OLDER ADULTS ATTITUDES ON AGING AND PERCEPTION OF LATE-LIFE SUICIDE

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ABSTRACT

Although middle-age to older-age adults hold the highest rates of suicide in the United States, the general public and media often fail to focus on this disturbing trend. This phenomenon may be driven by negative generalized ideas about aging that support cultural sanctioning of suicide for older adults. Research on the perspectives and cultural beliefs around suicide and aging has typically focused on young adults or gender differences (Stice & Canetto, 2008) with little attention paid to the perspectives, attitudes, and cultural beliefs of older adults. To address this gap, this study explored perspectives of older and younger adults on aging and late-life suicide. A sample of 446 adults, comprising 376 young (ages 18-29) and 70 older (ages 60-81) read a fictional obituary of an older adult who completed suicide. Participants then answered questions regarding 10 stressful precipitating events and eight protective factors as well as measures on age stereotype, age distancing, suicidality, and reasons for living. Results indicated for older adults, acceptability of late-life suicide was associated with greater age distancing, and agreement with age stereotyping was positively associated with suicidality and age distancing, but not reasons for living. Results also indicated younger and older adults differ on importance attributed to precipitants but not protectants. Younger adults attributed more importance to social isolation, while older adults indicated terminal illness as a cause for suicide. However, younger and older adults agreed that having good
family relationships was the most important protective factor. Our results suggest that age cohort provides a unique lens through which to understand suicide.

*Keywords:* suicide, older adults, aging, age stereotypes, cultural scripts, perception
DEDICATION

This work is dedicated to my family and friends. I could not have gotten this far without your boundless support. To my parents, Margo and George Williams, who instilled in me, from very early on, that I could accomplish anything, and who continue to help in any and every way possible. I can never thank you enough. To my aunts and godmothers, Annette, Mary, Mary Laura, and Alberta, your love and life lessons are always with me. To my cousins, Deborah, Sunni, Jeanne, Donna, Barbara, Karen, Amy, Deanna, and many more, who believe in me, support me, and inspire me to be better with each passing year. To the amazing young people in my life, Stacy, Jessica, Malcolm, Janesca, Claude, and Arianna, please know it is never too late to learn, to change, and to grow. To my dear friends, Audra, Michael, Caitlin, Shelytia, Andrea, Carrie, Lori, Greg, Christina, Victoria, Milushka, and Roosevelt, who have, through the years, lent an ear, given a hug, helped me pack, move and get organized, bought countless lunches, dinners, and school supplies, and cheered me on every step of the way. Thank you all.
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# TABLE OF CONTENTS

## CHAPTER

### I. INTRODUCTION .........................................................................................1

- Foundations of the Culturally Sanctioned Appropriateness of Late-Life Suicide .................................................4
- Cultural Scripts of Suicide, Stereotypes and Aging..................6
- The Present Study ..............................................................................14

### II. METHOD ......................................................................................................16

- Participants .........................................................................................16
- Group Equivalencies ..........................................................................18
- Final Sample ......................................................................................20
- Materials ............................................................................................23
- Research Design .................................................................................28
- Procedure ...........................................................................................28

### III. RESULTS ......................................................................................................30

- Data Collection and Analysis.............................................................30
- Hypothesis Testing.............................................................................30

### IV. DISCUSSION ................................................................................................49

### REFERENCES ..........................................................................................................57

### APPENDIX: IRB Approval .......................................................................................62
LIST OF TABLES

TABLE

1. Independent Group T-Test Between Excluded and Included Participants on Major Variables .................................................................21

2. Bivariate Correlations Between Major Variables in the Full Sample (N=446, RFL:N=435) ..................................................................................................................32

3. Bivariate Correlations Between Major Variables Among Older Adults (N=70; RFL:N=65) ..................................................................................................................33

4. Bivariate Correlations Between Major Variables Among Younger Adults (N=376, RFL:N=370) ..................................................................................................................34

5. Age Difference Mean Rankings of Precipitants ................................................35

6. Age Difference Mean Rankings of Protectants ................................................36

7. Age Differences On Likeliness of Precipitant to Lead to Suicide .................37

8. Age Differences On Number of Suicide Deaths Caused by Precipitant .........39

9. Age Differences On Agreement with Decision to Suicide Based on Precipitant .................................................................................................41

10. Age Differences On Likeliness of Protectant to Prevent Suicide ..............44

11. Age Differences On Number of Suicide Deaths Prevented by Protectant ......45

12. Age Differences On Agreement with Not Dying by Suicide due to Protectant .................................................................................................46

13. Results of the Multiple Regression Analyses ..............................................48
CHAPTER I

INTRODUCTION

Suicide rates in the United States are the highest among middle-age to older-age adults, and these numbers are expected to continue to rise with the increasing proportion of middle-age to older-age adults within the population. However, the topic of mid- to late-life suicide remains relatively neglected by the general public, and across the media and research domains. In fact, based on media and research focus one may be led to believe that adolescent and young adult suicides are far more prevalent. Since suicide is understood within a cultural context, it is possible that our attitudes about suicide and our attitudes about aging and toward the aged are converging to form a general apathy around the topic of suicide among middle-age to older-age adults. The purpose of this paper was to examine relationships between attitudes toward late-life suicide and attitudes toward aging and the relationship between these attitudes and suicidality.

Whereas suicide is a tragedy at any age, suicide is the fourth leading cause of death in adults ages 35-54 and the eighth leading cause of death for adults ages 55-64 (CDC, 2013, 2011, 2010). If old age is a predictor of completed suicide (Paraschakis et al., 2011) then as these two groups move into the 65+ demographic the numbers of suicide deaths are expected to increase considerably. Older-age adults have some of the highest suicide rates in the US, for example, based on results compiled from 2014 data by the Center for Disease Control [CDC], adults 65-74 have a suicide rate of 15.6; adults 75-84 have a suicide rate of 17.5; and adults over the age of 85 have a suicide rate of 19.3
Together adults ages 45-85+ make up 40.7% of the population and 56% of the total suicide deaths for 2014. Similarly, older adults ages 65 years and older make up 14.5% of the total US population and 16.6% of the suicides in 2014 (Drapeau & McIntosh). In 2014, 16.6 of every 100,000 people age 65 and over died by suicide, higher than the rate of 13.4 per 100,000 in the general population (Drapeau & McIntosh, , AFSP, 2016). That in general, older-age adults are more likely than almost other age group to die by completing suicide gives rise to great economic and social concern.

Although the larger numbers of suicide deaths occur among middle-age and older-age adults, suicide deaths in youth and young adults seem to capture the public and media attention. Moreover, attention to suicide in older-age adults is so deficient that many clinicians and suicide prevention centers lack the basic knowledge and training to address older adult suicidal behavior (Lapierre et al., 2011). From a cultural perspective this incongruity may be due to a few factors, for example the general public knows little about suicide and even less about older adult or late-life suicide (Segal, 2000). Furthermore, it is relatively recently that government agencies and researchers called attention to late-life suicide, its issues and implications. It is only since the rapid increase of older adults in the population and the start of the baby boomers reaching older adult status that issues specific to older adults seeped into mainstream media, prior to that older adults were virtually invisible (Vickers, 2007). Finally, mainstream Western culture perpetuates, through the pathologizing of the aging process, persistent age-related attitudes that support suicidality among older adults (Stice & Canetto, 2008; Gallagher-Thompson & Osgood, 1997). This cultural sanctioning of late-life suicide often provides
support for the equally persistent perception that suicide before the prime of life is particularly tragic. It is at this juncture that the focus of this paper emerges.

While it is understood that “suicide is culturally patterned,” (Stice & Canetto, 2008, p. 4), meaning how one understands, explains, and reacts to suicide is in part driven by his or her culture, it is important to consider that how one perceives suicide is not only a function of the culture but of the individual. Hence, individual differences, for example temperaments, traits, group memberships, age sets, etc…, all shape how people interpret and embrace their culture including behaviors such as suicide (Heine, 2012). It seems intuitive that, since older-age adults have some of the highest rates of suicide in the nation, understanding how these populations perceive suicide, as well as, its risk factors [precipitants] and protective factors [protectants] would be essential. However, literature on older adult suicide has focused primarily on precipitants and protectants rather than perceptions (Marty, Segal, & Coolidge, 2010). Similarly, research on the perspectives and cultural beliefs around suicide focused primarily on young adults or gender differences. To date little attention has been paid to the perspectives of older-age adults on late-life suicide, its precipitants, and protectants.

Given the increased focus on, and relevance of, age, aging and age related topics, the first purpose of this paper is to illustrate the importance of understanding late-life suicide from the cultural perspective of older adults. The second purpose of this paper is to present the results of a study that investigated how older-age adults perceive aging, suicide, its precipitants and protectants and examined whether these perceptions relate directly to suicidality within these populations. This paper begins by exploring the historical underpinning of the perception of appropriateness of late-life suicide, followed
Foundations of the Culturally Sanctioned Appropriateness of Late-Life Suicide

Perceptions of suicide are culturally specific, denoting appropriateness or the lack thereof to reasons for suicidality (Stice & Canetto, 2008). Throughout history, suicide has been generally condoned and often viewed as appropriate for older adults, particularly in cases that involve terminal illness or intense suffering and pain, extreme isolation, or the lack of meaningful roles in life (Gallagher-Thompson & Osgood, 1997; Pridmore & McArthur, 2009). For example the founder of stoic philosophy, Zeno of Citium (c. 334 – c. 262 BC), advocated suicide to avoid the pain and suffering from sickness in later life. At the age 98, Zeno reportedly hung himself after he fell down and injured his toe (Gallagher-Thompson & Osgood, 1997). Famous Greek philosopher Socrates (c. 470/469 BC – c. 399 BC) was also a proponent of late-life suicide citing old age as one reason for taking his life, by way of poison, at the age of 70 (Gallagher-Thompson & Osgood, 1997). Lucius Annaeus Seneca (c. 4 BC – AD 65), the well-known stoic philosopher, who also completed suicide, “declared that if old age robs the individual of physical vitality or mental powers, then suicide is appropriate” (Gallagher-Thompson & Osgood, 1997, p. 30; see also Pridmore & McArthur, 2009). Scottish philosopher David Hume (1742/1987) condoned suicide for the sick, miserable or in the event that one becomes a burden. David Émile Durkheim included older adult men in his list of examples of obligatory altruistic suicide in which the person completes suicide out of duty or for the
greater good (Jones, 1986). Even, Sigmund Freud, who was a strong advocate of suicide prevention, when faced with painful terminal illness, chose physician assisted suicide to end his own life (Gallagher-Thompson & Osgood, 1997). In a study examining suicide across Western cultures comparing antiquity (ancient Greece to 61 CE) to a recent period (1994 – 2008) Pridmore and McArthur (2009) found that suicide in the face of sickness and old age was quoted and condoned.

Since the early 1990s, court rulings at both the state and federal levels have supported this notion that suicide in some cases is appropriate and reflects current popular beliefs regarding freedom, personal autonomy, and compassion, particularly in later life (Moore, 1993; Gallagher-Thompson & Osgood, 1997). For example, since Oregon’s Death with Dignity Act was enacted in 1997 four more states, Washington, Montana, Vermont, and most recently New Mexico have implemented some form of legal support for assisted suicide (Eckholm, 2014). Furthermore, results from a recent GALLUP poll suggest that public support for assisted dying has grown over the last 50 years such that, in 2014, 51 percent of respondents agreed that doctors should be allowed to assist a dying patient’s suicide up from 37 percent in 1948 (Eckholm, 2014). If the word suicide is not mentioned the difference increases further in which 70 percent of respondents agreed that doctors should be allowed to help a dying patient end their life. This semantic discrepancy suggests that individuals’ attitudes toward suicide may carry more weight than their agreement with suicidality and the factors surrounding suicide. Pridmore and McArthur (2009) found that suicide, as a response to adverse circumstances, is part of Western culture tracing back more than 2000 years and that this idea has been passed down over time. These culturally disseminated beliefs form cultural
scripts which fuel stereotypes, can drive actions such as suicidal behavior, and thus provide a historical foundation for the current trend of culturally sanctioning late-life suicide in the United States.

**Cultural Scripts of Suicide, Stereotypes and Aging**

Cultural beliefs function as cultural norms, which form as scripts for action and subsequently collect to form cultural patterns. Social constructs such as stereotypes, suicide, precipitants and protectants are composed of cultural scripts along with individual differences such as temperaments, group memberships and experiences (Colucci, & Lester, 2013; see also Canetto, 1997; Canetto & Lester, 1998). For example, “cultural scripts define the conditions under which suicidal behavior is permissible or expected” (Stice & Canetto, 2008, p. 5). Moreover, cultural scripts also inform the cognitive categorization process from which stereotypes are formed. For these reasons an understanding of beliefs surrounding aging and late-life suicide particularly from the perspective of older-age adults is essential.

