

THESIS

ATTITUDES AND BELIEFS ABOUT OLDER ADULT SUICIDE AND ABOUT OLDER
ADULTS WHO DIED BY SUICIDE, AND THE ROLE OF AGEISM

Submitted by

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ABSTRACT

ATTITUDES AND BELIEFS ABOUT OLDER ADULT SUICIDE AND ABOUT OLDER ADULTS WHO DIED BY SUICIDE, AND THE ROLE OF AGEISM

Background: In most countries, individuals age 65 years or older have the highest suicide rates (World Health Organization, 2018). However, suicide is not uniformly common among all older adults (Canetto, 1992, 2017). For example, in the United States (U.S.), European-descent men age 65 years or older have high suicide rates while African-descent women age 65 years or older have low suicide rates (Canetto, 2021). These patterns suggest cultural influences on older adults' suicide. Studies indicate that cultural factors like suicide attitudes and beliefs predict suicide. For example, a U.S. longitudinal study found that suicide acceptability predicted subsequent suicide in the general population—in some cases, by a twofold increase (Phillips & Luth, 2020). Most studies of attitudes and beliefs about older adults' suicide have been conducted in Anglophone-countries. This study explored attitudes and beliefs about older adults' decision to suicide and about older adults who died by suicide in a non-Anglophone country, Israel. Specifically, this study examined Israeli attitudes and beliefs about older adult suicide/female and male suicide, attitudes and beliefs about older adults who died by suicide/females and males who died by suicide, and the role of ageism in these attitudes and beliefs. **Methods:** Attitudes and beliefs about older adult suicide (as compared to younger adult suicide) as well as female and male suicide, and attitudes and beliefs about older adults who died by suicide (as compared to younger adults who died by suicide) as well as females and males

who died by suicide, depending on one of five precipitants (1. A Chronic Nonfatal Debilitating Physical Illness; 2. A Terminal Debilitating Physical Illness; 3. An Achievement Failure; 4. Widowhood; 5. Economic Hardship) were measured. A modified version of the *Suicide Attitude Vignette Experience* (Stillion et al., 1984) form A was used as the stimulus material. Participants were asked to evaluate the suicide using Deluty's (1988-1989a, 1988-1989b) 7-point scales of suicide acceptability, permissibility, and agreement, as well as Stillion et al.'s (1989) 5-point scale of sympathy for the suicide, expanded to seven points to match Deluty's scales. To assess attitudes and beliefs about the person who died by suicide, participants responded to a 7-point scale about how emotionally adjusted they thought the person who died by suicide was (Lewis & Sheppard, 1992, as modified by Dahlen & Canetto, 1996). In addition, respondents expressed their view about the seriousness of the suicidal intent of the person who died by suicide via a 7-point scale (Dahlen & Canetto, 1996). Lower scores on these 7-point scales indicated less acceptability, permissibility, agreement, emotional adjustment, and seriousness. Ageism was measured using the 6-point scale, Fraboni Scale of Ageism (FSA) (Fraboni et al., 1990), as revised by Bodner & Lazar (2008). Ageism was the average of the 21 FSA items scores, as done in a study by Gamliel and Levi-Belz (2016). Low scores on this 21-item measure indicated less ageism. The sample was 1,107 individuals: 551 older adults ages 61 to 91 ($M_{\text{age}} = 72.06$, $SD = 6.77$) (276 females and 275 males) and 556 younger adults ages 21 to 37 ($M_{\text{age}} = 25.82$, $SD = 3.94$) (285 females and 271 males). The older adult participants were recruited from community day centers and the younger adults from university campuses and workplaces. **Results:** The decision to suicide, across sex and age of the person who died by suicide and across suicide precipitants, was rated as follows: acceptability ($M = 5.656$, $SD = 1.779$), permissibility ($M = 5.466$, $SD = 1.912$), agreement ($M = 5.826$, $SD = 1.661$), sympathy ($M = 5.337$, $SD = 2.104$). The

