reflected a feasible recruitment target similar to two comparable studies of LSB conducted with residents of NHs with dementia. One LSB study conducted by Subramaniam et al. (2014) in North Wales recruited 23 participants and another LSB study conducted by Morgan & Woods (2009) recruited 17 participants.

Maintaining a sample in long-term care research can be a challenge. Attrition rates for studies that were 6 to 12 months long and conducted in long-term care settings ranged from 15% to 20%. Oversampling is an efficient way to deal with attrition. To remain on the conservative side, this study oversampled by 20% to allow for attrition (Cleary, 2003). Twenty-four residents were recruited to ensure a sample size of 20 or 12 for each condition.

Attrition may be associated with factors that are within the control of the researcher (Cleary, 2003). Every effort was made to ensure that the setting for the intervention was safe, noise free, and devoid of major interruptions. Many of the residents had sensory deficits (hearing difficulties, sight problems, and/or speech problems). The research team was cognizant of these and accommodated residents as needed, such as having a well-lit room, speaking loudly and clearly, or reminding participants to wear their hearing aids or glasses. Multiple comorbidities, severe pain, and being easily fatigued are some of the potential complexities for retaining participants (Mody et al., 2008), making it crucial that the research team watched and assessed participants and adjusted accordingly.

Participants. After the two NHs were selected, a non-probability voluntary sampling method was used to recruit participants from these homes. The NH site coordinators assisted with identifying potential participants. The activity director at NH-A also assisted with identifying potential participants. Cleary (2003) emphasized that it is important to ensure that those helping to identify potential participants have a clear understanding of what the inclusion and exclusion criteria are. There is the potential that residents may feel that they cannot refuse participation when asked by staff because, as Lingler et al. (2009) stated, residents depend upon that staff for food, shelter, health, and social services. It was important to assure residents that participation was completely voluntary, and that refusal would not compromise their relationship with the staff (Lingler et al., 2009). Institutional Review Board (IRB) approved informational sheets were available to describe the study and to answer residents', staff, and any family members' questions.

The inclusion criteria included: resident of the nursing home, the ability to speak and understand English, over the age of 57, and mentally alert as measured by a score of 4 or higher on the Six-Item Screener (SIS) for cognitive impairment. The SIS was specifically developed from the Mini-Mental State Examination (MMSE) to screen subjects for the cognitive ability to participate in research studies. The SIS was found to have good test-retest reliability (.705), internal consistency (.82), and sensitivity (.90) (Krupp, Seebens, Kasper, Willkomm, & Balck, 2018). The scale is unobtrusive, only takes 1 to 2 minutes to complete, and was easily incorporated into the initial eligibility assessments (Callahan, Unverzagt, Hui, Perkins & Hendrie, 2002) (See Appendix C).

After identifying potential participants, the PI conducted private informational meetings. The PI then administered initial screenings using the SIS. For residents who did not qualify (SIS), the PI was sensitive to their feelings and did not rush the meeting but continued visiting with that resident for an unspecified length of time. If the resident was eligible and wanted to participate, the PI further explained the study, which included a total of five visits (two for measures and three for the LSB intervention) for approximately 1-hour at each visit over a 9-week time period. The PI also explained the measures that would be collected. Full disclosure and written consents were explained with plenty of time for any questions or clarification before consent forms were signed. The consent form included the purpose, procedures, risks, and costs of participating in the LSB. There were no costs for participating in the study and the Listeners received no monetary income from the LSB. In addition, the LSB remained the property of the participant, along with any scanned photos or stories written. This consent was signed by each participant and the PI.

A copy of the consent form was given to each participant. Additional information was provided to participants who wanted to request their family's cooperation to secure photos and/or memorabilia. Participants were told that as soon as recruitment levels were met, the research team would return to schedule their first visit. It took about two weeks to meet recruitment levels. A reminder card was hand delivered to each participant with their scheduled date and time for their first visit.

The majority of the participants who were recruited had complex health problems (Harris-Kojetin et al., 2016). This required well-designed and preplanned protocols that took into consideration multiple health concerns. Mody et al. (2008) provided recruitment and retention strategies and techniques for older adults involved in research. Some of the key approaches they advise are: secure cooperation from all key persons, minimize exclusion criteria, and maximize the benefit to burden ratio (Mody et al., 2008).

Mody et al. (2008) found that one of the most important keys to retention of older adults in research was to maximize the benefit and minimize the burden. The benefits to participants may be the social interaction with the research team, someone to listen to their life story, and the LSB itself. During the LSB intervention, precautions were taken to address possible burdens for NH participants with health complications, such as adjusting intervention times, assessing for fatigue, and being watchful for pain or other symptoms. On three occasions, LSB visits were stopped at approximately 30 minutes due to fatigue, health reasons, and/or upsetting memories. During that same week, another visit was schduled for the remaining 30 minutes of their LSB intervention. The PI visited each of these participants before the second half of their weekly visit to assess for physical or psychological distress.

Another way to ease burden is to provide the LSB at no cost to the participants. Furthermore, the research team eased the burden for staff and participants by escorting the participant to the area designated by the NHs for the intervention. In addition, every effort was made to keep the level of disruption for the staff to a minimum. Scheduled visits were done at the most convenient time for the participant with careful consideration of scheduled activities, i.e. meals, naps, medicine (Mody et al., 2008). There were several visits that were reschduled due to participants taking part in an unscheduled activity, therapy or other activities.

Twenty-seven people were screened from the two comparable NHs. Three persons were unable to complete the required inclusion criteria of four or higher on the SIS for cognitive impairment. Of those screened, 24 (89%) were elibible; twelve from each NH. After participating in the first LSB visit, one participant from NH-A withdrew for medical reasons. Following pretests, but before any LSB visits, two participants from NH-B withdrew due to personal reasons. This resulted in 21 participants (11 in NH-A and 10 in NH-B) who completed all surveys and the LSB intervention. *Figure 2* illustrates participant recruitment and participation.

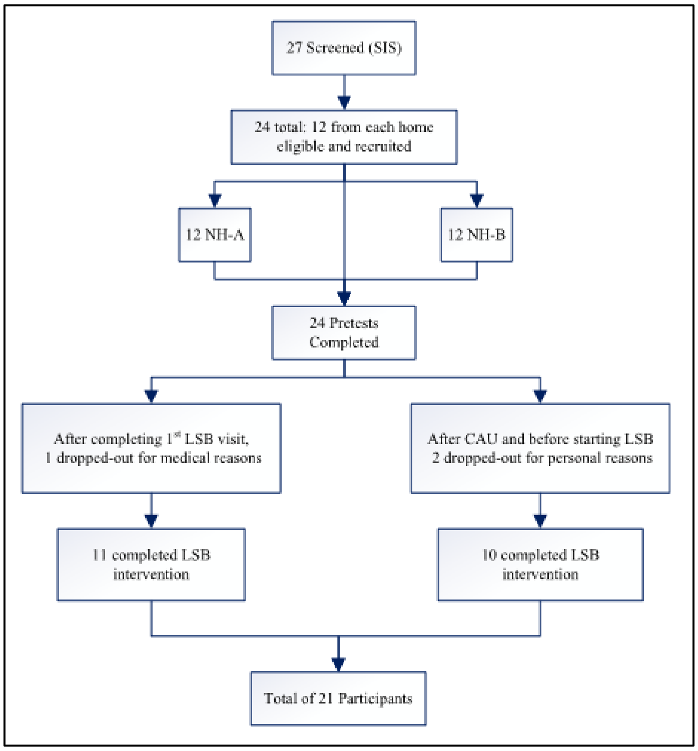

Figure 3. *2.* Participant recruitment and participation.

Listeners. Each Listener was randomly assigned participants from the two NHs as a means to remove some of the questions of bias (Trochim, 2006). Each Listener conducted individual LSB sessions with their randomly assigned participants from each NH. Supervision of each Listener was conducted by the PI throughout the study. The PI always remained at the

NHs while visits were being conducted. After visits, the PI would spend time with each Listener gaining feedback and providing direction. The PI was always available by mobile text if there were any issues that arose during visits. Several times the PI was called by the Listener to help find a new location for a visit due to the noise level of the area or to address health concerns (fatigue) of their participant.

Measures

At the first visit, the PI administered the following instruments in face-to-face interviews with each screened participant. Residents' characteristics were collected in order to assess the comparability of the two groups of participants. These measures included sociodemographic data and health measures. The sociodemographic data collected for each participant included: age, gender, marital status, level of education, ethnicity, religion, and length of residence in the NH (See Appendix D).

A health measure was used to assess physical limitations. In order to assess physical self-maintenance abilities, for instance bathing or dressing, the Katz Index of Independence in Activities of Daily Living (ADLs) was collected for each participant from the site coordinator. This scale includes seven ADLs (Katz, 1983) (See Appendix E).

Depressive symptoms were measured using the Geriatric Depression Scale (Residential) (GDS-12R). The Geriatric Depression Scale (GDS) of 30 items has been shown to effectively differentiate between depressed and non-depressed older adults (Yesavage, et al., 1983). Sheikh and Yesavage (1986) found that the 30-item GDS, when evaluated against diagnostic criteria, had 92% sensitivity and 89% specificity. Additionally, they found that the GDS was effective in distinguishing depressed from non-depressed older adults ($r = .84$, $p < .001$) (Sheikh & Yesavage, 1986). In 1986, a short form of 15 items (GDS-15) was developed for older adults from the original 30-item questionnaire due to previous validation studies finding high correlation with depressive symptoms (Sheikh & Yesavage, 1986).