**Suicide.** The way in which individuals perceive and explain suicide varies tremendously across cultures. For example, in China there is some evidence that young women are viewed less negatively if their suicide is preceded by long suffering abuse from their in-laws (Stice & Canetto, 2008). In the U.S. among European Americans there is some evidence that men are viewed less negatively if their suicide is preceded by achievement failure rather than emotional or interpersonal failure (Stice & Canetto, 2008). Among the majority in Uganda suicide for any reason is viewed as an abomination and in contrast suicide to preserve honor in Japan is generally still respected (Colucci, 2006).
Such culturally specific differences suggest that suicide is culturally patterned and that sanctioned precipitants are culturally driven. Furthermore, if some precipitants are culturally sanctioned it would appear reasonable to consider that the opposing protectants are also culturally driven, with the exception of those protective factors that are biological in nature, such as gender. Precipitants and protectants are discussed next.

Precipitants. Precipitants are understood as risk factors that are associated with or lead to suicide, such that those possessing the precipitant are at greater risk for suicidal behavior than someone who does not. Note that suicidal behaviors are viewed on a continuum from suicidal thinking to suicidal actions. Precipitants span the bio-psycho-social model with factors coming from each area of the model. There is, of course, no universal cause for suicide and no two suicides can be understood to result from the exact same conglomerate of factors (Conwell, 2001). Indeed, it is likely that the cause of any particular suicide death is multi-determined. However, researchers suggest that there are some consistent and perceived precipitants for older adult suicide (Stice & Canetto, 2008). For example due to the prevalence of suicide among European American men over the age of 45, age, race, ethnicity, and gender combined are understood to form a particularly salient precipitant (June, Segal, Coolidge, & Klebe, 2009). Likewise, psychological, biological, and social stressors such as depression, hopelessness, substance abuse, physical illness, death of a close loved one, and loss of purpose have been found to be associated with high risk for suicidality (CDC, 2013, 2010; Segal, 2008; Stice & Canetto, 2008). More often psychological, biological and social stressors combine to form complex interactions that lead to
intense suffering among older-age adults making it difficult to determine any one particular cause (Segal, 2008; Segal, Marty, Meyer & Coolidge, 2012).

In fact, Van Orden et al. (2010) posits that it is the combined presence of thwarted belongingness and perceived burdensomeness that is so highly associated with suicidal behavior across the lifespan, rather than multiple causes. Moreover, many of these precipitants, contribute to, are functions of, or are understood through, cultural lens which are subject to interpretation (Lester, 2008; Fässberg et al., 2012). For example, loss of purpose is more likely to be found in individualistic cultures where individuals are autonomic than in collectivist cultures where individuals have a greater responsibility to the group (Heine, 2012). Social processes such as globalization and acculturation further complicate our understanding. Age is also perceived differently across different cultures such that Western cultural perceptions of age are persistent and can be both positive and negative and become more complex as people age (Hummert, Garstka, Ryan, & Bonnesen, 2004; Hummert, Garstka, Shaner, & Strahm, 1994; Schmidt & Boland, 1986).

The Substance Abuse and Mental Health Services Administration (SAMHSA) and Administration on Aging (AoA) (2012), in a joint venture, reported additional risk factors for suicide among older adult populations such as social isolation, loss of independence or sense of purpose, rigidity inflexible personality or poor adaptation to change, cognitive impulsivity (impairment), aggression and access to lethal means. In addition, researchers suggest that stressful life events, such as family conflict, separation, and financial problems are also common precipitants of suicide in older adults, with
mental disorders and family discord among the highest (Rubenowitz, Waern, Wilhelmson, & Allebeck, 2001).

It is important to note that these lists are not exhaustive but rather reflect research across several Western countries where results mainly differed on the amount of presumed contribution of the varying factors to the suicide (Stice & Canetto, 2008). Also, there is some debate over factors such as age since most older-age adults do not attempt suicide. Moreover, it is unlikely that adversity provides any more risk than some other factor, given that in the U.S. many groups who experience the most social and economic adversity, such as African Americans, have the lowest rates of suicide. It is most likely that cultural constructs of adversity have greater influence on suicidality than the experience of adversity (Stice & Canetto, 2008). This cultural construction is also likely for suicide protectant factors.

**Protectants.** Protectant factors or protectants are positive personal or social conditions or resources that serve to reduce the potential for suicide by fostering resiliency in individuals. SAMHSA (2012) lists the following protectants including: easy access to effective clinical treatment for mental, physical and substance use disorders, access to a variety of clinical interventions and support for help seeking, restricted access to highly lethal means of suicide, strong familial or communal connections, external support through ongoing medical and mental health care relationships, and personal skills such as problem solving, and conflict resolution. Some protectants serve to directly oppose some precipitants for example strong familial or communal connections versus social isolation, respectively. Other considerations for protectants are not simply the presence of protective factors or their relation to precipitants but rather the level or degree
to which an individual or group attaches meaning or importance to any given protective factor such that those factors may serve as reasons for living.

Reasons for living (RFL) are beliefs or expectancies that are considered to mitigate suicidal risk (Linehan, Goodstein, Nielsen & Chiles, 1983). RFL include survival and coping beliefs, responsibility to family and or child-related concerns, fear of suicide, fear of social disapproval, and moral objections to suicide (Britton, et al., 2008) such as in African American cultures (June et al., 2009). Thus protectants also seem to be culturally driven, either by cultural sanctioned support such as the prevalence of or access to medical and psychological support, or by culturally driven beliefs such as reasons for living. For example, June et al. (2009) found that religiosity and reason for living were positively correlated such that the more highly-religious older individuals were, the higher their reasons for living. Similarly, Cook, Pearson, Thompson, Black, and Rabins (2002) found that older African American adults were less likely to experience suicidal ideation if they had higher levels of religiosity.

Because suicide, its precipitants, and its protectants are culturally patterned, it seems to be increasingly important to understand these constructs through a cultural framework. Since our own attitudes can affect our self-perceptions and behaviors, the cultural variability contributed by the individual may increase the effect of some precipitants or decrease the effect of some protectants. Also because age cohorts are subsets of the culture and may have their own cultural scripts, it is possible then that precipitants and protectants for younger age and middle-age adults differ than those for older-age adults. This suggests the social construct of suicide, its precipitants, and its protectants are culturally, generationally and individually subjective.
**Stereotyping and Age Stereotypes.** Much like suicide, stereotypes are also culturally, generationally and individually subjective. Stereotypes are generalized ideas about the characteristics, attributes, and behaviors of particular groups and their members. These ideas can be accurate or inaccurate, positive, negative, or neutral and are often based on attributes such as gender, race/ethnicity, age, or observations of behavior and personality traits. In navigating our environment, we depend on stereotypes when there is a lack of information or time for deeper processing. Whereas, psychological research around stereotyping varies across disciplines, the modern view supports the social cognitive approach. This perspective views stereotyping as part of the cognitive categorization process, in which stereotypes are mental representations or schemas that streamline cognitive processes such as encoding, storing, and retrieval (Dixon, 2000). Stereotypes simplify navigation of the environment. Research indicates that as mental processes reach capacity, stereotypes are increasingly likely to be activated for judgment tasks (Macrae, Milne, & Bodenhausen, 1994).

Both “stereotypes and stereotyping are inherently social” (Augoustinos, Walker, Donaghue, 2006, p.234) and thus contribute to cultural scripts. We build stereotypes over time from a variety of sources, including social groups such as family and friends, and the media. Because these sources are frequently traversed, the stereotypes are repeatedly activated (Dixon, 2000) cultural patterns. Research indicates that the presence of a group member or the discussion of group labels can automatically activate stereotypes and that this activation can be conscious or unconscious (Macrae, Stangor, & Hewstone, 1997). In instances such as race and gender, the stereotypes are often so ingrained that their activation is automatic and require deep processing to change, implying the stability and
resiliency of ingrained stereotypes (Augoustinos & Walker, 1998). In addition to race and gender, age has been indicated as one of the principal bases for stereotyping and categorization (Cuddy & Fiske, 2002).

Early studies of age stereotypes were rooted in the original tenets of stereotype research which espoused stereotypes as being “imprecise, negative, discriminating, and even immoral” such that early research on age stereotyping solely focused on exploring “false beliefs and discriminatory attitudes about older people” (Kruse & Schmitt, 2006, p. 394). As researchers revised the theory to adopt the social cognitive perspective, stereotypes were no longer conceptualized as inherently negative, and instead research focused on the functions and the context-specific meaning of stereotypes (Kruse & Schmitt, 2006). Research revealed that people do not typically think of a generalized category of older adults but instead organize the information into distinctive subcategories such as grandparent, elder statesman, or senior citizen, which hold more meaning (Brewer Dull, & Lui, 1981; Schmidt & Boland, 1986). The researchers suggest that multiple stereotypes of older adults exist at a basic level of categorization where the subcategories can be both positive (matriarch, patriarch, sage) and negative (despondent, impaired, curmudgeon) and become more complex as people age themselves (Hummert et al., 2004; Schmidt & Boland, 1986).

In a recent study, “63% of older adults reported to have experienced at least one type of everyday discrimination and 31% reported at least one major discriminatory event during their lifetime” (Luo, Xu, Granberg, & Wentworth, 2012, p. 275). Persistent negative and unjustifiable attitudes and behaviors directed toward a person or group because of their age is referred to as ageism. Blauth, McDaniel, Perrin, and Perrin (2011,
p. 6) define ageism as “a system of stereotypes, policies, norms, and behaviors that discriminate against, restrict, and dehumanize people because of their age.” However, age biases do not always require external social agents, our own attitudes about aging can affect our self-perceptions and behaviors. Researchers found that memory problems for older adults were related to their attitudes about memory and aging, such that individuals primed with negative stereotypes of old age such as senile and dependent performed worse on memory tasks than those primed with positive stereotypes such as kind and alert (Levy, 1996; Levy & Langer, 1994). Bargh, Chen, and Burrows (1996) found that participants primed to think of old age moved more slowly than neutral primed participants. Implications of the research suggest that, age stereotypes are so resilient, ingrained and automatic that they might influence our cognitive and motor skills. Moreover, under mental strain stereotypes are more likely to be activated particularly for judgment tasks. These ideas are consistent with the premise that there is correlation between age stereotyping and late-life suicide.

Age Stereotyping and Late-Life Suicide. We use stereotypes to make assessments about our environment and the people we encounter as well as to guide us in decision making efforts.

Our perceptions and behaviors are often facilitated through communication and categorization, such that we influence and shape others around us and they influence and shape us. This “context perspective” espouses that what we think about people influences how we will perceive them; how we perceive them influences how we behave towards them; and how we behave towards them ultimately shapes who they are (Blau, 1973, as cited in Sijuwade, 2009; see also Kruse & Schmitt, 2006). We also know that what we
think about ourselves influences how we behave and thus the decisions we make. These processes are inherently social and culturally patterned. Such that suicidality like all other thoughts and behavior is influenced by the scripts that emerge from the culture. Therefore, the question becomes what happens when age-related stereotypes, which are imbedded in an individual’s knowledge base and are a part of the cultural pattern of his/her larger group, are processed along with perspectives on suicide? What is the effect of age stereotyping on our understanding of late-life suicidality? Furthermore, does the integration of age-related stereotypes and perspectives on late-life suicide form a cultural script that may be associated with suicidality among older-age adults?

The Present Study

The purpose of this study was to explore the culturally, generationally, and individually subjective perspectives on aging and late-life suicide. Special attention was paid to the attitudes of older-age adults on late-life suicidality, precipitants, protectants, agreement with age stereotypes, and age distancing. It was also the purpose of this study to shed light on whether the perceptions around aging and late-life suicide are associated with suicidal ideation and suicidal resilience. The main variables of interest were agreement with late-life suicide, agreement with age stereotype, age distancing, suicidal ideation, and suicidal resilience. A cross-sectional design was used to compare older adults with younger adults.

Hypotheses were as follows:

1. For all participants, higher scores on overall acceptability of late-life suicide would be associated with a) higher scores on Agreement with Age Stereotyping; b) higher scores
on the Geriatric Suicidal Ideation Scale total score; and c) lower scores on the Reasons for Living Inventory total score.