person who died by suicide, across sex and age of the person who died by suicide and across suicide precipitants, was rated as follows: emotionally adjusted ($M = 5.535$, $SD = 1.712$), seriousness of suicide intent ($M = 2.681$, $SD = 2.035$). Older adult suicide was rated as relatively less acceptable, less permissible, less agreeable, and as eliciting less sympathy than younger adult suicide. Younger adult suicide following achievement failure was considered most permissible and acceptable and received the most agreement and sympathy across precipitant conditions. Younger adults whose suicide followed an achievement failure were rated as more serious in suicide intent than older adults whose suicide followed a terminal debilitating physical illness. However, older adults whose suicide followed a terminal debilitating physical illness were rated as more serious in suicide intent than younger adults whose suicide followed a terminal debilitating physical illness. Male suicide was considered more permissible than female suicide. Female and male suicide was evaluated similarly in terms of acceptability and sympathy. No difference was found between the perceived emotional adjustment of females and males who died by suicide, although males who died by suicide were believed to be less serious in their suicide intent than females who died by suicide. No differences were found in suicide acceptability and permissibility, agreement with, or sympathy for older adult suicide across respondents' characteristics such as their sex or age. The average ageism score, independent of respondent characteristics (i.e., their sex and age) was $M = 2.966$, ($SD = 0.683$). Younger adults ($M = 2.891$, $SD = 0.716$) held less ageist beliefs than older adults ($M = 3.044$, $SD = 0.629$). Ageism did not predict acceptability, permissibility, agreement, or sympathy with the older adults' decision to suicide, nor the perceived emotional adjustment or the perceived seriousness of suicide intent of the older adult who died by suicide. **Discussion:** This study's findings on attitudes and beliefs about older adult suicide, and about older adult suicide precipitated by a

terminal debilitating physical illness, did not align with the findings of similar U.S. studies. A main finding of this study was that older adult suicide was rated as less acceptable, less permissible, and less agreeable than younger adult suicide. Older adult suicide following a terminal illness received the lowest amount of sympathy when compared to other conditions involving both older and younger adults, except for younger adult suicide following a terminal debilitating illness. Further, older adults whose suicide occurred after a terminal debilitating physical illness were rated as more serious in their suicide intent when compared to younger adults whose suicide followed a terminal debilitating physical illness, but not to younger adults whose suicide followed an achievement failure. In fact, younger adults whose suicide followed an achievement failure were rated as most serious in their intent relative to all other precipitant conditions. This study's findings on attitudes and beliefs about persons who died by suicide were both similar to, and different from U.S. findings about attitudes and beliefs about persons who died by suicide. This study found no difference in attitudes and beliefs about older adult suicide depending on respondent characteristics (i.e., their sex and age), in contrast to some U.S. studies. Furthermore, in this study ageism was not a predictor of, or a moderator for attitudes and beliefs about suicide, in contrast to a prior Israeli study's findings that ageism moderates suicide attitudes and beliefs. Possible explanations for the divergent findings across studies include differences in national context and culture, and method issues. Recommendations for future research include using a broader range of attitude and belief questions, examining ageism via qualitative methods, and studying suicide attitudes and beliefs across a diversity of national and cultural contexts.

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INTRODUCTION

In most countries, individuals age 65 years or older have the highest suicide rates (World Health Organization, 2018). However, suicide is not uniformly common among older adults (Canetto, 1992, 2017). For example, in the United States (U.S.), European-descent men ages 65 years or older have very high suicide rates while African descent women ages 65 years or older have very low rates (see Figures 1 and 2, from Canetto (2021)).