However, older adults living in NHs are a unique population and three of the items were found to be irrelevant or ambiguous for residents. For example, “Do you prefer staying in rather than going out and doing new things?” Many residents are bed-bound or cannot go out. The three items were not reflective of residents of NHs and were omitted from the GDS-15, which increased the alpha from .76 to .81 (Sutcliffe, et al., 2000). It was found that the GDS-12R had good test-retest reliability and high internal consistency (Sutcliffe, et al., 2000).

The GDS-12R is a self-report scale of depressive symptoms and uses a yes/no format. The scale measures how the person has felt during the previous week and usually takes 5 to 7 minutes to complete, making it ideal for older adults in residential facilities. Scores > 4 are significant for depressive symptoms (Greenberg, 2007) (See Appendix F).

Meaning in Life was measured using the Meaning in Life Questionnaire (MLQ) (Steger, Frazier, Oishi, & Kaler, 2006). This 10-item survey measures two constructs‒presence of meaning (POM) (e.g., “I understand my life’s meaning”) and search for meaning (SFM) (e.g., “I am looking for something that makes my life feel meaningful”). POM measures the degree to which a person believes their life is meaningful overall and SFM assesses the extent to which a person is actively searching for meaning in their life (Steger et al., 2009). Each construct of meaning is measured by five items with scores ranging from 5 to 30 on a 7-point Likert scale (from 1-absolutely true to 7-absolutely untrue).

The MLQ does not have cut off scores like the GDS, but based on numerous studies, a score of POM > 24 indicates a person feels their life has meaning and purpose and a score of SFM < 24 indicates that person is not actively searching for meaning in their life. Further, scores

< 24 on POM indicate that a person feels their life does not have value or meaning and scores > 24 for SFM indicate that person is actively searching for someone or something to give their life meaning. This questionnaire has high convergent and discriminant validity and has been tested across age, gender, race, and national groups (Steger et al., 2006; Steger et al., 2009) (See Appendix G).

Procedures for LSB Intervention

Week # 1. NH-A and NH-B. This first visit was conducted with all 24 screened and enrolled participants. An overview of the study was reviewed as well as information regarding the number of sessions and length of time for each session. The consent form signed in the initial screening interview was reviewed with participants, which included the purpose, procedures, risks, and costs of participating in the LSB as well as the protection of confidentiality from the Listeners and the PI. This first visit was also a time for the participants to get acquainted with their Listener. The PI administered all measures face-to-face, which included: GDS-12R and MLQ. A written reminder card was given to each participant with the date and time of their next scheduled meeting as well as their Listener's contact information. In addition, the PI collected each participant's Katz ADL measure from the site coordinator.

Weeks # 2-4. NH-A received three 1-hour visits for the actual intervention of LSB. Each visit began with the Listener assessing the environment and the participant's needs, making sure that the participant could hear and see the Listener and that the seating arrangement was comfortable before beginning. Assessing the environment included: assessing for privacy, lighting, noise level, temperature, and seating arrangement (Haight & Haight, 2007). In addition, the Listener ensured the participant could see and/or hear them and/or make any adjustments or accommodations for any difficulties that needed attention. This was crucial to adequately accommodate for each participant's needs.

Weeks # 2-4. NH-B received care as usual with no visits to the participants.

Week # 5. NH-A and NH-B. The GDS-12R and the MLQ were collected by the PI from the remaining 21 participants. After measures were collected, Listeners reviewed with their NH-A participants their LSBs for any corrections, omissions, or adjustments that were needed. The LSB was left with the participant and the PI made corrections to their LSB. Within the week, the PI replaced the corrected version with the early version. A receipt for receiving the LSB was signed by the participant and PI. If the participant wanted a USB of their LSB, this was given to them with an area to sign on the LSB receipt form. A follow-up visit in four weeks for posttest 2 (Time 3) was scheduled and a written postcard with the date, time, and their Listener's contact information was left with the participant. Follow-up postcards, provided by the PI, were delivered to participants by the site coordinator.

Week # 5. NH-B. An overview of the study was again reviewed as well as information regarding the number of sessions and length of time for each session. The consent form signed in the initial screening interview was reviewed with participants, which included the purpose, procedures, risks and, costs of participating in the LSB as well as the protection of confidentiality from the Listeners and the PI. This visit was also a time for the participants to get more acquainted with their Listener. The PI administered the GDS-12R and the MLQ measures face-to-face. At this visit, a written reminder card was given to each participant with the date and time for their next scheduled visit as well as their Listener's contact information. In addition, the PI collected each participant's Katz ADL scale from the site coordinator.

Weeks # 6-8. NH-A received care as usual with no visits to the participants.

Weeks # 6-8. NH-B received three 1-hour visits for the actual intervention of LSB. Again, each visit began with the Listener assessing the environment and the participant's needs, making sure that the participant could hear and see the Listener and that the seating arrangement was comfortable before beginning. Assessing the environment included: assessing for privacy, lighting, noise level, temperature, and seating arrangement (Haight & Haight, 2007). In addition, the Listener ensured the participant could see and/or hear them and make any adjustments or accommodations for any difficulties that needed attention. This was crucial to adequately accommodate each participant's needs.

Week # 9. NH-A and NH-B. The GDS-12R and the MLQ were collected by the PI from all 21 participants. For NH-A, participants and Listeners were provided with time for closure and a handwritten thank you card was given from each Listener to their participants. An invitation to a presentation at the NH was personally given to each participant.

Week #9. NH-B. After measures were administered, the participant's LSB was read aloud by the Listener, using an additional draft, for any corrections, omissions, or adjustments that were needed. Reading the draft aloud to the participant was different than what was done with NH-A because this was found to be more accommodating and effective for noticing corrections or omissions that were needed by the participants. The LSB was left with the participant and the Listener used their draft to make corrections to the LSB. Within the week, the PI reprinted and replaced the corrected version with the early version. A receipt for receiving the LSB was signed by the participant and PI. If the participant wanted a USB of their LSB, this was given to them with an area to sign on the LSB receipt form. Again, during this visit participants and Listeners were provided with time for closure and a handwritten thank you card was given from each Listener to their participants. An invitation to a presentation for the NH was personally given to each participant. See Table 3.2 for a visual depiction of this nine-week process.

Table 3.2

Switching Replication

	T1				**T2**				**T3**
	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7	Visit 8	Visit 9
NH-A	O	LSB	LSB	LSB	O	CAU	CAU	CAU	O
NH-B	O	CAU	CAU	CAU	O	LSB	LSB	LSB	O

Note. T = times of measurement; LSB = Life Story Book Intervention; CAU = care as usual; O = measures collected.

Data Analysis

Data were analyzed using IBM SPSS Version 25 (IBM Corp., Released 2017). A multivariate analysis of covariance (MANCOVA) was performed. One of the benefits of using MANCOVA is that it is able to detect whether multiple outcome measures are correlated with one another in such a way that together they may have impacted the intervention (Pallant, 2016). Another benefit of using MANCOVA is that MANCOVA protects against an increased risk of a Type 1 error when several dependent variables are considered for analyses (Abu-Bader, 2011). MANCOVA controlled for pretest (Time 1) scores, which is one way to control for selection bias or to adjust for initial group differences (Rubin & Babbie, 2017).

Descriptive analyses were conducted to describe participants, including demographic characteristics and the Katz functional status measure (ADL). Demographic variables were assessed with t-tests for independent samples (continuous variables) and Fisher’s Exact test (categorical variables) to ascertain baseline differences between the two nursing home groups. Data were inspected for any errors in data entry and for any missing data. Prior to conducting the main analyses, data were evaluated to ensure that assumptions for multivariate tests were fulfilled, including normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity.

A one-way MANCOVA was performed to test the overall effects of the LSB intervention and the differences between the groups on the three outcome measures (GDS-12R, POM, and SFM) among the sample of 21 nursing home residents while using Time 1 (pretest) scores as covariates. Main effects from Time 1 (pretest) to Time 2 (posttest 1) in both groups were examined. To look at long term effects, a one-way repeated measures ANOVA was conducted for NH-A at the end of one month or at Time 3.

Potential Limitations and Solutions

Although controlling for the baseline scores improves threats to internal validity, it does not control for one plausible limitation, which is test-retest effect. One way to address this concern is to make sure the pretests and posttests are collected at the same time of day (Rubin & Babbie, 2017). This is especially important with frail older adults. As far as we were able, pretests and posttests were collected at the same time of day. Again, all participant measures were collected during the same week.

Residents are members of residential communities, and their involvement in a study may have implications for other members of the community (Lingler, Jablonski, Bourbonniere & Kolanowski, 2009). One way to address this was to provide a LSB toolkit that could be used by the NH to enable other residents the same opportunity to make their own LSB. A toolkit was donated to each NH, which contained all the essentials needed for making LSBs.

Protection of Human Subjects

Several steps were taken to ensure that this research was conducted with the highest ethical standards to protect the rights, welfare, and well-being of the participants. These include:

1) Before engaging in this study, approval was sought and obtained from the IRB from the University of Houston. 2) NH research requires a two-tiered informed consent process. Before reaching out to participants, permission and approval was sought at the facility level. This entailed full disclosure, including the nature, purpose, risks, and potential benefits. Discussions and questions about the study were also answered. This provided another layer of human subjects' protection for the NH residents (Lingler, Jablonski, Bourbonniere, & Kolanowski, 2009).