2. Among older adults, higher scores on overall acceptability of late-life suicide would be associated with higher scores on Age Distancing total score.

3. Among older adults higher scores on Agreement with Age Stereotyping would be associated with a) higher scores on the Geriatric Suicidal Ideation Scale total score; b) lower scores on the Reasons for Living Inventory total score; and c) higher scores on Age Distancing total score.

Ages differences would emerge across acceptability ratings of precipitants and protectants to late-life suicide such that:

4. Regarding precipitants, a) Older adults would rate the following precipitants: severe/terminal illness, death of a first-degree relative, and burdensomeness more likely, more acceptable, and attribute more suicide deaths than younger adults, and b) younger adults would rate the following precipitants family discord, financial trouble, and ending of relationship with intimate partner/spouse more likely, more acceptable, and attribute more suicide deaths than older adults.

5. For protective factors, a) older adults would rate the following protectants family, religious beliefs, and personal beliefs more likely, more acceptable, and attribute more prevented suicide deaths than younger adults, and b) younger adults would rate the following protectants friends, counseling, and medical care more likely, more acceptable, and attribute more prevented suicide deaths than older adults.
CHAPTER II

METHOD

Participants

**Total sample.** The original complete sample consisted of 734 adults who volunteered to participate in the study. Men comprised 23.6% of the total sample \((n = 173)\), women comprised 75.6% of the total sample \((n = 555)\) and individuals identifying as gender-neutral comprised .8% of the total sample \((n = 6)\). Participants’ ages ranged between 18 and 81 with a mean age of 27.73 years \((SD = 16.60)\). Age information was missing for 92 participants. The majority of participants identified as White/Caucasian \((n = 459, 72.5\%)\), followed by Multiracial/Multiethnic (that is 2 or more races identified) \((n = 91, 14.4\%)\), Other \((n = 27, 4.3\%)\), African American \((n = 17, 2.7\%)\) Asian \((n = 9, 1.4\%)\), Native Hawaiian or other Pacific Islander \((n = 5, .8\%)\), and Native American/Alaskan Native \((n = 5, .8\%)\). Twenty participants reported that they did not wish to answer the question (.2%) and race data was missing for 101 participants. Out of all participants, 14.6% participants \((n =107)\) reported being Hispanic or of Latin descent and ethnicity data was missing for 99 participants. When asked about their experience with suicidality including ever trying to kill themselves or experiencing the death by suicide of a close family member or friend, 14.3% \((n =105)\), of participants reported having attempted suicide, 3.8% \((n = 28)\) did not wish to answer the question and 33.4% \((n = 245)\) of participants indicated experiencing the death by suicide of a close family
member or friend and 1.6% \((n = 12)\) did not wish to answer the question. Experience with suicidality data was missing for 99 participants.

In order to form two distinct age categories within the groups, participants were separated into a young adults group (defined as between 18 – 29 years of age) and an older adults group (defined as 60 years old and older).

**Younger adults.** Young adult participants were solicited from the Psychology Department subject pool comprised of undergraduate college students from the University of Colorado at Colorado Springs. The initial younger adult sample consisted of 507 participants (men, \(n = 122, 24.1\%\); women, \(n = 381, 75.1\%\); gender-neutral, \(n = 4, .8\%\)) who volunteered to participate in the study. As per group criterion, younger adult participants ranged in age from 18 to 29 years old with a mean age of 20.10 years \((SD = 2.39)\) The majority of participants identified as White/Caucasian \((n = 352, 70.0\%)\), followed by Multiracial/Multiethnic (that is 2 or more races identified) \((n = 81, 16.1\%)\), Other \((n = 23, 4.6\%)\), African American \((n = 12, 2.4\%)\) Asian \((n = 9, 1.8\%)\), Native Hawaiian or other Pacific Islander \((n = 5, 1.0\%)\), and Native American/Alaskan Native \((n = 5, 1.0\%)\). Sixteen participants reported that they did not wish to answer the question \((3.2\%)\) and race data was missing for 4 participants. Out of all participants, 19.5% participants \((n = 99)\) reported being Hispanic or of Latin descent.

**Older adults.** Older adult participants were solicited from the Gerontology Center Research Registry Database at the University of Colorado at Colorado Springs. The initial older adult sample consisted of 71 participants (men, \(n = 20, 28.2\%\); women, \(n = 50, 70.4\%\); gender-neutral, \(n=1, 1.4\%)\)) who volunteered to participate in the study. As per group criterion, older adult participants ranged in age from 60 to 81 years old with a
mean age of 69.21 years (SD = 5.97) The majority of participants identified as White/Caucasian ($n = 56, 84.8\%$), followed by Multiracial/Multiethnic (that is 2 or more races identified) ($n = 4, 6.1\%$), African American ($n = 3, 4.5\%$), and Other ($n = 2, 3\%$). One participant reported that they did not wish to answer the question (1.5%) and race data was missing for 5 participants. Out of all participants, 3.1% participants ($n = 2$) reported being Hispanic or of Latin descent.

**Group Equivalencies**

**Exclusion Criteria.** Whereas 734 participants enrolled for the study, 81 had to be removed from the data analysis for not completing the study, meeting the age requirements, or not following study instructions. Furthermore, 80 additional participants were removed due to missing pertinent demographic data. Calculations to address group differences and control for gender and ethnicity were calculated on the remaining sample of 578 participants and then data from the excluded participants were analyzed to explore whether they differed from our final sample on our dependent measures.

**Gender and ethnicity.** In the original sample, men made up 24.1% of the young adult sample, women made up 75.1% of the young adult sample and gender-neutral individuals made up .8% of the young adult sample. For older adults, men made up 28.2% of the young adult sample, women made up 70.4% of the young adult sample and gender-neutral individuals made up 1.4% of the young adult sample. It is important to note that for the gender by age group chi-square, the two gender-neutral cells did not did not have the expected frequency of 5 or more so five participants who indicated their gender as gender-neutral were removed from the final sample in order to meet the assumption of minimum expected cell frequency. Results from the gender by age group
chi-square suggest that no significant gender difference between old and young adults, as tested using a chi-square test for independence which indicated a non-significant association between gender and age group, although younger adults had fewer men participants than the older adult sample, $\chi^2(2, N = 573) = .614, p < .433$, with a small effect of $\phi = .03$. However, a chi-square test for independence indicated a significant association between race (White and Non-White) and age group, with older adults having less Non-White participants than the younger adult sample, $\chi^2(2, N = 552) = 5.73, p = .017$, with a small effect of $\phi = .10$. These findings indicated that the older and younger adult groups were not equivalent on racial distribution. It is important to note that for the race by age group chi-square, seven cells did not have the expected frequency of 5 or more so race was categorized into “White” or “Non-White” in order to meet the assumption of minimum expected cell frequency.

To address the group differences and control for gender and ethnicity, every gender-neutral individual was excluded from analysis, then every young adult who indicated they did not wish to indicate their race every other non-White woman in the young adult group was systematically excluded from analysis, then every fifth White young woman, followed by every fifth White young man. After systematic exclusion of young women and men, men made up 30.5% of the young adult group, women made up 69.5% of the young adult group, while older adult men comprised 28.6% of the sample and old adult women accounted for the remanding 71.4%. Equivalency between old and young adults on gender was demonstrated by a non-significant chi-square $\chi^2(1, N = 441) = .008, p = .928$, with a small effect of $\phi = -.004$. In addition, equivalency between old and young adults on race was demonstrated by a non-significant chi-square $\chi^2(2, N =
$20441) = .2.02, p = .155$, with a small effect of phi = -.068. These participants comprised the final sample, which is described next.

**Final Sample**

**Total sample.** The final sample of participants, after establishing group equivalencies, consisted of 446 adults (29.7% men, $n = 132$; 70.3% women, $n = 314$) with valid profiles. Participants in the final sample had a mean age of 27.89 years ($SD = 18.18$) ranging from 18 to 81 years old. The majority of participants identified as White/Caucasian ($n = 351, 78.7\%$), followed by Multiracial/Multiethnic (that is 2 or more races identified) ($n = 50, 11.2\%$), Other ($n = 15, 3.4\%$), African American ($n = 13, 2.9\%$) Asian ($n = 5, 1.1\%$), Native American/Alaskan Native ($n = 4, .9\%$) and Native Hawaiian or other Pacific Islander ($n = 3, .7\%$). Race data was missing for five participants. Out of all participants, 12.8\% participants ($n = 57$) reported being Hispanic or of Latin descent. Ethnicity data was missing for seven participants. When asked about their experience with suicidality including ever trying to kill themselves or experiencing the death by suicide of a close family member or friend, 13.5\% ($n = 60$), of participants reported having attempted suicide, 2.9\% ($n = 13$) did not wish to answer the question and 37.7\% ($n = 168$) of participants indicated experiencing the death by suicide of a close family member or friend and 1.1\% ($n = 5$) did not wish to answer the question. Experience with suicidality data was missing for seven participants.

The excluded participants do not significantly differ from our final sample in their responses to major variables such as agreement with precipitants ($t(720) = -.89, p = .374, d = -.07$), agreement with protectants ($t(720) = -.132, p = .895, d = .01$), age distancing scores ($t(720) = -.750, p = .454, d = -.05$), GSIS total score ($t(720) = .23, p = .819, d = -$
.03), or RFL total score ($t(701) = -1.07, p = .285, d = -.08$). The excluded group scored lower ($M = 2.94, SD = .576$) on the agreement with age stereotyping scale than the final sample group ($M = 3.04, SD = .581$). The difference between the group scores was significant ($t(720) = -2.38, p = .018, d = -.17$), however the effect size was small (see Table 1).

Table 1

Independent Group T-Test Between Excluded and Included Participants on Major Variables

<table>
<thead>
<tr>
<th>Participants</th>
<th>Excluded N=276*</th>
<th>Included N=446*</th>
<th>t</th>
<th>df</th>
<th>P (2-tailed)</th>
<th>Cohen’s D</th>
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</thead>
<tbody>
<tr>
<td>Mean of Agreement with Risks</td>
<td>2.38 (1.16)</td>
<td>2.46 (1.20)</td>
<td>-.89</td>
<td>720</td>
<td>.374</td>
<td>-.07</td>
</tr>
<tr>
<td>Mean of Agreement with Protectants</td>
<td>4.44 (.72)</td>
<td>4.45 (.68)</td>
<td>-.132</td>
<td>720</td>
<td>.895</td>
<td>-.01</td>
</tr>
<tr>
<td>Agreement with Age Stereotype Mean Score</td>
<td>2.94 (.58)</td>
<td>3.04 (.58)</td>
<td>-2.38</td>
<td>720</td>
<td>.018</td>
<td>-.17</td>
</tr>
<tr>
<td>Age Distancing Mean Score</td>
<td>2.65 (.76)</td>
<td>2.69 (.70)</td>
<td>-.750</td>
<td>720</td>
<td>.454</td>
<td>-.05</td>
</tr>
<tr>
<td>GSIS Total Score</td>
<td>60.21 (27.92)</td>
<td>59.76 (24.00)</td>
<td>.23</td>
<td>720</td>
<td>.819</td>
<td>.02</td>
</tr>
<tr>
<td>RFL total _ Mean total</td>
<td>4.36 (.74) N=268</td>
<td>4.42 (.69) N=435</td>
<td>-1.07</td>
<td>701</td>
<td>.285</td>
<td>-.08</td>
</tr>
</tbody>
</table>

Younger adult sample. The final sample of young adult participants, after establishing group equivalencies, consisted of 376 young adults (men, $N = 112, 29.8\%$; women, $N = 264, 70.2\%$). Participants in the final sample had a mean age of 20.18 years ($SD = 2.46$). The majority of participants identified as White/Caucasian ($n = 295, 78.5\%$), followed by Multiracial/Multiethnic (that is 2 or more races identified) ($n = 46, 12.2\%$), Other ($n = 13, 3.5\%$), African American ($n = 10, 2.7\%$) Asian ($n = 5, 1.3\%$), Native
American/Alaskan Native \( (n = 4, 1.1\%) \) and Native Hawaiian or other Pacific Islander \( (n = 3, 0.8\%) \). Out of all participants, 14.6\% participants \( (n = 55) \) reported being Hispanic or of Latin descent. When asked about their experience with suicidality including ever trying to kill themselves or experiencing the death by suicide of a close family member or friend, 14.6\% \( (n = 55) \), of participants reported having attempted suicide, 3.5\% \( (n = 13) \) did not wish to answer the question and 36.7\% \( (n = 138) \) of participants indicated experiencing the death by suicide of a close family member or friend and 1.3\% \( (n = 5) \) did not wish to answer the question.