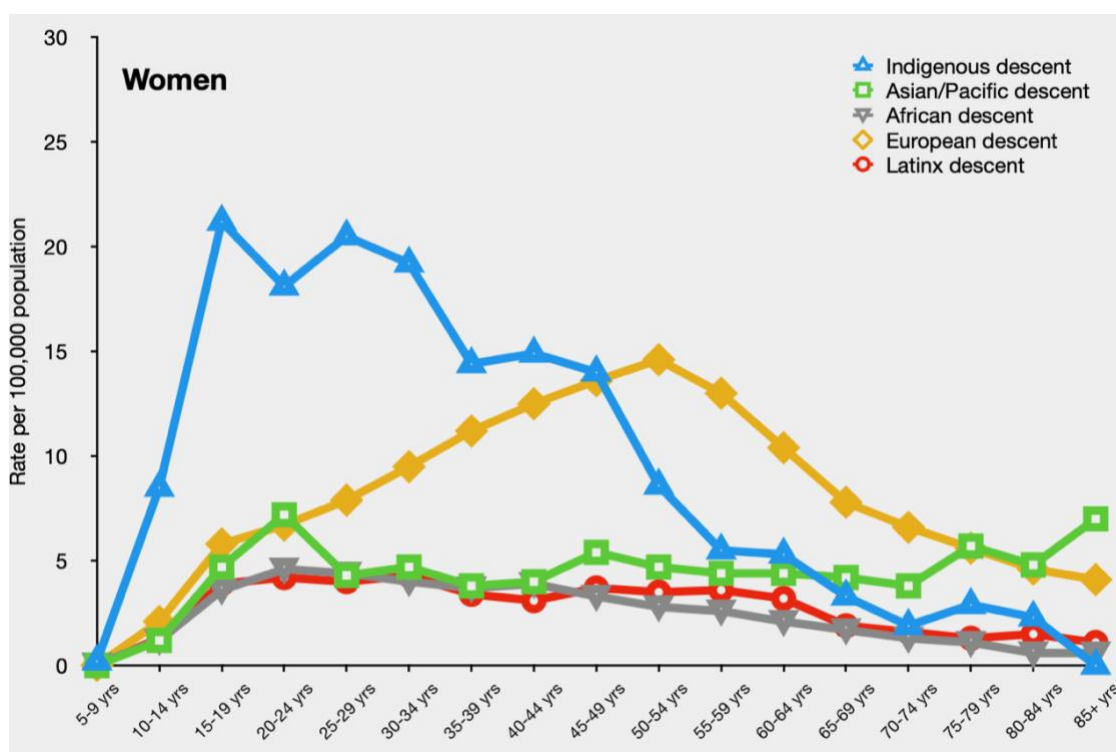


Figure 1

U.S. Women's Suicide Rates by Ethnicity and Age, 2010-2019

Note. Data is from WONDER Online Database, Underlying Causes of Death 1999-2019, (<http://wonder.cdc.gov/ucd-icd10.html>). Figure is from Canetto (2021).