Furthermore, individual informed consent was obtained before participant eligibility criteria screenings were conducted. Every effort was made to convey all relevant information, including full disclosure and assurance that participation was voluntary and was not required by the facility. In order to protect the privacy and maintain the confidentiality of all participants, there were provisions made to protect all identifiable data from recruitment to maintaining the data. These provisions included the confidentiality of referred residents who did not meet the eligibility criteria; de-identification of each participant with a study number; a database created with password protected files used only by the PI; components of the study data kept in a locked file cabinet; the research team well trained in how to maintain participant confidentiality; and the research team completed the required CITI training on ethical conduct of research. To ensure privacy, written agreements between the research team and the participants were signed to ensure that no stories were included in their LSB that did not have the express permission of the participants. The LSB belongs to the participant and any information or stories shared were not disclosed to families or staff to protect the participant (McKeown, Ryan, Ingleton, & Clarke, 2015).

Chapter Highlights

Cooperation was obtained from two NHs in the Houston Metropolitan Area from which participants were recruited. After the initial screening of residents who were cognitively able to complete the screening, consent forms were obtained from 24 participants and surveys were administered. These surveys consisted of demographic information, GDS-12R, and MLQ. Surveys were collected at pretest (Time 1), posttest (Time 2), and posttest 2 (Time 3). Three participants dropped out of the study before the LSB intervention. This study implemented the individualized, semi-structured, LSB intervention by means of three 1-hour visits. Protections were in place and adhered to for protecting the privacy and confidentiality of the participants.

CHAPTER IV

RESULTS

"Everyone deserves to have their life remembered as more than an old, faded photograph with a name on the back"(Gibson, 2018, p. 197).

This chapter provides a summary of the data collected and analyzed so as to answer the research questions. All residents from this two-group experiment were tested at the same three points in time using the same two measures (GDS-12R and MLQ- with two subscales- POM and SFM). To reiterate, with the switching replication design as one NH received the intervention the other acted as the control group. and then, after the first posttest (Time 2), the control group received the intervention. The study sample's (*N* = 21) demographic characteristics are presented in Table 4.1. Descriptive statistics of the GDS-12R and the two subscales of MLQ (POM and SFM) measures will be reported after the internal consistency reliability of the three scales is described. Subsequently presented are the results of the inferential statistics and MANCOVA that were used to analyze the difference between the two NHs on the posttest scores (Time 2) on GDS-12R, POM, and SFM, while controlling for prestest scores (Time 1). Finally, the results of the research questions are presented.

Data Analysis

Data screening. All variables were entered into IBM SPSS Version 25.0 (IBM Corp., Released 2017). The variables were examined for accuracy in data entry, missing data, normal distribution of data, and outliers. There were no missing data. MANOVA is robust to violations of normality, but sensitive to outliers. Therefore, multivariate normality was tested by calculating Mahalanobis distances. The maximum value for Mahalanobis was less than the critical value (alpha .001) indicating that there were no multivariate outliers (Pallant, 2016, p. 294). There were two cases with univariate outliers that were retained for further analysis. Two separate analyses were conducted with and without these two cases with no meaningful differences.

Data were evaluated to ensure that the assumptions for multivariate tests were fulfilled. Measures of skewness and kurtosis, histograms, normal Q-Q plots were examined for each dependent variable (GDS-12R, MLQ subscales POM and SFM). Normal distributions were revealed for all variables. The results of Levene's test of equality of variances was significant for POM ($p < .037$), but not for SFM and GDS ($p > .05$). Since Levene's Test for POM was significant a more conservative level for determining significance was set at $p < .01$ rather than the traditional $p < .05$ (Tabachnick & Fidell, 2013). The residuals SSCP matrices showed that GDS-12R, POM, and SFM met the assumptions of linearity and multicollinearity. Box's M test of variance-covariance matrices was statistically significant ($F = .957$, $p > .001$); therefore, Wilks' Lambdas will be reported. Bartlett's test of sphericity showed a significant correlation between the dependent variables (chi-square $_{(df = 5)}$ = 28.247, $p < .05$). The results of Pearson's correlation and scatterplots showed a linear relationship between the covariate and the dependent variables. The assumptions for multivariate tests were fulfilled.

Participants. The average age of participants was 75 years old (SD =11.34; range = 57-95). The sample was predominantly female (81%), widowed (52%) or divorced (28.6%) with some college or technical training (42.9%) or a high school diploma or GED (28.6%). Most participants were non-Hispanic white (52%) or African American (33%) and Protestant (76.2%). The majority had lived at their residence for one-two years (57%), followed by less than a year (28.6%). Table 4.1 summarizes the demographic characteristics. Analyses using Fisher's Exact test (categorical variables) and independent samples *t*-test (continuous variables) were used to detect significant differences between the participants in each NH. As Table 4.1 indicates there were no significant differences between the groups in regard to age, gender, marital status, education, ethnicity, religion, or length of stay at residence. There were, however, significant differences between the groups Katz scores or ADLs (t = -2.285; *p* = .045). Lower scores indicate the person is more physically dependent, whereas higher scores indicate a person has more independence with their physical capabilities. NH-B participants were more independent than NH-A participants. To examine whether these differences would impact the main analyses models, analyses were conducted while controlling for Katz scores. There were no significant differences while controlling for the Katz scores.

There were some differences between the study sample and the target population. For instance, the average age of residents who reside in NHs in the U.S. is 83 years of age (Administration on Aging (AoA), 2017), whereas the study sample's average age was younger, at 75 years of age. The study sample also had a wide range of ages from 57 to 95 years. Nationally, only 16.5% of NH users are under the age of 65 years. In the U.S., 65% of NH residents are women, however, the study sample had 81% women. The distribution of race in NHs in the U.S. is 75% Non-Hispanic white and 14.3% African American (Harris-Kojetin, et al., 2019). The distribution of race in the study sample was 52% Non-Hispanic white and 33% African American. These were some of the notable differences between study sample and the target population.

Table 4.1

Sample Descriptive Characteristics

Characteristic	NH-A (n= 11)		NH-B (n= 10)	
	n,	%	*n*,	%
Age[a]				
Mean	77.1 (SD 11)		72.1 (SD 11.7)	
Range	59-90		57-95	
Gender[b]				
Female	10	90.9%	7	70.0%
Male	1	9.1	3	30.0
Marital Status[b]				
Widow (R)	7	63.6	4	40.0
Divorced	3	27.3	3	30.0
Single	1	9.1	2	20.0
Married	0	0	1	10.0
Education[b]				
Grades 9-11	2	18.2	1	10.0
High School or GED	4	36.4	2	20.0
Some College/Tech	2	18.2	7	70.0
College Graduate, plus	3	27.3	0	0
Ethnicity[b]				
White	6	54.5	5	50.0
African American	3	27.3	4	40.0
Asian	2	18.2	0	0
Hispanic	0	0	1	10.0
Religion[b]				
Protestant	8	72.7	8	80.0
Catholic/Other	3	27.3	2	20.0
Length of Time at Residence[b]				
less than 1 year	5	45.5	1	10.0
one-two years	6	54.5	6	60.0
three or more years	0	0	3	30.0
Katz Index (ADL)[c]	1.27 (SD .65)		3.0 (SD 2.3)*	

[a] No significant differences between intervention and control groups (t test with $p > 0.05$).

[b] No significant differences between intervention and control groups (Fisher's Exact)

[c] Significant difference ($p < 0.05$) between experimental and control groups ($t_{(df.10.28)} = -2.285$; $p = .045^{*}$)

Internal consistency reliability. An internal consistency reliability analysis was performed for GDS-12R, POM and SFM (Rubin & Babbie, 2017). The Cronbach's alpha (α) varied with each administration of the measures. Table 4.2 displays the results of the analysis for each dependent variable at each time period.

Table 4.2

Mean, Standard Deviation, and Internal Consistency Reliability of Scales

Measure	Mean	SD	Cronbach's α in Current Study	N of Items
GDS-12R				
Time 1	2.52	2.38	0.734	11
Time 2	1.95	2.33	0.798	10
Time 3	1.90	2.79	0.867	12
POM				
Time 1	28.90	5.09	0.598	5
Time 2	29.29	6.60	0.914	5
Time 3	28.81	5.74	0.780	5
SFM				
Time 1	16.19	10.00	0.887	5
Time 2	16.33	10.03	0.903	5
Time 3	17.90	9.43	0.870	5

GDS-12R = Geriatric depression scale residential; POM = Presence of meaning; SFM = Search for meaning

Results Regarding LSB Effectiveness

Preliminary analyses: participant differences inspections. In order to compare the NHs at baseline (Time 1), group comparisons on outcome variables were conducted. Table 4.3 shows the baseline scores on GDS-12R, POM, and SFM for all participants. There were no significant differences at baseline between NH-A and NH-B participants on all three measures: GDS-12R (t = -.402; p = .692), POM (t = -.417; p = .681), and SFM (t = .260; p = .798).

Table 4.3

Baseline or Time 1 Scores for All Participants on GDS-12, POM, and SFM

Measure	NH-A (*n* = 11) Mean (SD)	NH-B (*n* = 10) Mean (SD)	*t*-test
GDS-12R	2.73 (SD 2.37)	2.30 (SD 2.50)	$t_{(df.19)}$ = .402; p = .692
POM	28.45 (SD 6.14)	29.40 (SD 3.86)	$t_{(df\ 19)}$ = -.417; p = .681
SFM	15.64 (SD 9.57)	16.80 (SD 10.93)	$t_{(df.19)}$ = -.260; p = .798

Multivariate analysis. A one-way MANCOVA was utilized to examine the effectiveness of LSB for reducing depressive symptoms and increasing MIL for residents of NHs. The independent variable was the NHs and the dependent variables consisted of posttest scores (Time 2) on the GDS-12R, POM, and SFM. Participants' pretest scores (Time 1) were used as the covariate in this analysis.