**Older adult sample.** The final sample of older adult participants, after establishing group equivalencies, consisted of 70 older adults (men, \( N = 20, 28.6.7\% \); women, \( N = 50, 71.4\% \)). Participants in the final sample had a mean age of 69.30 years (\( SD = 5.97 \)). Similarly, to the young adult group, the majority of participants identified as White/Caucasian \( (n = 56, 80\%) \), followed by Multiracial/Multiethnic (that is 2 or more races identified) \( (n = 4, 5.7\%) \), African American \( (n = 3, 4.3\%) \), and Other \( (n = 2, 2.9\%) \). Race data was missing for five participants. Out of all participants, 2.9\% participants \( (n = 2) \) reported being Hispanic or of Latin descent. Ethnicity data was missing for seven participants. When asked about their experience with suicidality including ever trying to kill themselves or experiencing the death by suicide of a close family member or friend, 7.1\% \( (n = 5) \), of participants reported having attempted suicide, and 42.9\% \( (n = 30) \) of participants indicated experiencing the death by suicide of a close family member or friend. Experience with suicidality data was missing for seven participants.
Materials

Stimulus Materials. Participants read a fictional local obituary of J. T., a 71-year-old individual who died by suicide and is described as either male or female. The obituary is based on a model used by Stice and Canetto (2008). Initials were used instead of names to control for the influence of differing names in the study. The obituary was as follows:

J. T., a Fort Collins resident, was born on August 24th, 1939 and died on July 8th, 2010. At the age of 71, he/she is survived by his/her family, also of Fort Collins, CO. Services will be held for him/her at 2:00 p.m., July 18th at the Fort Collins Funeral Home Chapel. Interment will follow at the Fort Collins Memorial Gardens. It was determined that J.T.’s cause of death was suicide.

Perceptions of Precipitants. Participants rated 10 stressful events they believed most likely precipitated J. T.’s suicide using a 6-point Likert scale. Consistent with past research the stressful events that were used in this study are found to be events perceived to be significant in older adult suicide (Stice & Canetto, 2008; Van Orden et al., 2010). The ten categories of stressful events to be used in this study are: family discord, legal difficulties, severe/terminal illness, death of a first-degree relative, terminal illness in first-degree relative, ending of relationship with intimate partner/spouse, financial trouble, and employment change/retirement, burdensomeness, and social alienation. Participants were given the option to choose a category marked “Other” and write in an alternate event.

Proportion of Suicides Attributed to the Chosen Precipitants. For each of the 10 events, participants were asked to indicate their estimate of the number of older
(female or male) suicide deaths are due to those presumed precipitants, out of 10 older (female or male) suicides, using a 10-point scale.

**Acceptability of Late-Life Suicide.** For each of the 10 precipitants, respondents were asked to indicate how acceptable the decedent’s decision to suicide given the presumed precipitant using a 6-point Likert scale.

**Perceptions of Protectants.** Participants rated a list of eight protectants on how likely could the protective factors protect the decedent from suicide. The 8-factor list that were used in this study are found to be events perceived to be protective factors against suicide (Stice & Canetto, 2008). The eight categories of protective factors to be used in this study are: personal beliefs, religious beliefs, good family or close friend relationships, social engagement/activities, financial resources, counseling/psychotherapy, psychotropic medication, and medical treatment for physical illness. Respondents were given the option to choose a category marked “Other” and write in an alternate event.

**Proportion of Suicides Prevented by the Chosen Protectants.** For each of the eight factors selected, respondents were asked to indicate their estimate of the number of older (female or male) suicides that were prevented due to those presumed protectants, out of 10 older (female or male) suicides, using a 10-point scale.

**Agreement with Protectants.** For each of the eight protective factors, respondents were asked to indicate how much they agree that the presumed protectant was the reason if the decedent had not died by suicide, using a 6-point Likert scale.

For the final task, participants were asked to complete a questionnaire comprised the following measures agreement with age stereotyping, distancing from
aging, geriatric suicide ideation scale, cognitive age, and reasons for living as well as demographic information.

**Agreement with Age Stereotyping.** Participants’ beliefs about age, aging, and age salience, were measured using the Agreement with Age Stereotype scale (AAS) (Kruse & Schmitt, 2006). Participants’ were instructed to rate their agreement using 24 items on a scale of 1 to 6 (1 = *Strongly disagree*, 6 = *Strongly agree*) across five subscales (Gains and Potentials, Losses and Risks, Social Downgrading, Social Burden, and Age Salience). Responses to the AAS produce a possible total score of 24-144 and mean scores between 1 and 6, with 1 representing low agreement with age stereotypes and 6 representing high agreement with age stereotypes. The 24-item scale includes statements such as “In old age, the prime time of life is over” (Gains and Potentials); “With advancing age people are less and less able to make decisions by themselves” (Losses and Risks); “Older people are too expensive for public budgets” (Social Burden); “The achievements of older people are not appreciated in our society” (Social Downgrading); and “What I expect from others depends on their age” (Age Salience). All positively worded items were reverse-coded so that higher scores indicate more negative feelings about aging and greater agreement with negative age stereotype.

**Cognitive Age.** Along with demographic information such as chronological age, gender, and cultural vitals such as race, and ethnicity, participants’ self-perceived age was also assessed using Barak and Schiffman’s (1981) Cognitive Age Measure. Participants were asked to determine in what age group (teens to nineties) they feel they belong across the following four items a) “I feel as though I am in my…” b) “I look as though I am in my…” c) “I do most things as though I were in my…” d) “My interests are mostly those
of a person in their….” Participants’ responses were averaged and the final score will provide the participants cognitive age to be compared with their chronological age to check for age perception discrepancies.

**Age Distancing.** Along with cognitive age participants’ perception of their age in group were assessed using an adaptation of Tyrrell’s Distancing from Aging Questionnaire (DAQ) (2014). Participants’ were instructed to rate their agreement to 10 items on a scale of 1 to 6 (*1 = strongly disagree, 6 = strongly agree*). Responses to the DAQ produce a possible total score of 10-60 and mean scores between 1 and 6, with 1 representing low distancing from aging and 6 representing high distancing from aging. The 10-item scale includes statements such as “I have a hard time imagining myself any older than I am today;” “I would probably avoid spending time in a place where I knew the majority of people would be older;” “I enjoy visiting older relatives and family friends;” “A relationship with an older person is just as rewarding as a relationship with a younger person.” All positively worded items were reverse-coded so that higher scores indicate more negative feelings about aging and greater distancing from aging.

**Geriatric Suicide Ideation Scale (GSIS).** The GSIS contains 31 items and uses a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The GSIS provides a total score as well as 4 subscales including Suicide Ideation, Death Ideation, Perceived Meaning in Life, and Loss of Personal and Social Worth (Heisel & Flett, 2006). This measure was used to determine participants’ tendency to ideate about suicide. Participants responded to items such as “I have tried ending my life in the past,” where higher scores would indicate a higher suicidal ideation. Segal et al. (2012) analyzed the psychometric properties of this scale and found the scores to have both a strong reliability
(with a Cronbach’s alpha of .92) and validity among older adults. Higher scores on the scale indicated a higher tendency to ideate about suicide, thus showing predictive validity. Significant, positive correlations between GSIS scores and psychological well-being (measured with the PWB, or psychological well-being scale), along with other factors such as depression (measured by the GDS, or geriatric depression scale) indicated convergent validity (Heisel & Flett, 2006). Also, Heisel and Flett (2006) found positive correlations between the GSIS and scale for suicide ideation (SSI) scores, which demonstrated construct validity when measuring suicide ideation.

**Reasons for Living Inventory (RFL).** The RFL contains 48 items and uses a 6-point Likert scale, with responses ranging from 1 (*not at all important*) to 6 (*extremely important*). This inventory has a total score as well as six subscales including Survival and Coping Beliefs, Responsibility to Family, Child-Related Concerns, Fear of Suicide, Fear of Social Disapproval, and Moral Objections (Linehan et al., 1983). The total number of subscale items ranges from 3 to 24 (June et al., 2009). Participants responded to items such as “I care about enough about myself to live” and “I have a responsibility and commitment to my family,” where higher scores would indicate stronger reasons to live. Linehan et al. (1983) evaluated the psychometric properties of the scale and found the scores to have moderately high internal reliability (with Cronbach’s alpha ranging from .72 to .89). In their study on religiousness, social support and reasons for living in 72 African American and European older adults, June et al. (2009) found moderate internal consistency (with a Cronbach’s alpha of 0.72) for the total RFL score. Higher scores on the scale indicated stronger reasons for living, thus showing predictive validity.
Cultural Information. The last section of the questionnaire contained a series of demographic questions such as age, gender, ethnicity, grade level, political and religious attitudes and affiliations. Particular attention was paid to questions of age, race, and ethnicity.

Research Design

This study used a correlational design to explore factors of attitudes toward aging and their relationship to attitudes toward late-life suicide. Because the relationship between variables may also vary between age cohorts a series of independent samples t-test was also used to compare and contrast young adults and older adults on attitudes toward late-life suicidality, precipitants, protectants, agreement with age stereotypes, cognitive age, and age distancing.

Procedure

Young adults. Young adult participants were undergraduate students solicited from the UCCS Psychology Department participant pool who volunteered to participate in the study. Participants enrolled in the study through the UCCS SONA System and were sent a link to an online survey via SONA. It took young adult participants less than 60 minutes to fill-out the online survey. Students were compensated with extra credit (applied to their psychology courses through SONA) as appreciation for participating in the study.

Older adults. Older adult participants were recruited from the UCCS Gerontology Center Research Registry Database. Community dwelling older adults who were registered on the database were emailed a recruitment letter that included a link to the online study. Older adult participants with only phone contact information were called
and informed about the study. Participants who expressed interest in the study were given the option to have the packet sent in the mail to complete and return, or to complete the study online. Participants enrolled in the study through the UCCS SONA System and were sent a link to an online survey via SONA. It took older adult participants less than 90 minutes to fill-out the online survey. All older adults were entered into a raffle for two gift-cards participating in the study.

This study was approved by the Institutional Review Board of the University of Colorado at Colorado Springs. In order to form two distinct age categories within the groups, participants were separated into a young adult-age range (defined as between 18-29 years of age) and an older group (defined as 60 years old and older).
CHAPTER III
RESULTS

Data Collection and Analysis

The statistical software IBM SPSS 24 was used on all data analyses. Descriptive statistics were run to find means and standard deviations for participants’ demographic information, the acceptability of late-life suicide, AAS, DAQ, GSIS, and RFL total scores. A series of simple correlations were run to examine relationships between the dependent measures and a series of independent samples t-tests were used to examine age differences (young versus old). Effect sizes were calculated using Becker’s (1998) effect size calculator.

Hypotheses Testing

The purpose of this study was to explore subjective perspectives on aging and late-life suicide and how they may differ for older and younger adults. Because most research explores the attitudes of younger adults the focus of this study is on the attitudes of older-age adults on late-life suicidality, precipitants, protectants, agreement with age stereotypes, and age distancing. The secondary goal of this study was to shed light on whether the perceptions around aging and late-life suicide are associated with suicidal ideation and suicidal resilience.

For our first hypothesis we predicted that for all participants, higher scores on overall acceptability of late-life suicide will be associated with a) higher scores on Agreement with Age Stereotyping; b) higher scores on the Geriatric Suicidal Ideation
Scale (GSIS) total score; and c) lower scores on the Reasons for Living Inventory (RFL) total score. The results from the one-tail correlations analysis of the full sample were consistent with hypothesis 1 (See Table 2). The correlations between the acceptability of late-life suicide and agreement with age stereotyping, \( r(446) = .308, p < .001 \), and the GSIS total score, \( r(446) = .352, p < .001 \) were found to have medium positive relationships, such that higher scores on overall acceptability of late-life suicide were associated with higher scores on the Agreement with Age Stereotyping scale and the GSIS total score. Also consistent with the hypothesis the acceptability of late-life suicide had a small negative relationship with the RFL total score \( r(435) = -.141, p = .002 \) such that higher scores on overall acceptability of late-life suicide were associated lower scores on the RFL total score. Although not part of the hypothesis it is important to note that, for the overall sample, acceptability of late-life suicide and age distancing were found to have a medium positive relationship, \( r(446) = .250, p < .001 \). Results also showed that agreement with age stereotyping was found to have a strong positive relationship with age distancing, \( r(446) = .560, p < .001 \) and a medium positive relationship with the GSIS, \( r(446) = .337, p < .001 \). Finally results for the full sample also showed the age distancing had a medium positive relationship with the GSIS, \( r(446) = .358, p < .001 \).