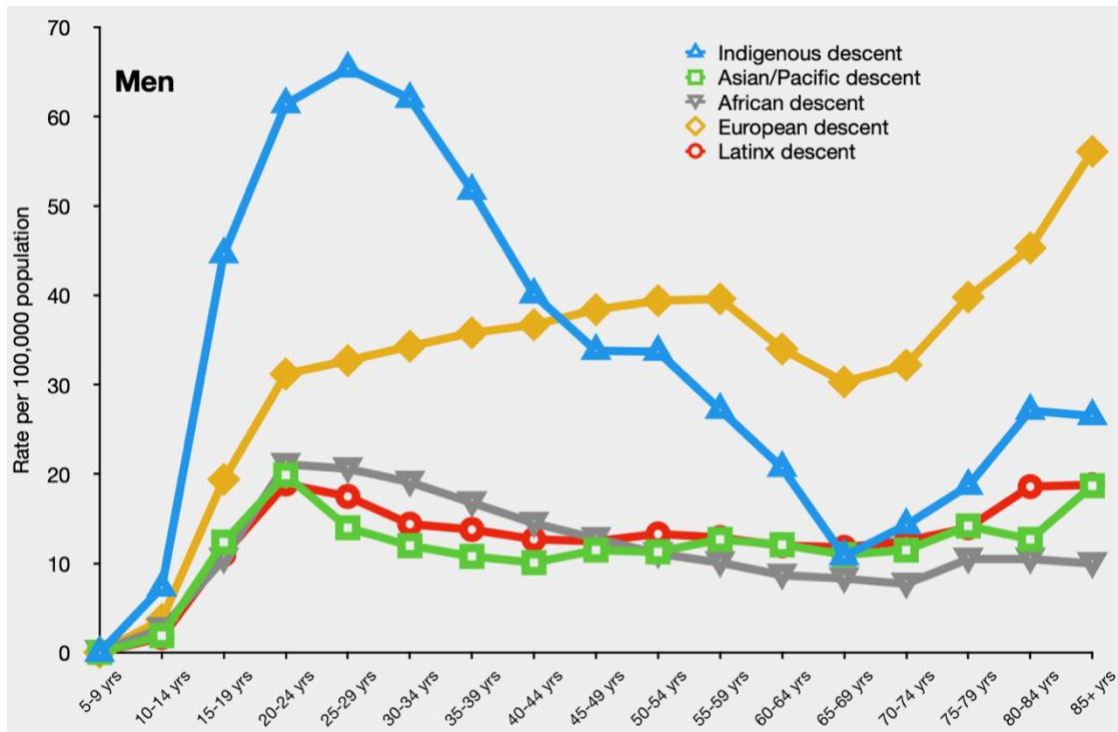


Figure 2

U.S. Men's Suicide Rates by Ethnicity and Age, 2010-2019

Note. Data is from WONDER Online Database, Underlying Causes of Death 1999-2019, (<http://wonder.cdc.gov/ucd-icd10.html>). Figure is from Canetto (2021).

Aging adversities are not an explanation for the high suicide mortality of U.S. European-descent older adult men. In the U.S., European-descent older adult men experience the least severe aging-hardships (e.g., poverty), relative to ethnic-minority older adult men, and relative to older adult women, across ethnicities (Canetto, 1992, 2017).

Depression is also not a plausible explanation. In the U.S., older adult women experience higher or similar rates of depression as older adult men (Canetto, 2017).

The variability in older adult suicide mortality within and between countries shows that suicide is not an inevitable occurrence in late life. It also suggests that cultural factors play a role in older adult suicide (Canetto, 1992, 2017). The question then is: how might culture enable the suicide of some (e.g., men of European descent) older adults? Another important question is: what theory is most congruent with a cultural approach to older adult suicide?

Studies indicate that cultural factors like suicide attitudes and beliefs predict suicide. For example, a U.S. longitudinal study found that suicide acceptability predicted subsequent suicide in the general population—in some cases, by a twofold increase (Phillips & Luth, 2020). Most studies of attitudes and beliefs¹ about older adult suicide have been conducted in Anglophone-countries with high suicide mortality.

This study explored attitudes and beliefs about the suicide of older adult women and men, and attitudes and beliefs about older adult women and men who died by suicide, in a non-Anglophone country with low suicide mortality, Israel. Separate attention to the suicide decision and to the person who died by suicide is important because past research (e.g., Canetto et al., 2021; Eskin et al., 2016) found these two domains (decision and person) to be distinct in terms of attitudes and beliefs. This study also explored the role of ageism in attitudes and beliefs toward the suicide decision of older adult women and men, and attitudes and beliefs about older adult women and men who died by suicide. In terms of framework, this study builds on suicide scripts theory and evidence.

Suicide scripts theory and evidence across the lifespan

Cultural scripts of suicide-theory (Canetto, 1992-1993, 1997, 2015, 2021; Canetto & Lester, 1998; Canetto & Sakinofsky, 1998) provides a framework and method for making sense of the variability in older adult suicide. Cultural scripts of suicide-theory starts from the observation that in each culture there are unique and specific conditions when suicidal behavior is expected, and even relatively permissible. Suicide scripts comprise the scenario of the suicidal

¹ Some studies are described as studies of suicide attitudes; others as studies of suicide beliefs; and yet others as studies of suicide attitudes and beliefs. We will adopt here the language used in the different studies though what is called belief and what is called attitude is not consistent across studies. This language variability relates to ambiguities, in the social sciences, in definitions of belief and attitude.

act (including the suicidal person, the method, the emotions and motives expressed by or attributed to the suicidal individual), as well as its precipitants and outcome. Suicide scripts also include the meanings of the suicidal act, that is, the beliefs about the causes of the suicidal behavior, the attitudes about the suicidal behavior, including its permissibility, as well as the response (of family, friends, and communities) that the suicidal act engenders. Cultural scripts of suicide-theory postulates that these scripts organize, provide significance, and influence the frequency and dynamics of individual suicides. The theory is also that individuals draw upon these scripts in choosing their course of action and in giving their action some public legitimacy. In other words, the theory predicts a connection between scripts and actual behavior, for example, between societal acceptance of suicidal behavior and high suicidality rates—especially among those from whom suicidality is expected.