After adjusting for pretest scores (Time 1), the results indicated there was not an overall statistically significant difference between NH-A and NH-B on the post-intervention scores of the combined dependent variables, $F(3, 14) = 2.50$, $p = .102$; Wilks' Lambda = .652; observed power = .50. The effect size for LSB was moderate (partial eta squared = .35). Table 4.4 presents the means and standard deviations of the dependent variables at each time point. Table 4.5 displays the MANCOVA summary table.

Table 4.4

Mean Scores Time 1, Time 2, and Time 3

Home/Measure	Pretests (T1)	Posttests (T2)	Posttest 2 (T3)
	Mean (SD)	Mean (SD)	Mean (SD)
NH-A (*n* = 11)			
GDS-12R	2.73 (2.37)	1.36 (1.75)	1.64 (2.25)
POM	28.45 (6.14)	27.46 (7.61)	28.27 (6.50)
SFM	15.64 (9.57)	16.45 (10.15)	15.45 (9.04)
NH-B (*n* = 10)			
GDS-12R	2.30 (2.50)	2.60 (2.80)	2.00 (2.83)
POM	29.40 (3.86)	31.30 (4.88)	29.40 (5.06)
SFM	16.80 (10.93)	16.90 (10.30)	21.50 (9.29)

Table 4.5

MANCOVA Summary Table

Source	DV	SS	*df*	MS	F	*p*	η^2	Observed Power
Covariate GDS-12R[a]	GDS-12R	25.975	1	25.975	6.754	.019	.297	.685
	POM	25.125	1	25.125	.850	.370	.050	.140
	SFM	181.779	1	181.779	3.137	.096	.164	.384
Covariate POM[b]	GDS-12R	.553	1	.533	.139	.715	.009	.064
	POM	86.469	1	86.469	2.926	.107	.155	.363
	SFM	188.053	1	188.053	3.245	.091	.169	.395
Covariate SFM[c]	GDS-12R	1.051	1	1.052	.273	.608	.017	.078
	POM	104.384	1	104.384	3.532	.079	.181	.423
	SFM	646.353	1	646.353	11.154	.004	.411	.880
NH	GDS-12R	10.814	1	10.814	2.812	.113	.149	.351
	POM	78.307	1	78.307	2.649	.123	.142	.334
	SFM	.768	1	.768	.013	.910	.001	.051
Error	GDS-12R	61.533	16	3.846				
	POM	472.900	16	29.556				
	SFM	927.210	16	57.951				
Total	GDS-12R	189.000	21					
	POM	18881.000	21					
	SFM	7818.00	21					
Corrected	GDS-12R	108.952	20					
	POM	870.286	20					
	SFM	1984.667	20					

[a] Wilks' lambda = .551, $F_{(df =3, 14)} = 3.810$, $p > .035$, $\eta^2 = .45$
[b] Wilks' lambda = .581, $F_{(df = 3, 14)} = 3.367$, $p > .049$, $\eta^2 = .42$
[c] Wilks' lambda = .560, $F_{(df = 3, 14)} = 66.01$, $p > .039$, $\eta^2 =.44$
p = .05

An examination of the mean scores indicated that NH-A participants reported lower levels of depression on the GDS-12R (*M* =1.36, *SD* = 1.75) compared with NH-B participants (*M* = 2.60, *SD* = 2.80). In addition, an inspection of the mean scores of POM and SFM indicated that the mean scores for POM remained high (above 24) and the mean scores for SFM remained lower (below 24). In other words, over time, the two MIL dimensions remained stable and did not significantly change (POM: NH-A (*M* =27.45, *SD* = 7.61); NH-B (*M* = 31.30, *SD* = 5.0); SFM: NH-A (*M* =16.45, *SD* = 10.15); NH-B (*M* = 16.90, *SD* = 10.3).

Effects of time. While the MANCOVA results were not statistically significant on the combined dependent variables (*p* = .102), change was being made in the appropriate direction for depressive symptoms. An additional analysis was conducted to evaluate the effects of time for NH-A. A one-way repeated measures ANOVA was conducted for NH-A to compare scores on each dependent variable at pretest (Time 1), posttest (Time 2), and posttest 2 or one-month follow-up (Time 3). The means, standard deviations, and standard errors are presented in Table 4.6. The results of the repeated measures showed a significant effect for time for GDS-12R. The results were not significant for time for POM and SFM. See Table 4.6 and Table 4.7.

Table 4.6

Dependent Variables for NH-A over Time (n =11)

Measure	T1		T2		T3	
	Mean (SD)	SE	Mean (SD)	SE	Mean (SD)	SE
GDS-12R	2.73 (2.37)	.72	1.36 (1.75)	.53	1.64 (2.25)	.68
POM	28.46 (6.14)	1.85	27.45 (7.61)	2.29	28.27 (6.50)	1.96
SFM	15.64 (9.57)	2.89	16.45 (10.15)	3.01	15.45 (9.04)	2.71

Table 4.7

Results for NH-A Dependent Variables, One-Way RANOVA-Summary Table

Measure	SS	*df*	MS	F	*p*	η^2
Times GDS-12R[a]	11.46	2	5.727	4.209	.030*	.39
Subjects	110.06	10	11.006			
Residuals	27.21	20	1.361			
Total	148.72	32				
Times POM[b]	6.24	2	3.121	.133	.877	.01
Subjects	906.55	10	90.66			
Residuals	471.09	20	23.56			
Total	1383.88	32				
Times SFM[c]	6.24	2	3.12	.130	.879	.013
Subjects	2283.58	10	228.36			
Residuals	480.42	20	24.02			
Total	2770.24	32	255.50			

[a] Wilks' lambda = .613, $F_{(2,9)}$ = 2.837, $p > .111$, η^2 =.39
[b] Wilks' lambda = .968, $F_{(2,9)}$ = .151, $p > .862$, η^2 = .01
[c] Wilks' lambda = .983, $F_{(2,9)}$ = .076, $p > .927$, η^2 = .017
*$p < 0.05$

Results with research questions. In this section, the results of the univarate *F* tests for each research question and related hypotheses are reported.

R.Q.1: What are the effects of LSB on depressive symptoms for mentally alert residents of NHs, as measured by GDS-12R scores?

Result: The results of the one-way MANCOVA were not statistically significant. Therefore, the null hypothesis was not rejected.

R.Q.2: What are the effects of LSB on POM for mentally alert residents of NHs, as measured by MLQ?

Result: The results of the one-way MANCOVA were not statistically significant. Therefore, the null hypothesis was not rejected.

R.Q.3: What are the effects of LSB on SFM for mentally alert residents of NHs, as measured by MLQ?

Result: The results of the one-way MANCOVA were not statistically significant. Therefore, the null hypothesis was not rejected.

Chapter Highlights

In this chapter data collected from NH participants were analyzed. Differences in demographic variables from the study's sample (*N* = 21) were inspected. A multivariate analysis of covariance was conducted to inspect for differences between NH-A and NH-B on the dependent variables, while controlling for pretests scores (Time 1) for GDS-12R and the two MLQ subscales POM and SFM. In addition, analyses were conducted to evaluate scores collected over time for NH-A on all measures. Finally, the research questions and their corresponding results were presented.

CHAPTER V

DISCUSSION

Listening is the most powerful form of acknowledgement…a way of saying, "You are important" (Anonymous).

This quasi-experimental study evaluated the reminiscence intervention LSB with persons who are mentally alert and living in nursing homes. LSB was evaluated by inspecting participants' responses to questions regarding depressive symptoms and meaning in life (MIL). The present chapter discusses the nonsignificant findings and moderate effect size for LSB among participants on the GDS-12R and the MLQ, followed by a discussion of the study's limitations and strengths. Finally, implications for future research, theory, practice, and policy will be proposed.

Study Overview

Nursing home residents are at an increased risk for depression and report lower quality of life than older adults living in the community. Poor quality of life for NH residents is a major concern as the demand for NHs only increases with an aging population (CMS, 2018; Harris-Kojetin, et al., 2019). There is a need for nonpharmacological interventions for both mentally alert and cognitively impaired NH residents. Since there is extensive research of LSB with cognitively impaired residents, this study sought to examine the effects of LSB for reducing depressive symptoms and increasing MIL for mentally alert residents.

A MANCOVA was used to compare posttest scores (Time 2) among participants from two comparable NHs while controlling for pretest scores (Time 1). Although the results were statistically nonsignificant, the moderate effect size ($\eta^2 = 0.35$) was not trivial. The data from this study did not provide strong enough evidence to reject the null hypotheses, but there is a substantial risk of a Type II error in light of the small sample size and low statistical power.

We had projected a large effect size of *d* = 0.94 due to reminiscence intervention research. Specifically, the Pinquart & Forstmeier (2012) meta-analysis found that those with chronic physical diseases have larger improvements (*g* = 0.94) on depressive symptoms compared with those without chronic physical diseases (Pinquart & Forstmeier, 2012). Additionally, they found the largest improvements were with those who received life-review therapy (*g* = 1.28) and with individuals who had a diagnosis of depression (*g* = 1.09). With our predicted large effect size, we had calculated a power of 0.90. The results of this study showed that with our weaker effect size our power was only 0.50, indicating a 0.50 risk of Type II error.

Discussion on Depression

The first research question sought to examine the effects of LSB on depressive symptoms for mentally alert residents of NHs. This study found nonsignificant results for LSB reducing depressive symptoms. These results were in contrast with previous studies for LSB with community dwelling older adults that resulted in improved mood as compared with care as usual (Chan, et al., 2013; Chan, et al., 2014; Chung, 2009). Although conducted with residents of NHs with dementia, Cody & Drysdale (2013) also found that reminiscence therapy alleviated depression.