Our second hypothesis predicted that among older adults, higher scores on overall acceptability of late-life suicide will be associated with higher scores on age distancing total score. Consistent with our hypothesis, the results calculated from the sample of older adults (See Table 3), indicated that the acceptability of late-life suicide had medium positive relationships with age distancing, \( r(70) = .304, p = .005 \), such that higher scores
on overall acceptability of late-life suicide were associated with higher scores on age distancing.

Table 2

*Bivariate Correlations Between Major Variables in the Full Sample (N=446, RFL:N=435)*

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1. Agreement with Precipitants</td>
<td>.944</td>
<td>--</td>
<td>.944</td>
<td>.308**</td>
<td>.250**</td>
<td>.352**</td>
<td>-.141**</td>
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<td>2. Agreement with Protectants</td>
<td>.786</td>
<td>--</td>
<td>-.062</td>
<td>-.175**</td>
<td>-.093*</td>
<td>.209**</td>
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<tr>
<td>3. Agreement with Age Stereotyping (AAS)</td>
<td>.845</td>
<td>--</td>
<td>.560**</td>
<td>.337**</td>
<td>.025</td>
<td></td>
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<tr>
<td>4. Age Distancing (DAQ)</td>
<td>.759</td>
<td>--</td>
<td>.358**</td>
<td>-.056</td>
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<tr>
<td>5. Geriatric Suicidal Ideation Total (GSIS)</td>
<td>.963</td>
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<td>-.455**</td>
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<tr>
<td>6. Reasons for Living Total (RFL)</td>
<td>.942</td>
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</table>

Note: * p < .05, ** p < .01;

We also predicted that among older adults higher scores on agreement with age stereotyping will be associated with a) higher scores on the GSIS total score; b) lower scores on the RFL total score; and c) higher scores on Age Distancing total score.

Consistent with our third hypothesis, for the sample of older adults (See Table 3), results indicated that agreement with age stereotyping had strong positive relationships with the GSIS total score r(70) = .577, p < .001 and the age distancing questionnaire, r(70) = .677, p < .001. However our results suggest that there was no meaningful relationship between agreement with age stereotyping and RFL scale total score r(61) = -.192, p = .063.

Although not part of the hypothesis it is important to note that correlations between the acceptability of late-life suicide and agreement with age stereotyping were found to have a medium positive relationship, r(70) = .370, p = .001.
Table 3

Bivariate Correlations Between Major Variables Among Older Adults (N=70; 
RFL:N=65)

<table>
<thead>
<tr>
<th></th>
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<th>1</th>
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</thead>
<tbody>
<tr>
<td>1. Acceptability/</td>
<td>.939</td>
<td>--</td>
<td>-.028</td>
<td>.370**</td>
<td>.304**</td>
<td>.465**</td>
<td>-.333**</td>
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<tr>
<td>Agreement with Precedents</td>
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<tr>
<td>2. Agreement with</td>
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<td>-.026</td>
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<td>.353**</td>
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<td>3. Agreement with Age</td>
<td>.871</td>
<td>--</td>
<td>.677**</td>
<td>.577**</td>
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<td>4. Age Distancing</td>
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<td>.604**</td>
<td>-.337**</td>
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<td>5. Geriatric Suicidal</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ideation Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Reasons for Living</td>
<td>.940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * p < .05, ** p < .01;

There were no formal hypotheses for scores found among the younger adults group. However an exploration of the data collected from young adults (See Table 4) found that acceptability of late-life suicide had medium positive relationships with agreement with age stereotyping, \( r(376) = .285, p < .001 \) age distancing, \( r(376) = .226, p < .001 \) the GSIS, \( r(376) = .329, p < .001 \), such that higher scores on overall acceptability of late-life suicide were associated with higher scores on the Agreement with Age Stereotyping scale, age distancing questionnaire and the GSIS total score. Also for young adults acceptability of late-life suicide had a small negative relationship with the RFL total score, \( r(376) = -.127, p = .007 \), such that higher scores on overall acceptability of late-life suicide were associated lower scores on the RFL total score. Results from the young adults also showed that Age Stereotyping scale had medium positive relationships with age distancing, \( r(376) = .489, p < .001 \) and the GSIS total score, \( r(376) = .266, p <
.001, such that higher scores on overall agreement with age stereotyping scale were associated with higher scores on the age distancing questionnaire and the GSIS total score. In addition, total scores from the age distancing questionnaire had a medium positive relationship with agreement with the GSIS, such that higher scores on the age distancing questionnaire overall were associated with higher GSIS total scores.

Table 4

*Bivariate Correlations Between Major Variables Among Younger Adults (N=376, RFL: N=370)*

<table>
<thead>
<tr>
<th></th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acceptability/Agreement with Precedents</td>
<td>.946</td>
<td>--</td>
<td>-.009</td>
<td>.285**</td>
<td>.226**</td>
<td>.329**</td>
<td>-.127**</td>
</tr>
<tr>
<td>2. Agreement with Protectants</td>
<td>.771</td>
<td>--</td>
<td>-.051</td>
<td>-.162**</td>
<td>-.100*</td>
<td>.191**</td>
<td></td>
</tr>
<tr>
<td>3. Agreement with Age Stereotyping</td>
<td>.826</td>
<td>--</td>
<td>.489**</td>
<td>.266**</td>
<td>.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age Distancing</td>
<td>.744</td>
<td>--</td>
<td>.290**</td>
<td>-.066</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Geriatric Suicidal Ideation Total</td>
<td>.963</td>
<td>--</td>
<td>--</td>
<td>-.497**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Reasons for Living Total</td>
<td>.943</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: * p < .05, ** p < .01;* 

Another purpose of this study was to explore the age differences on cultural scripts around suicide precipitants and protectants. To begin mean scores on likeliness to cause or prevent suicide, number of suicide deaths caused or prevented, and agreement with the decision to die by suicide or not were ranked by age group for both precipitants (See Table 5) and protectants (See Table 6) respectively. For precipitants, younger adults attributed more importance to social isolation than older adults, and older adults attributed more importance to terminal illness than younger adults. For protectants,
Table 5

Age Difference Mean Rankings of Precipitants

<table>
<thead>
<tr>
<th></th>
<th>Likeliness</th>
<th>Number of Deaths Caused</th>
<th>Acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Younger</td>
<td>Older</td>
<td>Younger</td>
</tr>
<tr>
<td>Family discord/disruptive arguments with spouse/partner/other family member</td>
<td>9</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Legal difficulties/appearing in court</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Severe illness/terminal illness/need for in-home assistance</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Death of first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Feeling like a burden to others (burdensomeness)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Employment change/retirement</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Separation/divorce/break-up with an intimate partner/spouse</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Financial trouble/decrease in income</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Social isolation (loneliness)</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Terminal illness in first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

younger adults and older adults did not generally vary. Both age groups indicated that good family relationships was the most important protective factor. Regarding suicide precipitants, hypothesis four predicted that a) Older adults will attribute the following precipitants: severe/terminal illness, death of a first-degree relative, and burdensomeness as more likely, more acceptable, and attribute more suicide deaths than younger adults;
and b) younger adults will attribute the following precipitants: family discord, financial
trouble, and ending of relationship with intimate partner/spouse as more likely, more
acceptable, and attribute more suicide deaths than older adults. A series of independent
samples t-tests comparing older and younger adults were run on the likeliness that the precipitant led to the suicide, the number of suicide deaths they attributed to that precipitant, and finally how much they agree with the decision to suicide.

Table 6

*Age Difference Mean Rankings of Protectants*

<table>
<thead>
<tr>
<th>Protectant</th>
<th>Likeliness Younger</th>
<th>Likeliness Older</th>
<th>Number of Deaths Prevented Younger</th>
<th>Number of Deaths Prevented Older</th>
<th>Acceptability Younger</th>
<th>Acceptability Older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in religious activities</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Having good family relationships</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Having close friends</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Having Social engagement/activities</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Having financial resources</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Counseling/psychotherapy (i.e., “talk therapy”)</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Medication for a psychological condition (such as depression or anxiety)</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Medical treatment for a non-psychological disease or illness</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Results on the likeliness measure for precipitants (See Table 7) showed that younger adults mean scores were significantly higher than older adults on five of the ten factors, such that young adults attributed the following factors as more likely to lead to suicide than older adults: family discord, \((M_y = 3.47, SD = 1.15; M_o = 2.96, SD = 1.08,)\)
Table 7

*Age Differences On Likeliness of Precipitant to Lead to Suicide*

<table>
<thead>
<tr>
<th>Precipitant in Life of Suicidal Participant</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>t</th>
<th>df</th>
<th>P (2-tailed)</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family discord/disruptive arguments with spouse/partner/other family member</td>
<td>3.47 (1.15)</td>
<td>2.96 (1.08)</td>
<td>3.46</td>
<td>444</td>
<td>.001</td>
<td>.46</td>
</tr>
<tr>
<td>Legal difficulties/appearing in court</td>
<td>3.01 (1.14)</td>
<td>3.09 (1.10)</td>
<td>-.55</td>
<td>443</td>
<td>.583</td>
<td>-.07</td>
</tr>
<tr>
<td>Severe illness/terminal illness/need for in-home assistance</td>
<td>4.51 (1.02)</td>
<td>4.51 (1.08)</td>
<td>-.01</td>
<td>443</td>
<td>.989</td>
<td>.00</td>
</tr>
<tr>
<td>Death of first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>4.07 (1.19)</td>
<td>3.86 (1.15)</td>
<td>1.41</td>
<td>443</td>
<td>.159</td>
<td>.18</td>
</tr>
<tr>
<td>Feeling like a burden to others (burdensomeness)</td>
<td>4.61 (1.01)</td>
<td>4.46 (.90)</td>
<td>1.14</td>
<td>443</td>
<td>.256</td>
<td>.16</td>
</tr>
<tr>
<td>Employment change/retirement</td>
<td>3.54 (1.13)</td>
<td>2.67 (1.07)</td>
<td>5.97</td>
<td>444</td>
<td>.000</td>
<td>.79</td>
</tr>
<tr>
<td>Separation/divorce/break-up with an intimate partner/spouse</td>
<td>3.68 (1.27)</td>
<td>3.16 (1.21)</td>
<td>3.13</td>
<td>443</td>
<td>.002</td>
<td>.42</td>
</tr>
<tr>
<td>Financial trouble/decrease in income</td>
<td>3.98 (1.12)</td>
<td>3.73 (1.08)</td>
<td>1.71</td>
<td>444</td>
<td>.088</td>
<td>.23</td>
</tr>
<tr>
<td>Social isolation (loneliness)</td>
<td>4.80 (1.00)</td>
<td>4.16 (1.28)</td>
<td>3.97</td>
<td>85.23</td>
<td>.000</td>
<td>.56</td>
</tr>
<tr>
<td>Terminal illness in first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>4.08 (1.64)</td>
<td>3.53 (1.14)</td>
<td>3.67</td>
<td>444</td>
<td>.000</td>
<td>.39</td>
</tr>
</tbody>
</table>

$t(444) = 3.46, p = .001, d = .46$, employment change/retirement, ($M_y = 3.54, SD = 1.13$; $M_o = 2.67, SD = 1.07, t(444) = 5.97, p < .001, d = .79$), separation/divorce/break-up with an intimate partner/spouse ($M_y = 3.68, SD = 1.27; M_o = 3.16, SD = 1.21, t(443) = 3.13, p = .002, d = .42$), social isolation (loneliness), ($M_y = 4.80, SD = 1.00; M_o = 4.16, SD = 1.28$).
1.28, \( t(85.23) = 3.97, p < .001, d = .56 \), and terminal illness in first-degree relative (such as a spouse, parent, child, sibling), \( (M_y = 4.08, SD = 1.64; M_o = 3.53, SD = 1.14, t(444) = 3.67, p < .001, d = .39) \). One factor: financial trouble, \( (M_y = 3.98, SD = 1.12; M_o = 3.73, SD = 1.08, t(444) = 1.71, p = .088, d = .23) \), trended toward significance and yielded a meaningful effect size.

Younger adults mean scores did not differ from older adults on the following four factors: death of a first-degree relative, \( (M_y = 4.07, SD = 1.19; M_o = 3.86, SD = 1.15, t(443) = 1.41, p = .159, d = .01) \), burdensomeness, \( (M_y = 4.61, SD = 1.01; M_o = 4.46, SD = .90, t(443) = 1.14, p = .256, d = .16) \), severe/terminal illness, \( (M_y = 4.51, SD = 1.02; M_o = 4.51, SD = 1.08, t(443) = -.01, p = .989, d = .00) \), and legal difficulties \( (M_y = 3.01, SD = 1.14; M_o = 3.09, SD = 1.10, t(443) = -.55, p = .583, d = -07) \).