Studies using a diversity of methods have generated evidence relevant to suicide-scripts theory. These studies have documented the suicide scripts of different sociodemographic groups within cultures/countries (e.g., Canetto et al., 2021, in Italy; Eisenwort et al., 2014, in Austria; Meng, 2002, in China; Molloy & McLaren, 2004, in Australia; Rasool & Payton, 2014 in Iraq; Stice & Canetto, 2008, in the U.S.; Widger, 2012, in Sri Lanka; Winterrowd et al., 2017, in the U.S.). Most studies have focused on scripts of younger adult or adult suicide, not on scripts of older adult suicide; and most have included younger adult and/or adult respondents, not older adult respondents.

A growing number of quantitative studies conducted in a diversity of countries have generated evidence on the association of aspects of suicide scripts (e.g., suicide attitudes and beliefs) and actual suicidality (e.g., Joe et al., 2007, in the U.S.; Kleiman, 2015, in the U.S.; Li et al., 2009, in China; Phillips & Luth, 2018, in the U.S.; Stein et al., 1998, in Israel). For example,

Phillips and Luth's (2018) U.S. longitudinal study found that suicide acceptability, an aspect of the suicide script, predicted suicide in the U.S. general population—in some cases, by a twofold increase. Most of these studies focused on adults across the lifespan or on adolescents, not on older adults.

This study examined cultural scripts of older adult suicide, specifically, the attitudes and beliefs aspect of the older adult suicide script. This study explored attitudes and beliefs about suicide as well as attitudes and beliefs about the person who died by suicide.

An innovation of this study is that it focused on suicide attitudes and beliefs in Israel, a non-Anglophone country with low overall suicide mortality, and high older adult suicide mortality. Most studies of older adult suicide attitudes and beliefs have been conducted in Anglophone-countries with high suicide rates. In the past two decades, Israel's overall suicide rates have ranged between 4.45-6.76 per 100,000 (World Health Organization, 2021). In Israel suicide rates increase with age in both women and men. Individuals age 75 years and older have the highest suicide rate in the country: 4.3 per 100,000 for women and 23.2 per 100,000 for men (Haklai, 2011, cited in Shelef et al., 2014, p. 849).

Building on theory (e.g., Canetto, 1997) and past findings, this study included measures of factors often associated with suicide attitudes and beliefs, that is, suicide precipitant (e.g., Winterrowd et al., 2017), and whether the person who died by suicide is female or male (Deluty 1988-1989b; Stillion et al., 1989), as well as respondent characteristics like respondents' sex and age (Lewis et al., 1993-1994; Winterrowd et al., 2017) and age (Winterrowd et al., 2017).

Scripts of Older Adult Suicide Studies

Research on the attitudes and beliefs aspects of the older-adult suicide script has primarily been conducted in European or European-descent majority, high-income countries with high suicide mortality, and using quantitative methods.

Attitudes and Beliefs about Older Adult Suicide

Two U.S. studies found that the suicide of an older adult was viewed as more acceptable than the suicide of a younger person (Deluty, 1988-1989b; Segal et al., 2004). The earlier of the two studies (Deluty, 1988-1989b) was conducted in a predominantly European-American community. This study's sample comprised 780 undergraduate students, the majority being between the ages of 18 and 25. Participants were given vignettes describing a suicide by an older and a middle-aged adult under different life circumstances. The suicide decision of older adults was viewed as "wiser", "stronger", "braver", and more "right" than the suicide decision of the 45-year-old. The more recent study (Segal et al., 2004) involved younger adult undergraduate students ($M_{age} = 20.6$) and older adult individuals ($M_{age} = 75.1$) living in senior housing facilities. The majority of the sample (82.3%) was European-American. The participants completed the Suicide Opinion Questionnaire (SOQ), a 100-item measure of suicide attitudes. In this study older adults' suicidal behavior was viewed as more normal and acceptable than younger adults' suicidal behavior.