The majority of participants were not depressed when they began the study. This was evident by participants' mean scores at Time 1 (baseline) on the GDS-12R (*M* 2.73; *SD* 2.4) for NH-A and NH-B (*M* 2.30; *SD* 2.50), which were below the suggested score ≥ 4 indicating depression. Post-intervention (Time 2) mean scores for NH-A (*M* 1.36; *SD* 1.75), although not statistically significant when compared to NH-B, were lower. The drop in mean scores for NH-A suggests there was a change in the desired direction. However, NH-B at Time 2 had not received the intervention yet and depressive symptoms increased slightly (*M* 2.60; *SD* 2.80).

Furthermore, both NH participants' scores at Time 3 did not return to pre-intervention (Time 1) levels (NH-A, *M* 1.64; *SD* 2.25; NH-B, *M* 2.00; *SD* 2.83). The mean scores from the entire sample indicate that improvements in depressive symptoms appeared to have begun, perhaps indicating with a larger sample size an overall statistically significant result might have been found.

GDS-12R is a validiated measure for geriatric depression, but the presence of chronic health conditions of residents of NHs may require a measure for depression that supports specific identification of depression for frail NH populations (Jongenelis, et al., 2007). Since depression is often under-recognized with older adults with chronic medical conditions, an even shorter more patient-friendly version of the geriatric depression scale may reduce respondent burden and may be better suited for this frail population; such as the GDS-8 or GDS-4 (Pocklington, McMillan, Gilbody, & Manea, 2015).

Discussion on Meaning in Life (MIL)

The second and third research questions sought to examine the effects of LSB on MIL using the MLQ, which measures two constructs of meaning‒presence (POM) and searching (SFM). For many older adults living in NHs, MIL has been found to be of particular importance (Bernard, Braunschweig, Fegg, & Borasio, 2015; Haugan, Moksnes, & Løhre, 2016). This study found no significant differences between the experimental and control groups on POM or SFM.

Steger et al. (2006) suggest that scores above 24 on POM and below 24 on SFM may indicate that a person feels their life has valued meaning and purpose and that person is not actively seeking new meaning in their life. The participants in this study had mean scores above 24 for POM and below 24 for SFM at both baseline (Time 1) (POM 28.45, 29.40; SFM 15.64,16.80) and posttest (Time 2) (POM 27.46, 31.30; SFM 16.45, 16.90). The scores at baseline for both POM and SFM may indicate that participants already felt their lives had valued meaning and purpose and were not searching for meaning. They already had an understanding of what made their lives meaningful before the study and this did not significantly change after the LSB intervention. Furthermore, Dezutter, Luyckx, & Wachholtz (2015) found that higher levels of POM resulted in less depressive symptoms, whereas higher levels of SFM lead to higher depressive symptoms, indicating that SFM may be a stressful process.

POM and SFM mean scores (see Table 4.4) remained stable over time (Time 1, Time 2, and Time 3). This may suggest that MIL for these participants is now a part of their individual functioning or character trait (Dezutter, Luyckx, & Wachholtz, 2015). Park (2010) suggested that highly stressful events impact a person's global MIL. These participants may no longer perceive their frailty or place of residence as a destabilizing factor. Over 70% of the participants had lived at their residence longer than one year. This corresponds to Haugan's (2014) study finding that in both physical and psychological health MIL serves as a mediating variable for NH residents.

Steger et al. (2006) speculated that persons with scores above 24 on POM and below 24 on SFM may be active in religious activities and feel that spirituality is important to them (Steger et al., 2006). This corresponded with the fact that participants discussed throughout the current study how their faith impacted their MIL. Likewise, over 90% of the study participants were affiliated with a religion and the majority of participants were involved in religious activities at their NH.

There was a wide range of internal consistency reliability (alpha) values for POM (T1 = 0.598; T2 = 0.914; and T3 = 0.780). According to research methods texts, acceptable alpha values should exceed 0.70. An alpha value lower than 0.70 is considered questionable, and an alpha level lower than 0.60 is considered poor (Tavakol & Dennick, 2011). The wide variablity of reliabiltiy scores for POM in this study may indicate that the measure was not caputuring the POM constuct for these participants, which would further lower statistical power.

In general, the majority of participants did not like the MLQ. The 10-item questionnaire is rated on a 7-point Likert scale with answers ranging from “Absolutely True” to “Absolutely Untrue” (Steger et al., 2006). The PI enlarged and laminated the 7-point scale so participants, if they were able, could hold and look at the range of answers and point to one that fit their answer. Although there are only 10 questions, many became annoyed at the repetition of the questions and felt the scale answers were too ambiguous. In other words, some of their responses were, “*I don’t know*,” or “*Maybe this or maybe that.*” Many could not pinpoint an answer and would just point to any answer.

The MLQ has been shown to have excellent reliability and has been validated with older adults. Although this may be true, capturing the underlying concepts for frail, mentally alert residents of NHs may require a different measure. Given that MIL is a vital aspect of an older adult’s quality of life and health (Burack et al., 2012; Haugan, 2014; Hill & Turiano, 2014), it is important to find a measure that better measures the construct for this population (Heintzelman & King, 2014). One possibility may be a newly developed MIL scale developed specifically for older adults (Lee & Hong, 2017).

LSB Intervention

This study employed the LSB intervention in a structured process that allowed participants to review their lives in various stages from childhood to the present day. The intervention was implemented in three visits, much the same as Chan et al. 2013 and 2014 studies. We found that the average time spent with participants was 48 minutes rather than the projected one hour. The length of time spent for each visit seemed appropriate primarily because the participant was done talking, which was speculated to be due to the stamina of the person. On most occasions the frailty of the participant determined the length of time of each session.

The fidelity in which the intervention was implemented was assessed in multiple ways. The PI monitored and evaluated the Listeners throughout the study and provided structured feedback on a continual basis. Self-report checklists were completed by each Listener, along with a record of minutes spent with each participant. The PI remained at each NH during all LSB visits. A consistent schedule was kept, and all research staff adhered to the study protocol.

Strengths and Limitations

This study sought to address gaps in the existing knowledge of LSB for mentally alert residents of nursing homes. There are multiple strengths to this study. The first strength is that it advances the existing knowledge of LSB. Since 2006, there have been multiple studies of LSB for PWD, providing more evidence for improving multiple outcome measures. Even this study’s statistically nonsignificant findings and the moderate effect size contribute to the present lack of knowledge of LSB with mentally alert residents of NHs. In light of this study’s low statistical power, the moderate effect size has the potential to spark new interest in conducting further research of LSB with this population.

Secondly, all possible measures were taken to avoid bias in the study’s methodology. Participants were selected solely based on the inclusion criteria. In order to further avoid bias, participants were randomly assigned to an RA who conducted the intervention. There were no significant differences on outcome measures between the intervention group and the control group at baseline. Even so, baseline measures were controlled for statistically using MANCOVA. In addition, all measures were collected according to the study protocol. For example, all measures were collected by the PI from all participants during the same week. Participants taking part in the intervention completed the scheduled visits during the same week. No participant completed measures or intervention visits during a week other than what was planned in the protocol.

Thirdly, another strength of this study was the switching replication design. Again, this design is one of the more ethical study designs because no person (intervention or control) is denied treatment. The multiple independent administrations of LSB gave all participants the opportunity to benefit from LSB, and it also provided another opportunity to compare the effects of the intervention to nontreatment if the first posttest results had been significant.

The greatest limitation of this study was the small sample size. In order to overcome this limitation, further study is necessary with a larger sample size. As stated earlier, the imprecision of the measures may have underestimated the effects of the LSB intervention. The participants were not depressed when they started the intervention indicating a ceiling effect on the GDS-12R. This may have decreased the likelihood that the GDS-12R was accurately measuring depression for these participants. Another limitation of this study may have been the lack of qualitative data.

Implications

This quantitative study examined the effects of LSB for decreasing depressive symptoms and increasing MIL for mentally alert residents of NHs. There are implications from disappointing results regarding whether LSB is as effective as prior literature suggests, especially for mentally alert residents. The limitations of this study do provide an opportunity to make recommendations for further research, theory, practice, and policy.

Future research implications. In light of the small sample size (*N*= 21), low statistical power, and meaningful effect size, replicating the study with a larger sample size is advisable. In addition to the larger sample size, it is also suggested to include multiple NHs while employing additional research staff, with all following a mutual protocol. This study provides a clear implementation process that can be easily replicated.

Another potential area of research is to explore how the LSB affects NH staff. Subramaniam et al. (2014) and Subramanian & Woods (2012) found staff attitudes and knowledge of the PWD improved after LSB. Although staff were involved in the process of LSB with the PWD, the impact of the LSB on the staff has been rarely evaluated. After this study was completed, one NH staff member asked the PI to please come back and do another study so she could be interviewed. She wanted to express how much change she had witnessed in the participants, the other staff, and herself after the LSB experience. The impact of LSB on the NH staff should also be evaluated in LSB research.

Moreover, future studies may increase the effect size by exploring other constructs that contribute to depression, such as hopelessness or loneliness, as well as constructs that contribute to decreased MIL, such as life satisfaction. As suggested earlier, the GDS-8 or GDS-4 should be explored as a possible alternative to the GDS-12R. In addition, exploring alternatives to the MLQ for frail NH populations is also recommended.

Despite the fact that all Particpants were mentally alert, they all had complex and chronic health problems. The relationship between chronic medical conditions and depression is well noted in research, indicating that health problems may precipitate depressive episodes (Read, Sharpe, Modini, & Dear, 2017). Furture research should take this into consideration when collecting measures or conducting interventions. For example, one participant had dialysis three times a week. After dialysis she would spend the rest of the day depressed and in tears. We were careful not to conduct measures or LSB visits on those days. As far as we could predict, we followed the same protocol with the other participants. Interventions aimed at depression may not be successful unless accommodations for symptom burdens are made (Haugan, 2014).