Our hypotheses that older adults would attribute severe/terminal illness, death of a first-degree relative, and burdensomeness as more likely to lead to suicide than younger adults were not supported. However, our hypotheses that younger adults would attribute family discord, financial trouble, and ending of relationship with intimate partner/spouse as more likely to lead to suicide than older adults were supported.

Results on the number deaths attributed for the precipitants (See Table 8) showed that younger adults attributed more suicide deaths than older adults to nine of the precipitants as indicated by significantly higher mean scores for the following factors: family discord, \( (M_y = 3.96, SD = 2.08; M_o = 2.59, SD = 1.98, t(444) = 5.11, p < .001, d = .67) \), legal difficulties \( (M_y = 3.12, SD = 2.03; M_o = 2.49, SD = 1.89, t(444) = 2.43, p = .016, d = .32) \), death of a first-degree relative, \( (M_y = 5.53, SD = 2.44; M_o = 4.16, SD = 2.53, t(444) = 4.30, p < .001, d = .55) \), burdensomeness, \( (M_y = 6.43, SD = 2.38; M_o = \)
Table 8

*Age Differences On Number of Suicide Deaths Caused by Precipitant*

<table>
<thead>
<tr>
<th>Participants</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>P (2-tailed)</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (SD)</td>
<td>M (SD)</td>
<td>t DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family discord/ disruptive arguments with spouse/partner/ other family member</td>
<td>3.96 (2.08)</td>
<td>2.59 (1.98)</td>
<td>5.11</td>
<td>.000</td>
</tr>
<tr>
<td>Legal difficulties/ appearing in court</td>
<td>3.12 (2.03)</td>
<td>2.49 (1.89)</td>
<td>2.43</td>
<td>.016</td>
</tr>
<tr>
<td>Severe illness/terminal illness/need for in-home assistance</td>
<td>6.01 (2.16)</td>
<td>6.13 (2.42)</td>
<td>-.411</td>
<td>.681</td>
</tr>
<tr>
<td>Death of first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>5.53 (2.44)</td>
<td>4.16 (2.53)</td>
<td>4.30</td>
<td>.000</td>
</tr>
<tr>
<td>Feeling like a burden to others (burdensomeness)</td>
<td>6.43 (2.38)</td>
<td>5.23 (2.76)</td>
<td>3.43</td>
<td>89.225</td>
</tr>
<tr>
<td>Employment change/retirement</td>
<td>3.81 (2.06)</td>
<td>2.55 (1.83)</td>
<td>4.74</td>
<td>.000</td>
</tr>
<tr>
<td>Separation/divorce/break-up with an intimate partner/spouse</td>
<td>4.77 (2.34)</td>
<td>3.29 (2.40)</td>
<td>4.86</td>
<td>.000</td>
</tr>
<tr>
<td>Financial trouble/decrease in income</td>
<td>5.07 (2.29)</td>
<td>3.86 (2.20)</td>
<td>4.10</td>
<td>.000</td>
</tr>
<tr>
<td>Social isolation (loneliness)</td>
<td>6.91 (2.12)</td>
<td>5.03 (2.72)</td>
<td>5.50</td>
<td>85.31</td>
</tr>
<tr>
<td>Terminal illness in first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>5.37 (2.48)</td>
<td>4.07 (2.77)</td>
<td>3.95</td>
<td>.000</td>
</tr>
</tbody>
</table>

5.23, SD = 2.76, t(89.23) = 3.43, p = .001, d = .47), employment change/retirement, (M_y = 3.81, SD = 2.06; M_o = 2.55, SD = 1.83, t(443) = 4.74, p < .001, d = .66), separation/ending of relationship with intimate partner/spouse, (M_y = 4.77, SD = 2.34; M_o = 3.29, SD = 2.40, t(444) = 4.86, p < .001, d = .62), financial trouble, (M_y = 5.07, SD =
2.29; $M_o = 3.86$, $SD = 2.20$, $t(444) = 4.10$, $p < .001$, $d = .54$), social isolation (loneliness),
$(M_y = 6.91$, $SD = 2.12$; $M_o = 5.03$, $SD = 2.72$, $t(85.31) = 5.50$, $p < .001$, $d = .77$), and
terminal illness in first-degree relative (such as a spouse, parent, child, sibling), $(M_y = 
5.37$, $SD = 2.48$; $M_o = 4.07$, $SD = 2.77$, $t(443) = 3.95$, $p < .001$, $d = .49$). Younger adult
scores did not differ from older adults on one factor: severe/terminal illness, $(M_y = 6.01,$
$SD = 2.16$; $M_o = 6.13$, $SD = 2.42$, $t(444) = -.411$, $p = .681$, $d = .05$).

Our hypotheses that older adults would attribute more deaths by suicide to
severe/terminal illness, death of a first-degree relative, and burdensomeness than younger
adults were not supported. However, our hypotheses that younger adults would attribute
more deaths by suicide to family discord, financial trouble, and ending of relationship
with intimate partner/spouse were supported.

Results on the agreement measure for precipitants (See Table 9) showed that
younger adults mean scores were significantly higher than older adults on six out of ten
precipitants. Young adults agreed more with the decision to die by suicide than older
adults if the following precipitants were the cause: family discord, $(M_y = 1.99$, $SD = 1.25$;
$M_o = 1.43$, $SD = .86$, $t(444) = 3.59$, $p < .001$, $d = .52$), death of a first-degree relative, $(M_y
= 2.81$ $SD = 1.60$; $M_o = 2.36$, $SD = 1.56$, $t(444) = 2.18$, $p = .030$, $d = .28$), employment
change/retirement, $(M_y = 1.84$, $SD = 1.14$; $M_o = 1.47$, $SD = .83$, $t(123.42) = 3.20$, $p =
.002$, $d = .37$), separation/ending of relationship with intimate partner/spouse, $(M_y = 2.28,$
$SD = 1.40$; $M_o = 1.78$, $SD = 1.20$, $t(106.97) = .2.54$, $p = .013$, $d = .31$), social isolation
(loneliness), $(M_y = 3.16$, $SD = 1.80$; $M_o = 2.47$, $SD = 1.58$, $t(105.58) = 3.30$, $p = .001$, $d =
.41$), and terminal illness in first-degree relative, $(M_y = 2.73$, $SD = 1.62$; $M_o = 2.14$, $SD =
1.54$, $t(444) = 2.80$, $p = .005$, $d = .37$). In addition, as indicated by significantly higher
mean scores, older adults agreed more with the decision to die by suicide than younger adults if severe/terminal illness, \((M_y = 3.20, SD = 1.67; M_o = 3.64, SD = 1.91, t(441) = -1.97, p = .050, d = -.24)\) was the precipitating factor.

Table 9

*Age Differences On Agreement with Decision to Suicide Based on Precipitant*

<table>
<thead>
<tr>
<th>Participants</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>(t)</th>
<th>(df)</th>
<th>(P) (2-tailed)</th>
<th>Cohen’s (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family discord/ disruptive arguments with spouse/partner/ other family member</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.99 (1.25)</td>
<td>1.43 (.86)</td>
<td>3.59</td>
<td>444</td>
<td>.000</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>Legal difficulties/ appearing in court</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.78 (1.67)</td>
<td>1.63 (1.01)</td>
<td>1.14</td>
<td>444</td>
<td>.255</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Severe illness/terminal illness/need for in-home assistance</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.20 (1.60)</td>
<td>3.64 (1.91)</td>
<td>-1.97</td>
<td>444</td>
<td>.050</td>
<td>-.24</td>
<td></td>
</tr>
<tr>
<td>Death of first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.81 (1.74)</td>
<td>2.36 (1.56)</td>
<td>2.18</td>
<td>444</td>
<td>.030</td>
<td>.28</td>
<td></td>
</tr>
<tr>
<td>Feeling like a burden to others (burdensomeness)</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.96 (1.74)</td>
<td>3.10 (1.79)</td>
<td>-.629</td>
<td>444</td>
<td>.530</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>Employment change/retirement</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.84 (1.14)</td>
<td>1.47 (.83)</td>
<td>3.20</td>
<td>123.42</td>
<td>.002</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Separation/divorce/break-up with an intimate partner/spouse</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.28 (1.40)</td>
<td>1.87 (1.20)</td>
<td>2.54</td>
<td>106.97</td>
<td>.013</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>Financial trouble/decrease in income</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.29 (1.39)</td>
<td>2.20 (1.46)</td>
<td>.493</td>
<td>444</td>
<td>.623</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>Social isolation (loneliness)</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.16 (1.80)</td>
<td>2.47 (1.58)</td>
<td>3.30</td>
<td>105.58</td>
<td>.001</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>Terminal illness in first-degree relative (such as a spouse, parent, child, sibling)</td>
<td>(M (SD))</td>
<td>(M (SD))</td>
<td>(t)</td>
<td>(df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.73 (1.62)</td>
<td>2.14 (1.54)</td>
<td>2.80</td>
<td>444</td>
<td>.005</td>
<td>.37</td>
<td></td>
</tr>
</tbody>
</table>

Younger adults mean scores did not differ from older adults on the following factors: legal difficulties, \((M_y = 1.78, SD = 1.06; M_o = 1.63, SD = 1.01, t(444) = 1.14, p = .255, d = .14)\), financial trouble, \((M_y = 2.29, SD = 1.39; M_o = 2.20, SD = 1.46, t(444) = .493, p = .623, d = .06)\), and feeling like a burden (burdensomeness) \((M_y = 2.96, SD = 1.74; M_o = 3.10, SD = 1.79, t(444) = -.629, p = .530, d = -.08)\).
Our hypothesis that older adults would agree with the decision to suicide if severe/terminal illness was the precipitating factor more than younger adults was supported, suggesting that older adults agreed more with the decision to suicide if severe/terminal illness was the cause than younger adults. Results did not support our hypotheses that older adults would agree with the decision to suicide if death of a first-degree relative, and burdensomeness were the precipitants. However, our hypotheses that younger adults would agree with the decision to suicide if family discord, and ending of relationship with intimate partner/spouse were the precipitating factors more than older adults were supported. Results did not support our hypothesis that younger adults would agree more than older adults with the decision to suicide if financial trouble was the precipitant.

Regarding suicide protectants, hypothesis five predicted that a) Older adults would attribute the following protectants: having close family, participation in religious activities, and personal beliefs more likely, more acceptable, and attribute more prevented suicide deaths than younger adults, and b) Younger adults would attribute the following protectants having close friends, counseling, and medical care as more likely, more acceptable, and attribute more prevented suicide deaths than older adults. A series of independent samples t-test were run on the likeliness that the protectant would prevent the decedent’s decision to complete suicide, the number of prevented suicide deaths they attributed to that protectant, and finally whether they agreed if the decedent had not died by suicide that the presumed protectant was the reason. There was not sufficient data for the personal beliefs protectant to be included in the following analyses.
Results on the likeliness measure for protectants (See Table 10) showed that older adults were significantly higher than younger adults on one of the eight protective factors, such that older adults indicated that having financial resources was more likely to prevent suicide than younger adults, ($M_y = 3.91$, $SD = 1.10$; $M_o = 4.44$, $SD = 1.00$, $t(444) = -3.72$, $p < .001$, $d = .50$). Younger and older adults’ mean scores did not differ significantly on the remaining seven protectants: having good family relationships, ($M_y = 5.11$, $SD = .94$; $M_o = 5.10$, $SD = .84$, $t(444) = .075$, $p = .940$, $d = .01$), social engagement, ($M_y = 4.88$, $SD = .97$; $M_o = 4.86$, $SD = .89$, $t(444) = .187$, $p = .852$, $d = .02$), medication for psychological conditions ($M_y = 4.20$, $SD = 1.10$; $M_o = 4.14$, $SD = 1.20$, $t(444) = .428$, $p = .669$, $d = .05$), participation in religious activities, ($M_y = 4.08$, $SD = 1.18$; $M_o = 4.19$, $SD = 1.44$, $t(443) = -.662$, $p = .508$, $d = -.08$), having close friends, ($M_y = 5.03$, $SD = .94$; $M_o = 5.04$, $SD = .82$, $t(444) = -.136$, $p = .892$, $d = -.01$), counseling, ($M_y = 4.61$, $SD = .99$; $M_o = 4.63$, $SD = .89$, $t(444) = -.112$, $p = .911$, $d = -.02$), and medical treatment for non-psychological illness ($M_y = 4.07$, $SD = 1.09$; $M_o = 4.20$, $SD = 1.13$, $t(444) = -.995$, $p = .320$, $d = -.11$).