Attitudes and beliefs about suicide have been found to vary depending on the circumstances of the suicide. Droogas and colleagues (1982–1983), in their sample of 80 undergraduate students ages 19-57, found that respondents regarded physical deterioration and pain as a more justifiable motive for suicide than mental deterioration or pain. Another study using data from the National Opinion Research Center's 1982 national probability sample of the U.S. population (N= 1380, age 18 years and older) found that 45.9% of respondents approved of

suicide in the case of an “incurable disease” when compared to only 14.3% who approved of suicide when the person was “tired of living and ready to die” (Sawyer & Sobel, 1987). In a U.S. study conducted with a predominantly European-American sample of younger adults ($N = 455$, the majority being between the ages of 18-25) a physical illness or a disability were viewed as the most legitimate reasons for suicide (Deluty, 1988-1989a). Further, a vignette study ($N = 180$, $M_{\text{age}} = 21.7$, 63.3% European American) found that suicide by a 35-year-old man was viewed as more permissible when in response to a terminal illness (Range & Martin, 1990). Additionally, a study found that the 115 clinical psychologists, 81 psychiatrists, and 167 oncologists who filled out a suicide attitudes questionnaire, rated suicide in the face of physical illness as more acceptable than suicide due to chronic psychiatric illness (Hammond & Deluty, 1992). A vignette study ($N = 54$, age range = 65-94, 65% African American; 35% European American) also found that the nonfatal suicidal behavior of older adults with serious health problems (i.e., cancer, stroke, and a disfiguring skin disease) received more empathy and agreement than the nonfatal suicidal behavior of older adults facing other adversities (Parker et al., 1997). Another U.S. study of suicide attitudes found that in their sample of 405 adolescent to young-adult respondents ($M_{\text{age}} = 19$), suicidal behavior precipitated by a physical illness was perceived as “less foolish”, “less selfish”, “less weak”, “less passive”, “less cowardly”, and “less wrong” than suicidal behavior precipitated by the end of a relationship or an academic failure. This study also found that a suicidal act in the context of physical illness was viewed as more acceptable and more deserving of sympathy than suicidal behavior in response to other precipitants (Dahlen & Canetto, 2002). Finally, a U.S. vignette study of mostly female (60%) and mostly European descent (74%) respondents ($N = 500$, $M_{\text{age}} = 36$, range = 18-75) found that suicide was viewed as more acceptable when the person expressing suicidal ideation had a disability than when they did

not have a disability, and among respondents with and without disabilities. More negative attitudes about disability predicted greater suicide acceptability regardless of the suicidal persons' disability status (Lund et al., 2016).

U.S. studies of attitudes and beliefs about older adult suicide with predominantly European-American samples have also found that older adult suicide under conditions of physical illness is viewed as plausible, and even rational behavior (Stice & Canetto, 2008; Winterrowd et al., 2017). In the study by Stice and Canetto (2008) 300 adolescent to young-adult participants ($M_{age} = 19$) were given a fictional older adult suicide obituary and were asked to choose from a list the stressful events that they believed was the most likely precipitants of the suicide. They were also asked to estimate the proportion of older adult suicides due to the indicated precipitants. In this study, physical illness was believed to account for the greatest proportion of suicides. Physical illness was also perceived to be the most likely precipitant of older adult suicide. Building on the design of the study by Stice and Canetto (2008), the study by Winterrowd and colleagues (2017) involved both older adults ($N = 225$, $M_{age} = 70.95$) and younger adults ($N = 281$, $M_{age} = 19.04$) as participants. In this study, older adult suicide was most often assumed to be a response to health problems. Also, older adult suicide was believed to be a rational, courageous, and admissible response to physical illness.