Theory implications. This study drew upon Erik and Joan Erikson's Life Span Developmental Theory, including gerotranscendence, along with Robert Butler's concept of life review. Butler hypothesized that an older person may gain new significance and meaning if they have an opportunity to reflect on previous experiences and attribute meaning to them. Also, if an older person were afforded a chance to revisit experiences, they may gain an expanded understanding. Likewise, the Eriksons theorized in order for a person to achieve gerotranscendence they need to circle back through life challenges and reflect on their life. Future qualitative LSB research may enrich our understanding whether new meaning is gained and/or if an expanded understanding of life emerges. Additionally, a specific consideration for future research may be a longer LSB intervention time (more than 3 visits), which may allow a person more time to reflect, share their experiences, and gain new meaning.

Practice implications. This research was conducted with an extremely vulnerable population. Although the findings did not support the effectiveness of the intervention of LSB with this study's small sample size, it does not diminish the need for nonpharmacological personalized interventions that improve the quality of life for those living in NHs. The nonsignificant findings were in contrast to other personalized interventions that have had significant effects on psychological well-being (Weiss, Westerhof, & Bohlmeijer, 2016).

Personalized interventions are one way to engage a vulnerable person in their own health care (Chen, Mullins, Novak, & Thomas, 2016). Personalized interventions specifically tailor to the characteristics of the individual, i.e., those from various cultural backgrounds and health disabilities. Although this study's demographics reflected the U.S. NH population, there is a growing increase of older minority populations in NHs (Feng, Fennell, Tyler, Clark, & Mor, 2011). Interventions, such as LSB, designed to accommodate the various health and cultural backgrounds of residents of NHs should be preferred.

Workers in the field of geriatrics, especially social work, build trusting relationships by listening. For frail mentally alert residents, NH staff may need to find interventions that allow residents opportunities to reminisce and to listen to them. For instance, several participants commented that they could not believe someone wanted to hear their life story. One NH staff member said she knew one participant for three years and yet did not know much about her life story. She also commented that for the past three years this same participant had not eaten with other residents in the dining room and always wore a hospital gown. However, during the LSB intervention she came to the dining room to eat with others, and by the end of the intervention she "dressed" for meals and no longer wore her hospital gown. The LSB intervention may have allowed these residents an opportunity to feel valued and heard (McKeown et al., 2010). Additional qualitative research, from the point of view of residents, could explore the influence of LSB on being valued and heard.

This study provided an opportunity to test the contents of an innovative LSB toolkit. The toolkit provided all the essentials for the LSB intervention in one case. This all-inclusive kit provides for replication of LSB in practice and research. Again, the toolkit contained a Listener checklist, an audio recorder, microphone, timer, photo scanner, LSB questions, pad of paper, and pens. This study found that lapel microphones were extremely useful and included one in the toolkits. The microphones aided immensely in hearing and understanding participants on the audio recordings, particularly those who had suffered strokes. Further LSB research utilizing the toolkits may inform and promote LSB in practice, if not with mentally alert residents, than with already established LSB evidence with PWD.

Policy implications. The National Institute of Aging (NIA) has recognized the need to improve the quality of life for the 1.4 million older adults who rely on NHs for their long-term care (NIA, 2016). The NIA's mission is to support research and develop effective interventions that maintain the health and well-being of residents. With the NIA's support, it is an opportune time to replicate this study with a larger sample size to examine whether the LSB effects are similar to the strong research evidence that LSB has with PWD (Gridley et al., 2016). It is recommended that future research test the impact of LSB on a broad range of outcomes with mentally alert residents of NHs. It is imperative that non-pharmacological interventions continue to be researched and developed to address depression and MIL for residents of NHs.

Conclusion

This study examined the use of LSB with persons who are mentally alert and living in NHs in Houston, Texas. The findings for reducing depressive symptoms and increasing MIL, although statistically nonsignificant, do expand the existing knowledge of LSB. The moderate effect size suggests that further research is warranted with a larger sample size. The LSB research that has been conducted with PWD living in NHs has provided evidence for improvement on numerous outcome measures. By comparison, there is still a need for continued LSB research with mentally alert NH residents, who make up the other 50% of older adults living in NHs.

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APPENDICES

Appendix A. Good Practice Learning Points for Life Story Work

1. Whether someone wants to take part in LSB is an individual thing. It should not be assumed that a person necessarily wants to make or share a life story, and no one should be pushed into doing so.

2. A person's life story is never finished, and LSB needs to reflect this. To avoid setting people 'in stone', ensure that life story documents can be added to and updated.

3. LSB can be emotional and may raise sensitive issues. Some people will value the opportunity to talk about these issues, but staff require training to handle this and should not be expected to do so without support.

4. A person with dementia may have very different views from others about what their life story is for. Respect the person's wishes about what goes into the life story and who will see it, now and in the future. If they do not have capacity to express their views, consult someone who knows them well.

5. Staff should consider making and sharing their own life stories. How does this feel? Who would they share them with?

6. Beginning the process early will enable people with dementia to take a more active role in producing their life story and communicate how they would like it to be used in the future. However, it is never too late to use LSB to improve care for a person and invoke a 'nice feeling'.

7. Outcomes for better care will only come about if care staff take (and, indeed, are granted) the time to absorb life story information and the flexibility to use this to inform and improve the care they provide.

8. Short summaries might be useful for busy staff, helping them to achieve better care, but they cannot replace a life story owned, shared and added to by a person with dementia him- or herself.

9. The process of collecting life story information enables staff to connect and build relationships with people with dementia and their families. However, in order to have wider benefits it is also important to produce something that can be used and enjoyed by others.

Appendix B. Life Review Visit Questions

Questions extracted from The Handbook of Structured Life Review by Haight & Haight, 2007

Visit 1

Early Childhood

- What is the very first thing you can remember when you were very young?
- What other things do you remember about when you were very young?
- Tell me about your family during childhood?
- Tell me about your childhood friends? A best friend?
- Did you have a religious or spiritual upbringing? Tell me about it?
- Describe what going to school was like for you?

Family & Home

- What was your home like?
- Who were you closest to in your family?
- Was there enough food and necessities for your family?
- How did you celebrate holidays/birthdays?
- Did you have any chores or responsibilities?
- Tell me about extended family: aunts, uncles, grandparents, cousins

Later Childhood-Adolescence

- When you think about yourself and life as a teenager, what do you remember about that time?
- Who were important people to you as a teenager, and why?
- Did you work during these years?
- Were you a member of a certain clique or group?
- Did you participate in sports or school activities?
- Who did you want to be like?
- Did you feel good about yourself as a teenager?

Young Adulthood

- What was life like for you in your 20s and 30s?
- What important decisions did you make during this time?
- Did you have a job that earned money? Tell me about your work? Did you enjoy your work?
- Where did you live during those early years of working?
- Did you form any significant relationships with other people?
- Did you rear children? What was parenting like for you?

Adulthood

- In your entire life, what relationship stands out as most important?
- What was your most significant accomplishment?
- What were some of the difficulties you encountered?
- Would you call yourself a spiritual person?

Overview

- On the whole, what kind of life do you think you have had?
- What has been most satisfying about your life?
- What was the proudest moment of your life?
- What else would you like to tell me about your life?
- What piece of wisdom would you like to hand down to the next generation?
- What are the most important things to you in your life today?
- Have you enjoyed reviewing your life?

Appendix C. Six-Item Screener (SIS)

I would like to ask you some questions that ask you to use your memory. I am going to name three objects. Please wait until I say all three words, then repeat them. Remember what they are because I am going to ask you to name them again in a few minutes. Please repeat these words for me: APPLE—TABLE—PENNY.

(Interviewer may repeat names 3 times if necessary, but repetition not scored.)

Did patient correctly repeat all three words? Yes_____ No______

	Incorrect	Correct
1. What year is this?	0	1
2. What month is this?	0	1
3. What is the day of the week?	0	1
What were the three objects I asked you to remember?		
4. Apple	0	1
5. Table	0	1
6. Penny	0	1

Appendix D. Demographic Survey

The Effectiveness of Life Story Book on Depression and Meaning in Life for Mentally Alert Residents of Nursing Homes

Participant Demographic Survey

Thank you for taking part in this study! We would like to learn a little more about you. Please respond to the following survey questions. All survey responses will be kept confidential.