Our hypotheses that older adults would attribute the following protectants: family, and religious beliefs as more likely to prevent suicide than younger adults were not supported. In addition, our hypotheses that younger adults would attribute friends, counseling, and medical care as more likely to prevent suicide than older adults were also not supported.

Results on the number suicide deaths prevented by the protectant (See Table 11) showed that younger adults mean scores were significantly higher than older adults on one out of eight protective factors. Younger adults indicated that more suicide deaths were prevented by having close family relationships, ($M_y = 7.56$, $SD = 1.92$; $M_o = 6.90$, $t(444) = 3.91$, $p < .001$, $d = .50$).
Table 10

**Age Differences On Likeliness of Protectant to Prevent Suicide**

<table>
<thead>
<tr>
<th>Protectants</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>t (2-tailed)</th>
<th>df</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in religious activities</td>
<td>4.08 (1.18)</td>
<td>4.19 (1.44)</td>
<td>-.662</td>
<td>443</td>
<td>.508</td>
</tr>
<tr>
<td>Having good family relationships</td>
<td>5.11 (.94)</td>
<td>5.10 (.84)</td>
<td>.075</td>
<td>444</td>
<td>.940</td>
</tr>
<tr>
<td>Having close friends</td>
<td>5.03 (.94)</td>
<td>5.04 (.82)</td>
<td>-.136</td>
<td>444</td>
<td>.892</td>
</tr>
<tr>
<td>Having Social engagement/activities</td>
<td>4.88 (.97)</td>
<td>4.86 (.89)</td>
<td>.187</td>
<td>444</td>
<td>.852</td>
</tr>
<tr>
<td>Having financial resources</td>
<td>3.91 (1.10)</td>
<td>4.44 (1.00)</td>
<td>-.372</td>
<td>444</td>
<td>.000</td>
</tr>
<tr>
<td>Counseling/psychotherapy (i.e., “talk therapy”)</td>
<td>4.61 (.99)</td>
<td>4.63 (.89)</td>
<td>-.112</td>
<td>444</td>
<td>.911</td>
</tr>
<tr>
<td>Medication for a psychological condition (such as depression or anxiety)</td>
<td>4.20 (1.10)</td>
<td>4.14 (1.20)</td>
<td>.428</td>
<td>444</td>
<td>.669</td>
</tr>
<tr>
<td>Medical treatment for a non-psychological disease or illness</td>
<td>4.07 (1.09)</td>
<td>4.20 (1.13)</td>
<td>-.995</td>
<td>444</td>
<td>.320</td>
</tr>
</tbody>
</table>

SD = 2.57, t(83.92) = 2.05, p = .043, d = .29) than older adults. Younger and older adults mean scores did not differ significantly on the remaining protectants: participation in religious activities, (\(M_y = 5.29, SD = 2.41; M_o = 5.12, SD = 2.70, t(442) = 5.32, p = .595, d = .07\)), having close friends, (\(M_y = 7.28, SD = 1.99; M_o = 6.81, SD = 2.63, t(84.22) = 1.45, p = .164, d = .20\)), social engagement, (\(M_y = 6.84, SD = 2.15; M_o = 6.35, SD = 2.80, t(83.33) = 1.38, p = .173, d = .20\)), counseling, (\(M_y = 6.23, SD = 2.15; M_o = 5.79, SD = 2.44, t(444) = 1.56, p = .120, d = .19\)), medication for psychological conditions, (\(M_y = 5.69, SD = 2.29; M_o = 5.60, SD = 2.68, t(88.72) = .260, p = .796, d = .04\)), having financial resources (\(M_y = 5.23, SD = 2.26; M_o = 5.69, SD = 2.70, t(87.86) = -1.32, p =\)
.191, \( d = -0.18 \) and medical treatment for a non-psychological disease or illness (\( M_y = 5.47, SD = 2.41; M_o = 5.74, SD = 2.61, t(444) = -0.849, p = .396, d = -0.11 \)).

Table 11

*Age Differences On Number of Suicide Deaths Prevented by Protectant*

<table>
<thead>
<tr>
<th>Participants</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>t</th>
<th>df</th>
<th>P (2-tailed)</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in religious activities</td>
<td>5.29 (2.41)</td>
<td>5.12 (2.70)</td>
<td>5.32</td>
<td>442</td>
<td>.595</td>
<td>.07</td>
</tr>
<tr>
<td>Having good family relationships</td>
<td>7.56 (1.92)</td>
<td>6.90 (2.57)</td>
<td>2.05</td>
<td>83.92</td>
<td>.043</td>
<td>.29</td>
</tr>
<tr>
<td>Having close friends</td>
<td>7.28 (1.99)</td>
<td>6.81 (2.63)</td>
<td>1.45</td>
<td>84.22</td>
<td>.164</td>
<td>.20</td>
</tr>
<tr>
<td>Having Social engagement/activities</td>
<td>6.84 (2.15)</td>
<td>6.35 (2.80)</td>
<td>1.38</td>
<td>83.33</td>
<td>.173</td>
<td>.20</td>
</tr>
<tr>
<td>Having financial resources</td>
<td>5.23 (2.26)</td>
<td>5.69 (2.70)</td>
<td>-1.32</td>
<td>87.86</td>
<td>.191</td>
<td>-.18</td>
</tr>
<tr>
<td>Counseling/psychotherapy (i.e., “talk therapy”)</td>
<td>6.23 (2.15)</td>
<td>5.79 (2.44)</td>
<td>1.56</td>
<td>444</td>
<td>.120</td>
<td>.19</td>
</tr>
<tr>
<td>Medication for a psychological condition (such as depression or anxiety)</td>
<td>5.69 (2.29)</td>
<td>5.60 (2.68)</td>
<td>.260</td>
<td>88.723</td>
<td>.796</td>
<td>.04</td>
</tr>
<tr>
<td>Medical treatment for a non-psychological disease or illness</td>
<td>5.47 (2.41)</td>
<td>5.74 (2.61)</td>
<td>-0.849</td>
<td>444</td>
<td>.396</td>
<td>-.11</td>
</tr>
</tbody>
</table>

Our hypotheses that older adults would attribute more prevented suicides to the following protectants: family, and religious beliefs than younger adults was not supported. Also our hypotheses that younger adults would attribute more prevented suicides to friends, counseling, and medical care than older adults was also not supported.

Results on the agreement measure for protectants (See Table 12) showed significant age differences between younger and older adults on three of the eight
protective factors. Older adults significantly higher mean scores indicated that older adults agreed more than younger adults with the decision to not die by suicide if the following protectants were present: participation in religious activities, \( (M_y = 4.05, SD = 1.24; M_o = 4.38, SD = 1.34, t(443) = -1.98, p = .048, d = -.26) \), having financial resources, \( (M_y = 3.69, SD = 1.19; M_o = 4.14, SD = 1.25, t(444) = -2.92, p = .004, d = -.37) \), and medical treatment for non-psychological disease, \( (M_y = 4.06, SD = 1.16; M_o = 4.41, SD = 1.10, t(444) = -2.35, p = .019, d = -.31) \).

Table 12

*Age Differences On Agreement with Not Dying by Suicide due to Protectant*

<table>
<thead>
<tr>
<th>Participants</th>
<th>Younger N=376*</th>
<th>Older N=70*</th>
<th>t</th>
<th>df</th>
<th>P (2-tailed)</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in religious activities</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.05 (1.24)</td>
<td>4.38 (1.34)</td>
<td>-1.98</td>
<td>443</td>
<td>.048</td>
<td>-.26</td>
</tr>
<tr>
<td>Having good family relationships</td>
<td>5.22 (.93)</td>
<td>5.14 (1.00)</td>
<td>.616</td>
<td>444</td>
<td>.538</td>
<td>.08</td>
</tr>
<tr>
<td>Having close friends</td>
<td>5.07 (.90)</td>
<td>4.86 (1.03)</td>
<td>1.72</td>
<td>444</td>
<td>.087</td>
<td>.22</td>
</tr>
<tr>
<td>Having Social engagement/activities</td>
<td>4.72 (1.00)</td>
<td>4.50 (1.19)</td>
<td>1.63</td>
<td>444</td>
<td>.105</td>
<td>.20</td>
</tr>
<tr>
<td>Having financial resources</td>
<td>3.69 (1.19)</td>
<td>4.14 (1.25)</td>
<td>-2.92</td>
<td>444</td>
<td>.004</td>
<td>-.37</td>
</tr>
<tr>
<td>Counseling/psychotherapy (i.e., “talk therapy”)</td>
<td>4.40 (1.05)</td>
<td>4.53 (.97)</td>
<td>-.98</td>
<td>444</td>
<td>.327</td>
<td>-.12</td>
</tr>
<tr>
<td>Medication for a psychological condition (such as depression or anxiety)</td>
<td>4.25 (1.12)</td>
<td>4.49 (1.07)</td>
<td>-1.64</td>
<td>443</td>
<td>.101</td>
<td>-.22</td>
</tr>
<tr>
<td>Medical treatment for a non-psychological disease or illness</td>
<td>4.06 (1.16)</td>
<td>4.41 (1.10)</td>
<td>-2.35</td>
<td>444</td>
<td>.019</td>
<td>-.31</td>
</tr>
</tbody>
</table>

One of the factors trended toward significance and yielded a meaningful effect size indicating that young adults agreed more than older adults with the decision to not
die by suicide if having close friends, \((M_y = 5.07, SD = .90; M_o = 4.86, SD = 1.03, t(444) = 1.72, p = .087, d = .22)\), was the protective factor.

Younger and older adults’ mean scores did not differ significantly on the remaining four protectants: having close family relationships, \((M_y = 5.22, SD = .93; M_o = 5.14, SD = 1.00, t(444) = .616, p = .269, d = .08)\), social engagement, \((M_y = 4.72, SD = 1.00; M_o = 4.50, SD = 1.19, t(444) = 1.63, p = .053, d = .20)\), counseling, \((M_y = 4.40, SD = 1.05; M_o = 4.53, SD = .97, t(444) = -98, p = .164, d = -.12)\), and medication for psychological conditions \((M_y = 4.25, SD = 1.12; M_o = 4.49, SD = 1.07, t(443) = -1.64, p = .101, d = -.22)\).

Our hypothesis that older adults would agree with the decision to not suicide given that religious beliefs was the protectant more than younger adults was supported, however our hypothesis that older adults would agree with the decision to not suicide given that having close family relationships was the protectant more than younger adults was not supported. Our hypotheses that younger adults would agree with the decision to not suicide given that friends, and medical care were the protectants more than older adults was supported however our hypothesis that younger adults would agree with the decision to not suicide given counseling was the protectant was not supported.

Much of the interest in suicide research centers on whether suicidality can be predicted. Although there were no formal hypotheses, additional analyses were run to see if highly correlated measures were also predictive of suicidal ideation (GSIS total score). As previously reported, acceptability of late-life suicide, agreement with age stereotyping, and age distancing were found to be significantly, positively, correlated with the GSIS total score for the full sample (See Table 2) as well as the older adults (See
Table 3) and younger adults (See Table 4) sub-samples. A multiple linear regression (See Table 13) was calculated to predict the GSIS total score based on agreement with late-life suicide, age distancing, and agreement with age stereotyping. Using the enter method it was found that agreement with late-life suicide, age distancing and agreement with age stereotyping mean scores explained a significant amount of the variance in the GSIS total score \(F(3,442) = 40.09, p < .001\), with an R2 of .21 and R2Adjusted = .21. The analysis shows that agreement with late-life suicide (Beta = .26, \(t(442) = 5.75, p < .001\)), age distancing (Beta = .22, \(t(442) = 4.25, p < .001\)) and agreement with age stereotyping (Beta = .14, \(t(442) = 2.61, p = .009\)) have significant positive regression weights and thus predicted GSIS total scores.