Attitudes and beliefs about older adult suicide have often been found to vary depending on respondent characteristics, including respondents' sex and age, though not consistently. Deluty (1988-1989b) found that among predominantly European-American students ($N = 780$, majority between the ages of 18-25), men were less opposed to suicide than women. Similarly, Saywer and Sobal (1987) found that in their study men were less opposed to suicide than women. Parker and colleagues (1997) observed that men had less empathy for suicide than

women; Dahlen and Canetto (2002) found that men had less negative evaluations of the decision to engage in suicidal behavior and were more likely to agree with and accept the suicidal behavior than women; and Winterrowd and colleagues (2017) observed that men viewed older adult suicide with less sympathy than women. Age is also often a factor in suicide attitudes and beliefs. In Segal and colleagues' study (2004), older adults ($M_{age} = 75.1$) expressed more positive attitudes about suicide, viewing it as more acceptable and normal than younger adults ($M_{age} = 20.6$). Similarly, in Winterrowd and colleagues' study (2017) older adults ($M_{age} = 70.95$) expressed more favorable attitudes and beliefs about older adult suicide than younger adults ($M_{age} = 19.04$). For example, they rated older adult suicide as more courageous.

Attitudes and Beliefs about Older Adults who Died by Suicide

In the U.S., suicide is perceived as a masculine act (Canetto, 2017; Linehan, 1973). The U.S.-English language of suicide itself is gendered (Canetto, 1992, 1997, 2021; Canetto & Lester, 1995). In U.S. English, common adjectives to describe a suicide are *successful* and *completed*. Expressions like *successful* and *completed* suicide imply that dying as a result of a suicidal act (a behavior that in the U.S. is more common in men) is a form of success. What in the U.S. is women's most common suicidal behavior is often called, in U.S. English, a *failed* attempt (Canetto, 1992, 1997, 2021; Canetto & Lester, 1995). U.S. language and attitudes mirror and reinforce each other. A U.S. study of predominantly European-American adolescents and younger adults found that male suicide was rated as "less foolish", "less wrong", "more powerful", and "more permissible" than female suicide, independent of context (Deluty, 1988-1989b). In another U.S. study men who died by suicide were perceived as more well-adjusted than women who killed themselves, independent of precipitant (Lewis & Sheppard, 1992).

A study (Stillion et al., 1989) explored, via the Suicide-Attitudes-Vignette-Experiences (SAVE-L), how attitudes and beliefs about nonfatal suicidal acts may vary depending on the suicidal persons' sex and age, in a sample of U.S. older adults ($N = 40$, $M_{\text{age}} = 71.8$, 20 females and 20 males) and adolescents and younger adults ($N = 40$, $M_{\text{age}} = 19.5$, 20 females and 20 males). This study found that older adult women received the least amount of sympathy while young women received the most sympathy. The respondents expressed the greatest agreement with the suicidal behavior of older adult women, a finding that is in contrast with the findings by Deluty's (1988-1989b). Stillion et al. (1989) hypothesized the reason for this finding being a devaluing of older adult women in the United States. By contrast, Deluty (1988-1989b) conjectured that suicide by women is seen as more "abnormal" because suicide is considered a male act. Finally, in Stillion and colleagues' (1989) study, suicidal older adult women received the least amount of empathy, except by older adult female respondents, who expressed the greatest empathy for older adult suicidal women.

The perceived seriousness of the suicidal act is an important aspect of attitudes and beliefs about suicidal individuals. The general belief is that older adults in general, and older adult men in particular, are most "serious" about suicide—which usually means that older adult men are assumed to have the most intent to die, and also to be least impulsive in their suicidal behavior (see Canetto, 2017, for a critical review of these beliefs). A U.S. study found that the perceived seriousness of the suicidal act varied by suicide precipitant. Individuals who became suicidal following an illness were viewed as most serious about their intent to kill themselves (Dahlen & Canetto, 1996).

Ageism

Ageism has been defined as stereotyping and discriminating attitudes, beliefs and behavior in relation to older adults (Butler, 1980). Ageist ways includes offensive humor, negative attitudes and beliefs about older adults, and avoidance of contact with older adults (Bodner et al., 2012; McCann & Giles, 2002).

Ageism has health costs. A U.S. study calculated the health costs of ageism among individuals age 60 years or older for one year by combining analyses of ageism and comprehensive health care spending for the eight most-expensive health conditions. The cost of ageism for one year was \$63 billion—one of every seven dollars spent on the eight health conditions (Levy et al., 2020).