1. What year were you born? __________

2. What is your gender?
   - ☐1 Female
   - ☐2 Male
   - ☐3 Other

3. What is your marital status?
   - ☐1 Married
   - ☐2 Widow/Widower
   - ☐3 Divorced
   - ☐4 Single
   - ☐5 Other

4. What is the highest grade or year of school you completed?
   - ☐1 Elementary (Grades 1-8)
   - ☐2 Some high school (Grades 9-11)
   - ☐3 High school graduate or GED
   - ☐4 Some college or technical school
   - ☐5 College graduate or more
   - ☐6 No schooling

5. What is your ethnicity?

☐1 White
☐2 Black or African American
☐3 American Indian or Alaskan Native
☐4 Asian
☐5 Hispanic or Latino
☐6 Other

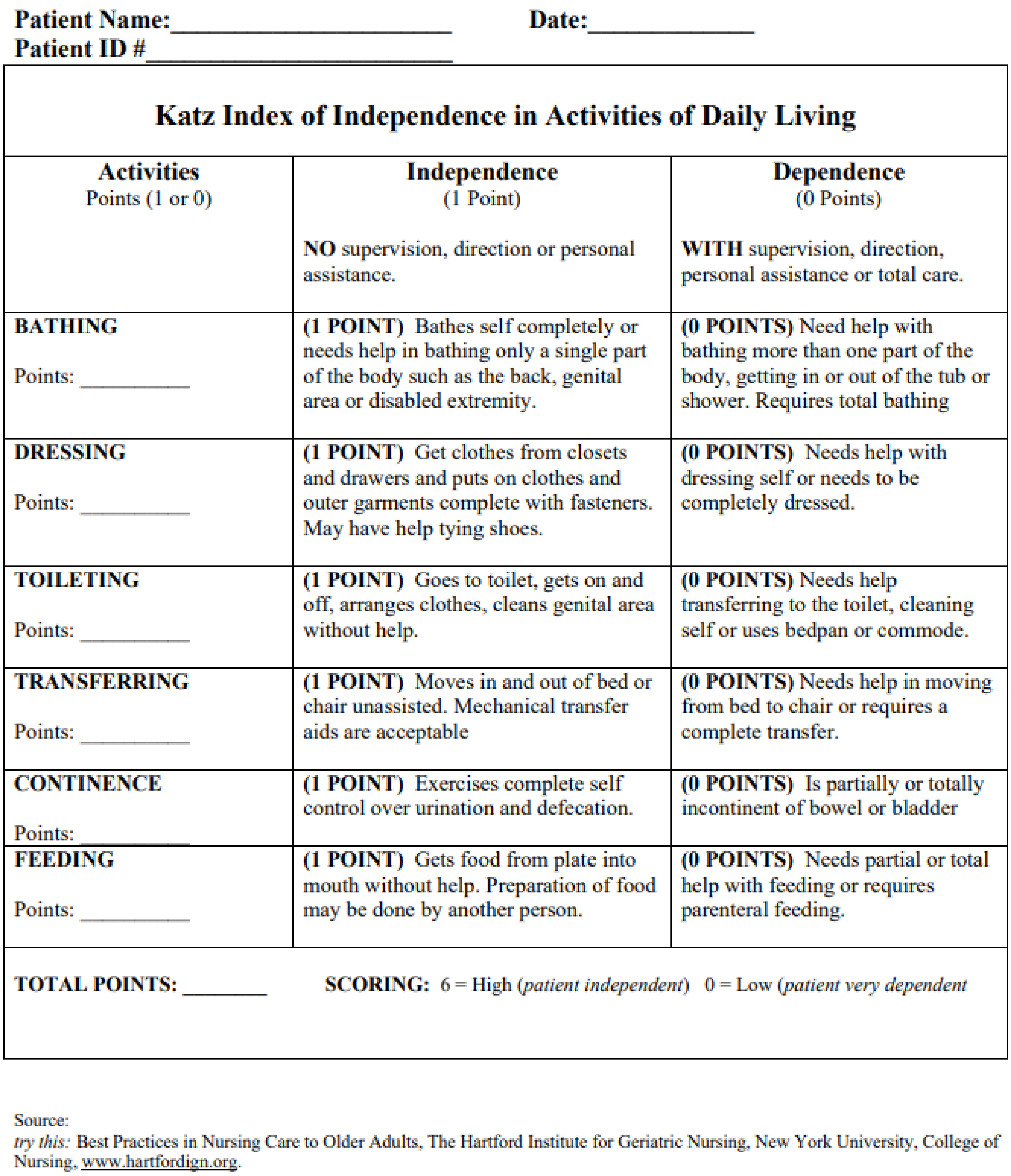
6. What is your religion?

☐1 Protestant
☐2 Jewish
☐3 Catholic
☐4 Muslim
☐5 Buddhist
☐6 Unaffiliated
☐7 Other Religion ____________

7. How long have you lived at this nursing home?

☐1 Less than a year
☐2 One-two years
☐3 Three years or more

Appendix E. Katz Index of Independence in Activities of Daily Living (ADLs)



Patient Name:______________________ **Date:**_____________

Patient ID #_________________________

Katz Index of Independence in Activities of Daily Living

Activities Points (1 or 0)	**Independence** (1 Point) **NO** supervision, direction or personal assistance.	**Dependence** (0 Points) **WITH** supervision, direction, personal assistance or total care.
BATHING Points: __________	**(1 POINT)** Bathes self completely or needs help in bathing only a single part of the body such as the back, genital area or disabled extremity.	**(0 POINTS)** Need help with bathing more than one part of the body, getting in or out of the tub or shower. Requires total bathing
DRESSING Points: __________	**(1 POINT)** Get clothes from closets and drawers and puts on clothes and outer garments complete with fasteners. May have help tying shoes.	**(0 POINTS)** Needs help with dressing self or needs to be completely dressed.
TOILETING Points: __________	**(1 POINT)** Goes to toilet, gets on and off, arranges clothes, cleans genital area without help.	**(0 POINTS)** Needs help transferring to the toilet, cleaning self or uses bedpan or commode.
TRANSFERRING Points: __________	**(1 POINT)** Moves in and out of bed or chair unassisted. Mechanical transfer aids are acceptable	**(0 POINTS)** Needs help in moving from bed to chair or requires a complete transfer.
CONTINENCE Points: __________	**(1 POINT)** Exercises complete self control over urination and defecation.	**(0 POINTS)** Is partially or totally incontinent of bowel or bladder
FEEDING Points: __________	**(1 POINT)** Gets food from plate into mouth without help. Preparation of food may be done by another person.	**(0 POINTS)** Needs partial or total help with feeding or requires parenteral feeding.

TOTAL POINTS: ________ **SCORING:** 6 = High (*patient independent*) 0 = Low (*patient very dependent*

Source:
try this: Best Practices in Nursing Care to Older Adults, The Hartford Institute for Geriatric Nursing, New York University, College of Nursing, www.hartfordign.org.

Appendix F. Geriatric Depression Scale Residential (GDS-12R)

Instructions: Circle the answer that best describes how you felt over the past week.

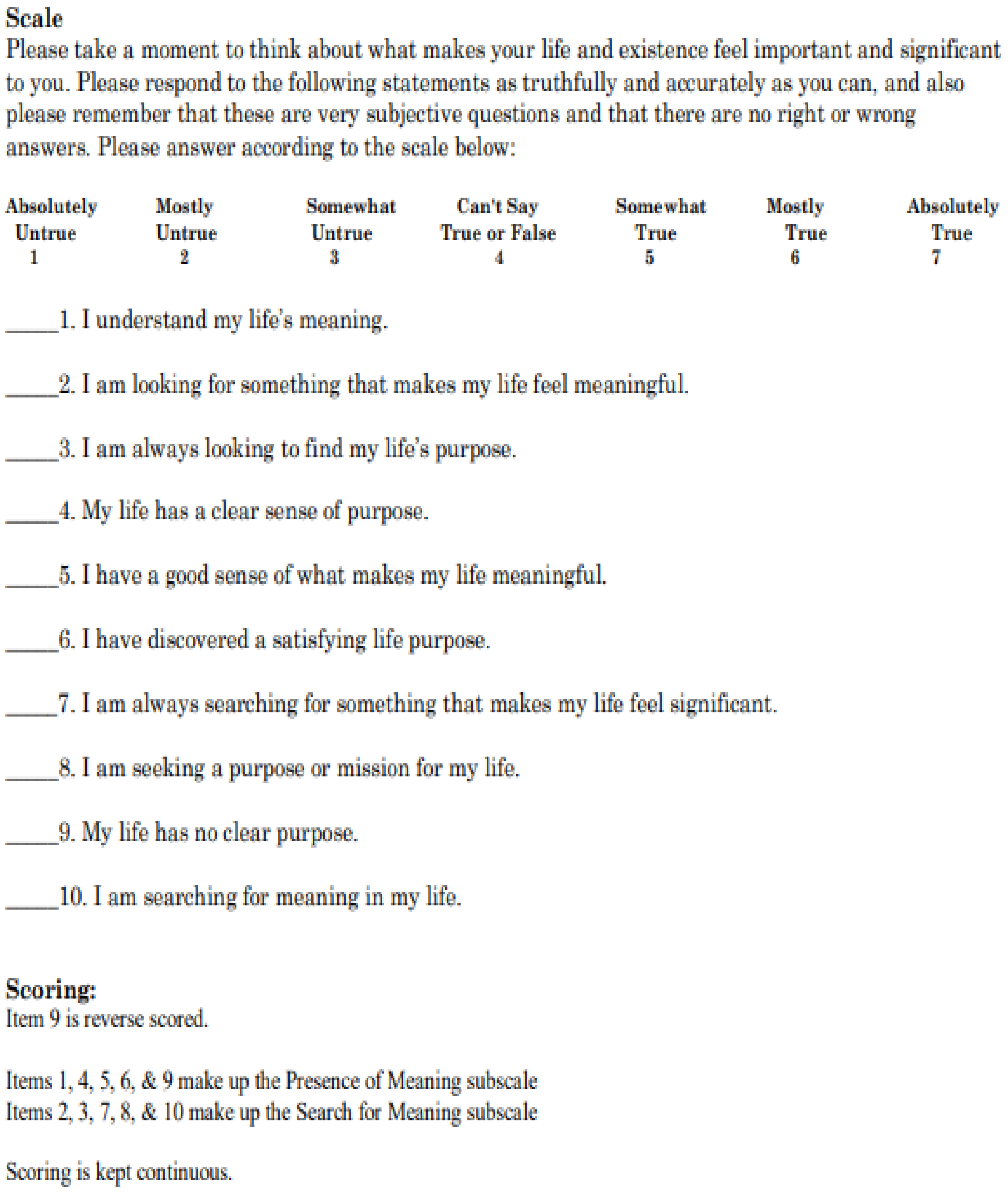
1. Are you basically satisfied with your life? yes no
2. Have you dropped many of your activities and interests? yes no
3. Do you feel that your life is empty? yes no
4. Do you often get bored? yes no
5. Are you in good spirits most of the time? yes no
6. Are you afraid that something bad is going to 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 think it is wonderful to be alive now? yes no
10. Do you feel worthless the way you are now? yes no
11. Do you feel full of energy? yes no
12. Do you feel that your situation is hopeless? yes no

Total Score _______________

A score > 4 points is suggestive of depression. A score ≥ 8 points is almost always indicative of depression. A score > 5 points should warrant a follow-up comprehensive assessment.