Table 13

Results of the Multiple Regression Analyses

<table>
<thead>
<tr>
<th></th>
<th>(t)</th>
<th>(p)</th>
<th>(\beta)</th>
<th>(F)</th>
<th>df</th>
<th>(R^2)</th>
<th>Adj. (R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Model</td>
<td></td>
<td></td>
<td></td>
<td>40.09**</td>
<td>3, 442</td>
<td>.214</td>
<td>.209</td>
</tr>
<tr>
<td>Agreement with Protectants</td>
<td>5.75</td>
<td>.000</td>
<td>.256</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreement with Age Stereotyping</td>
<td>2.61</td>
<td>.009</td>
<td>.136</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age Distancing</td>
<td>4.25</td>
<td>.000</td>
<td>.218</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The dependent variable was the Geriatric Suicidal Ideation Total Score
CHAPTER IV

DISCUSSION

The aims of the present study were to examine the attitudes associated with late-life suicidality to understand the subjective perspectives on aging and late-life suicide and how they may differ for older and younger adults. We explored the relationships between attitudes on age stereotypes, age distancing, and late-life suicidality, including precipitants and protectants.

We predicted that for all the participants, regardless of age, overall acceptability of late-life suicide would be associated with a) higher scores on Agreement with Age Stereotyping; b) higher scores on the Geriatric Suicidal Ideation Scale total score; and c) lower scores on the Reasons for Living Inventory total score. Results indicated, as we expected, that participants who agreed more with late-life suicide also agreed with negative age stereotypes, had higher suicidal ideation, and less reasons for living, suggesting that the cultural scripts around late-life suicide are associated with negative cultural scripts on aging. Through cultural-scripts-of-suicide theory (Canetto, 1997, 2008, Canetto & Lester, 1998) we understand that suicidality and whether it is sanctioned is defined by cultural scripts. Our findings, that the acceptability of late-life suicide was associated with negative attitudes about aging and suicidal ideation, suggest that the general apathy toward older adult suicide is consistent with negative attitudes toward aging that are prevalent in the US.
Due to the dearth of research on older adults’ attitudes on late-life suicide it was an important focus of this study to explore the attitudes of the older adults in our sample on aging and late-life suicide. We predicted that for older adults the acceptability of late-life suicide would be associated with increased Age Distancing. We also predicted that for older adults higher scores on Agreement with Age Stereotyping would be associated with a) higher scores on the Geriatric Suicidal Ideation Scale total score; b) lower scores on the Reasons for Living Inventory total score; and c) higher scores on Age Distancing total score. Support for the hypothesized relationships was mixed. Results supported our expectations that as older adults agreed more with late-life suicide the more they engaged in distancing themselves from their perceived older adults group and furthermore that older adults who agreed more with negative age stereotypes had higher suicidal ideation, and engaged in more age distancing. However, our results suggest that there was no meaningful relationship between agreement with age stereotyping and reasons for living. This may suggest that for older adults the internalized cultural scripts around age stereotypes are not impacted by reasons for living, particularly given that meaningful relationships between acceptability of late-life suicide and reasons for living, as well as between age distancing and reasons for living emerged from the results. The implication of these findings may be that for older adults expected reasons for living may not be effective as protective factors (Segal et al., 2012) if their suicidality is deeply rooted in negative age stereotypes.

Another aim of this study was to explore how younger and older adults may differ on their perceptions on suicides risks, and protective factors, and to connect this study to the existing body of literature, we also explored age differences in attitudes toward aging
and late-life suicide. We predicted that older adults would indicate severe/terminal illness, death of a first-degree relative, and burdensomeness as more likely to lead to suicide, attribute more suicide deaths than younger adults and as more acceptable reasons for suicide than younger adults. We also predicted that younger adults would indicate family discord, financial trouble, and ending of relationship with intimate partner/spouse as more likely to lead to suicide, attribute more suicide deaths than younger adults and as more acceptable reasons for suicide than older adults. Support for the hypothesized age differences on precipitants was mixed.

Consistent with the literature, that older adults viewed late-life suicide due to terminal illness as more reasonable, courageous, and permissible (Winterrowd, Canetto, & Benoit, 2017), our results supported our hypothesis that older adults would agree with the decision to suicide if severe/terminal illness was the precipitating factor more than younger adults. However, our hypotheses that older adults would find severe/terminal illness, more likely to lead to suicide, and cause more suicide deaths than younger adults were not supported. Suicide for sick older adults is sanctioned in US culture (Winterrowd, Canetto, & Benoit, 2017). It is possible that age differences did not emerge because younger and older adults hold similar cultural scripts on the likeliness of severe/terminal illness to cause late-life suicide and the number of suicide deaths that precipitant may cause. This similarity in cultural scripts may also be true for the precipitant burdensomeness, particularly given that burdensomeness has emerged as a prominent risk factor in recent suicide research (Stanley, Hom, Rogers, Hagan & Joiner, 2015). Our hypotheses that older adults over younger adults would find death of a first-degree relative, and burdensomeness as more likely to lead to suicide, cause more suicide
deaths and agree more with the decision to die by suicide if those were the precipitants were not supported.

Our hypotheses, that younger adults would attribute family discord, and ending of relationship with intimate partner/spouse as more likely to lead to suicide, cause more suicide deaths and agree more with the decision to die by suicide if those were the precipitants than older adults, were supported. Also, our hypotheses that younger adults would attribute financial trouble, as more likely to lead to suicide, and cause more suicide deaths were supported. However, results did not support our hypothesis that younger adults would agree more than older adults with the decision to suicide if financial trouble was the precipitant. It may that be that age cohort differences in the attribution of importance to precipitants of suicide are impacted by differences in life goals/agendas such that younger adults who are driven by forming novel relationships (Carstensen, Isaacowitz, & Charles, 1999) may perceive social losses as more concerning than older adults. Furthermore, younger adults in college, who may already manage financial difficulties and may have high expectations for their future earning potential, may not find financial trouble as concerning as older adults who may have restricted income and limited opportunities to increase their revenue.

In regards to protective factors, we predicted that a) older adults would attribute the following protectants: having close family, participation in religious activities, and personal beliefs as more likely, more acceptable, and attribute more prevented suicide deaths than younger adults; and b) younger adults would attribute the following protectants having close friends, counseling, and medical care as more likely, more
acceptable, and attribute more prevented suicide deaths than older adults. Support for the hypothesized age differences on protectants was mixed.

Our hypothesis that older adults would agree with the decision to not suicide given that religious beliefs/participation in religious activities was the protectant more than younger adults was supported. Also, our hypotheses that younger adults would agree with the decision to not suicide given that close friends, and medical care were the protectants more than older adults was supported. That older adults agreed with religious activity as a protectant more than younger adults and younger adults agreed with social support as a protectant more than older adults is consistent with the literature (Winterrowd, Canetto, & Benoit, 2017).

Our hypotheses that older adults would attribute the following protectants: having close family relationships, and religious beliefs as more likely to prevent suicide and would attribute more prevented suicides than younger adults were not supported. In addition, our hypotheses that younger adults would attribute having close friends, counseling, and medical care as more likely to prevent suicide and would attribute more prevented suicides than older adults were also not supported. Finally, our hypotheses that older adults more than younger adults would agree with the decision to not suicide given that having close family relationships was the protectant and that younger adults would agree with the decision to not suicide given counseling was the protectant were also not supported. The lack of variance among the younger adult and older adult groups suggest that the cultural scripts on these protective factors may be similar across the age cohorts.

Beyond our hypotheses, several notable patterns emerged from the results. First, that for precipitants in general, younger adults mean scores were higher than their older
peers, such that younger adults attributed more suicide deaths, found precipitants more likely causes of suicide and agreed with the decision to suicide based on the precipitant more than older adults. However, this pattern did not hold for protectants, such that for protectants older adults had higher scores. For example, older adults agreed with the decision to not suicide based on more factors than younger adults. Second, across both age groups, attribution of importance for precipitants and protectants differed across concepts of likeliness to cause or prevent suicide, number of suicide deaths attributed to or prevented by, and agreement with the decision whether or not to die by suicide. The implications of these findings suggest that the attitudes toward risk factors in general may be stronger among younger adults than older adults whereas the attitudes toward protective factors may be stronger among older adults than younger adults. Moreover, the differences between likeliness, expected outcomes, and agreement suggest that the cultural scripts attributed to others’ decision to suicide may not be attributed to ones’ own decision on whether or not to die by suicide. The findings suggest that the cultural script nuances for older adults in general and suicidal older adults in particular are not well understood.

Finally, often the general aim of suicidological research is to determine whether suicidality can be predicted. To that end, because acceptability of late-life suicide, agreement with age stereotyping, and age distancing were found to be correlated with the GSIS total score, the factors were explored for whether they predicted suicidal ideation (GSIS total score). Results suggest that agreement with late-life suicide, age distancing and agreement with age stereotyping mean scores positively predicted suicidal ideation.
Future research will be necessary to better understand how these factors individually impact suicidality.

Several limitations of the present study should be noted. First, our hypotheses included generalized concepts about religious and personal beliefs in which participants were encouraged to answer opened ended questions for these items. Due to a lack of response, these concepts were unable to be considered in the analyses. It may be useful to ask about generalized personal beliefs and religious beliefs as direct items to extend beyond precipitants and protectants included in the study. A second limitation was combining social isolation and loneliness into the same construct. Additional studies should look into teasing out the differences between social isolation and loneliness as separate precipitants. A third limitation was that the list of precipitants did not include challenges that older adults often mention in clinical settings such as loss of function or disability, loss meaningful activities, and pain. Although these precipitants may be embedded in broader factors such as health or wellbeing, the results of the study highlight the need of future research to tease out other factors that are important to older adults, particular those adults in clinical or long-term care settings. Another limitation was the sample which had a relatively small sample of older adults as well as the sample of young adults who were all college students currently enrolled in psychology classes. Finally, another limitation was the lack of diversity among the participants. Most of the sample was comprised of European American, non-Hispanic, Christian, educated, adults, which may not be generalizable to the larger population. Future replications of the study would benefit from making these adjustments.
This study identifies the relationship between negative attitudes on aging and late-life suicide and highlights the unique perspective of older adults on the precipitants and protectants of late-life suicide. Because negative attitudes on aging are associated with negative health outcomes disability in older adults (Moser, Spagnoli, & Santos-Eggimann, 2011), and because suicide due to health problems is culturally sanctioned, particularly by older adults (Winterrowd, Canetto, & Benoit, 2017), future studies should explore the interaction between negative attitudes on aging and health outcomes, and its impact on late-life suicide. Moreover, this study highlights the need for better understanding of the perspectives of older adults on the risk factors and protective factors of late-life suicide as well as what may mitigate the impact of negative attitudes on aging.
REFERENCES


Conwell, Y. (2001). Suicide in later life: A review and recommendations for prevention. Suicide and Life-Threatening Behavior, 31, 32-47. doi:10.1521/suli.31.1.5.32.24221


APPENDIX

University of Colorado
Colorado Springs
Institutional Review Board (IRB) for the Protection of Human Subjects

Date: 2/23/2017

IRB PROTOCOL NO.: 15-168
Protocol Title: Adult Attitudes on Aging and Perception of Late-Life Suicide
Principal Investigator: Kadija N. Williams, MA
Faculty Advisor If Applicable: Daniel L. Segal, PhD
Application: Renewal(2)
Type of Review: Expedited 8
Risk Level: No more than Minimal Risk
Renewal Review Level (If changed from original approval) If Applicable: N/A No Change
This Protocol involves: a Vulnerable Population: N/A (No Vulnerable Population)
Expires: 22 March 2018
*Note, if exempt: If there are no major changes in the research, protocol does not require review on a continuing basis by the IRB. In addition, the protocol may match more than one review category not listed.
Externally funded: ☒ No ☐ Yes
OSP #: Sponsor:

Thank you for submitting your Request for IRB Review for renewal of an approved protocol. The protocol identified above has been reviewed according to the policies of this institution and the provisions of applicable federal regulations. The review category is noted above, along with the expiration date, if applicable.

Once human participant research has been approved, it is the Principal Investigator’s (PI) responsibility to report any changes in research activity related to the project:
- The PI must submit all protocol, recruitment, advertising, and consent form amendments/ revisions to the IRB for approval.
- If you are a student, please note that it is required to include the IRB approval letter to the library when you submit the dissertation/thesis.
- The PI must promptly inform the IRB of all unanticipated serious adverse events (within 24 hours). All unanticipated adverse events must be reported to the IRB within 1 week (see IRB 3864 IRB REV). Failure to comply with these federally mandated responsibilities may result in suspension or termination of the project.
- Renew study with the IRB at least 10 business days prior to expiration.
- Notify the IRB when the study is complete.

If you have any questions, please contact Research Integrity Specialist in the Office of Sponsored Programs and Research Integrity at 719-255-3503 or irb@uccs.edu

Thank you for your concern about human subject protection issues, and good luck with your research.

Sincerely yours,

Melissa J. Benton
Melissa Benton, PhD
IRB Committee Member

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