Sutcliffe, C., Cordingley, L., Burns, A., Mozley, C. G., Bagley, H., Huxley, P., & Challis, D. (2000). A new version of the geriatric depression scale for nursing and residential home populations: the geriatric depression scale (residential)(GDS-12R). International Psychogeriatrics, 173-181.

Appendix G. Meaning in Life Questionnaire (MLQ)



Scale

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

_____1. I understand my life's meaning.

_____2. I am looking for something that makes my life feel meaningful.

_____3. I am always looking to find my life's purpose.

_____4. My life has a clear sense of purpose.

_____5. I have a good sense of what makes my life meaningful.

_____6. I have discovered a satisfying life purpose.

_____7. I am always searching for something that makes my life feel significant.

_____8. I am seeking a purpose or mission for my life.

_____9. My life has no clear purpose.

_____10. I am searching for meaning in my life.

Scoring:

Item 9 is reverse scored.

Items 1, 4, 5, 6, & 9 make up the Presence of Meaning subscale
Items 2, 3, 7, 8, & 10 make up the Search for Meaning subscale

Scoring is kept continuous.

Appendix H. Informed Consent Form

UNIVERSITY OF HOUSTON
Consent to Take Part in a Human Research Study

Title of research study: The effectiveness of Life Story Book on depression and meaning in life for mentally alert residents of nursing homes. This research is being carried out by a researcher from the University of Houston, Graduate College of Social Work, Theresa Chrisman. This study is a part of a PhD dissertation and being conducted under the supervision of Dr. Allen Rubin.

Key Information: Life Story Book believes that every person has a story - a personal history - with events, people, circumstances, actions, feelings, insights, thoughts, learning, and milestones that define who they are. The purpose of this study is to find out how Life Story Book affects residents of nursing homes lives. Does it make things better? Or do they stay the same? This study will measure aspects that affect a persons' quality of life. We will do this by asking questions regarding depression and meaning in life.

What should I know about a research study?

- Someone will explain this research study to you.
- Taking part in the research is voluntary; whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide and can ask questions at any time during the study.

We invite you to take part in a research study about a reminiscence intervention called Life Story Book because you meet the following criteria: mentally alert, over the age of 65 years, and a resident of this nursing home.

In general, there are two nursing homes who will be participating in this study. This is a nine-week study and each participant will be visited six times, for one hour. For three of those visits, a research team member will listen and write your life stories. These stories will be typed, and photos and/or memorabilia can be added to create your Life Story Book.

The primary risk to you in taking part is: There is the possibility of stress or discomfort when talking about difficult feelings, moods or sad memories. If the visits bring up negative feelings that you would like to discuss with the nursing home physical or mental health staff, a referral will be made.
These feelings should be temporary. Your Life Story Book will be yours with all of the life stories you would like to include in it.

Detailed Information:

The following is more detailed information about this study, in addition to the information listed above.

Two similar nursing homes will take part in this study. For the purpose of this study, Theresa will flip a coin to determine which home will be A and which home will be B, which means, whichever home is A will build their Life Story Book first. While one home's residents are receiving Life Story Book, the other home's residents will continue receiving care as they usually do. We will then switch, and nursing home B will receive Life Story Book and nursing home A will continue receiving care as they usually do.

A research team member will ask you questions about different times in your life beginning at your earliest memories. They will have a list of questions, but you do not have to answer any question you do not like. The life stories will be audio recorded, typed, and nicely printed by the research team. The audio recordings will be deleted after they are transcribed into your stories. If you have any photos or memorabilia that you would like to include in your book, these will be scanned at the nursing home and added to your book. No photos or memorabilia will be removed from the nursing home. The book is a fabric covered scrapbook with sleeves to insert your stories and photos.

Why is this research being done?

Depression and lack of meaning in life are serious problems for many residents of nursing homes. This research is being done to find ways to help these residents without the use of drugs.

How long will the research last?

We expect this research study to last for nine weeks. You will be visited for a total of 6 one-hour visits.

How many people will be studied? We expect to enroll about 24 people from two nursing homes to participate in this research study: 12 from each nursing home.

What happens if I say yes, I want to be in this research?

You will be visited at the nursing home six times for about 1 hour.

Week 1: You will be visited by Theresa and a research team member. We will review the study and this consent form again and answer any of your questions. We will also ask you some information about yourself and about activities that you are able to do by yourself. We will also ask you a few questions about if you have felt depressed in the last week and some questions about how you feel about your meaning in life.

Weeks 2, 3 and 4: If your nursing home is chosen to go first to receive Life Story Book, you will have three visits by a research team member so that they can listen to your stories. If your nursing home is chosen to go second, you will wait three weeks before we come back to visit you.

Week 5: You will be visited again by Theresa and a research team member so that we can ask you again a few questions about if you have felt depressed in the last week and some questions about how you feel about your meaning in life.

Weeks 6, 7, 8: If your nursing home was chosen to go second to receive Life Story Book, you will have three visits by a research team member so that they can listen to your stories. If your nursing home was chosen to go first, you will now wait three weeks before we come back to visit you.

Week 9: You will be visited again by Theresa and a research team member so that we can ask you again a few questions about if you have felt depressed in the last week and some questions about how you feel about your meaning in life.

We will be asking you the following questionnaires:

1. Questions to assess your ability to perform activities of daily living independently
2. Depression questions about how you felt the previous week
3. Questions about if you feel your life has meaning
4. Questions about your personal information: for example- age, gender, education

During the three visits listening to your life stories we plan to audio record. We will audio record you during the Life Story Book Intervention and transcribe those stories. Audio recording will free the researcher to listen attentively to your life stories and will help the researchers to accurately type up your stories. All audio files will be destroyed immediately after transcribing the stories.

☐ I agree to be audio recorded during the research study.

☐ I do not agree to be audio recorded during the research study.

If you do not wish to be audio recorded, the researcher will just take notes of your life stories and check with you for accuracy.

What happens if I do not want to be in this research?

You can choose not to take part in the research, and it will not be held against you. Choosing not to take part will involve no penalty or loss of benefit to which you are otherwise entitled.

A decision to take part or not will have no effect on your routine care.

What happens if I say yes, but I change my mind later?

You can leave the research at any time and it will not be held against you.

If you stop being in the research, already collected data may not be removed from the study database.

Is there any way being in this study could be bad for me?

Participants may experience mild psychological discomfort. The Life Story Book intervention may result in some temporary mild psychological discomfort while discussing the past. The questionnaires will be administered by a Licensed Master Social Worker. In addition, the research team members will be trained and supervised by Theresa on skills for working with older adults-including gauging physical capabilities and the handling of upsetting memories.

You may become fatigued while you are participating. You can stop and rest at any time or may reschedule the visit if you are too fatigued to continue. The research team will be extremely flexible and attentive as to adjusting intervention times, assessing for fatigue, being watchful for pain or other symptoms you may be experiencing.

Will I receive anything for being in this study?

You will receive a Life Story Book for participating. We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include lower depression and an increase in meaning in your life.

What happens to the information collected for the research?

Efforts will be made to keep your personal information private, including research study records, to people who have a need to review this information. Each subject’s name will be paired with a code number, which will appear on all written study materials. The list pairing the subject’s name to the code number will be kept separate from these materials. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the Institutional Review Board (IRB) and other representatives of this organization, as well as collaborating institutions and federal agencies that oversee our research. We may publish the results of this research. However, unless otherwise detailed in this document, we will keep your name and other identifying information confidential.

With all assurances of confidentiality, we may still have to pass on information if it appears that you, or someone else, is at risk of serious harm.

This study collects ***private information with identifiers*** (***such as name, birthdate, etc.)***. Following collection, researchers will remove all identifying information from these ***data***. Once identifiers are removed, this information could be used for future research studies

We may share and/or publish the results of this research. However, we will keep your name and other identifying information confidential.

Can I be removed from the research without my OK?

Individuals whose health is compromised, per advice of the nursing home medical staff, may be withdrawn from the study. The research team, if possible, will advise the participant and have some closure. If appropriate, a book will be given to them, even if it is blank.

Research results

When the research is finished, we will come back to your nursing home to talk to you about what we have learned.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, you should talk to the research team at University of Houston, Graduate College of Social Work, Theresa Chrisman, Telephone: 713-447-3334 or Email: tcchrisman@central.uh.edu

This research has been reviewed and approved by the University of Houston Institutional Review Board (IRB). You may also talk to them at (713) 743-9204 or cphs@central.uh.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This website will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this website at any time.

Signature Block for Capable Adult

Your signature documents your consent to take part in this research.

Signature of subject — Date

Printed name of subject

Signature of person obtaining consent — Date

Printed name of person obtaining consent

My signature below documents that the information in the consent document and any other written information was accurately explained to, and apparently understood by, the subject, and that consent was freely given by the subject.

Signature of Principle Investigator Date

____

Printed name of Principle Investigator

Signature Block for Adult with Durable Power of Attorney

Your signature documents your permission for the named subject to take part in this research.

____

Printed name of subject

____ ____________________

Signature of legally authorized representative

____

Printed name of legally authorized representative

____ ____________________

Signature of person obtaining consent

____

Printed name of person obtaining consent