Ageism varies by culture. For example, a study found that East Asian (e.g., Chinese) younger adults reported more avoidance of older adults than younger adults from European-majority countries (e.g., U.S. younger adults), despite or perhaps because of the higher levels of obligation toward older adults expected of younger adults in East Asian countries (Giles et al., 2002). Further, in a study among 154 native Israeli citizens (86 Jewish, $M_{\text{age}} = 23.56$, $SD_{\text{age}} = 1.40$, and 68 Muslim Arabs, $M_{\text{age}} = 21.95$, $SD_{\text{age}} = 2.66$), less ageist attitudes (including “tolerance” towards older adults, viewing older adults as contributing to society, and less avoidant behaviors) were exhibited among Muslim Arabs. Muslim Arabs also expressed less fear of growing old and fewer concerns over their physical appearance in older age (Bergman et al., 2013).

Ageism has also been shown to vary depending on respondents’ demographic characteristics, including their sex and age. For example, a U.S. study of younger adults recruited from a southeastern university (Sample A, $N = 353$, $M_{\text{age}} = 22.6$, age range = 17-58, Sample B, $N = 201$, $M_{\text{age}} = 22.15$, age range = 17-54) found that men and younger individuals had higher

ageism scores on the Fraboni Scale of Ageism (FSA) than women and older individuals (Rupp et al., 2005). A study of 955 Israelis of three age groups (ages 18-39, 40-67, 68-98) found that men exhibited more avoidance and stereotypical attitudes towards older adults than women. In the Israeli study, middle-aged individuals had the highest ageism score with regard to their perception of older adults' contribution to society, while younger adults held the most avoidant attitudes towards older adults (Bodner et al., 2012). Two studies explored ageism in relation to older adult suicide. The first study investigated whether rates of older adult suicide differ depending on ageism in 26 European countries (Yur'yev et al., 2010). Specifically, this study compared patterns of suicide and ageism in Eastern and Western European countries—using the WHO European Mortality Database for the suicide data and a European Social Survey for attitudes about older adults. The Eastern European countries included 12 countries (Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Poland, Romania, the Russian Federation, Slovakia, Slovenia, and Ukraine) and the Western European countries included 13 European countries (Belgium, Denmark, Finland, France, Germany, Greece, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK) as well as Israel. Older-adult suicide mortality was higher in countries that were higher in ageism—specifically in countries where older adults had lower status, were less recognized for their economic contribution, were less likely to be thought of as having high moral standards and were less likely to be the recipient of friendly feelings and admiration. In Eastern European countries older adults' status and economic contributions were seen as less important than in Western European countries. Furthermore, older adults were regarded with less admiration and viewed them as less friendly in Eastern than in Western European countries.

One study was found that investigated whether attitudes and beliefs about older adult suicide differ as a function of ageism (Gamliel & Levi-Belz, 2016). This study, which was conducted in Israel, examined the relationship between ageism, measured via the FSA (Fraboni et al., 1990), and attitudes about suicide using a modification of Renberg and Jacobsson's (2003) scale, in a sample of undergraduate students ($N = 113$, $M_{\text{age}} = 23.9$, $SD_{\text{age}} = 2.3$, 90% female). High-ageism participants expressed a greater acceptance of, and more permissive attitudes about older adult suicide than low-ageism participants. This study also evaluated the effect of suicide framing (e.g., framing of the suicide in a more positive or more negative way) on suicide attitudes in responses to a suicide vignette (e.g., suicide scenarios of an older adult in one of two frames: a relatively positive frame (*not prolonging life*) or a relatively negative frame (*ending life*)) among adults recruited from a shopping center ($N = 266$, $M_{\text{age}} = 36.6$, $SD_{\text{age}} = 14.6$, 58% female). Ageism moderated how suicide was evaluated but depending on frame. High-ageism participants had more permissive attitudes about older adult suicide than low-ageism participants when suicide was framed in the positive frame of suicide as a way to not prolong life. This finding highlights the importance of the ways in which suicide is framed in terms of suicide attitudes and beliefs, including suicide acceptance.

Current Study

This study examined attitudes and beliefs about the suicide decision of older adults as well as the suicide decision of females and males², in addition to attitudes and beliefs about older adults who died by suicide as well as females and males who died by suicide, among younger and older adults in Israel. Building on suicide script theory (Canetto, 1997, 2015, 2017) and findings (e.g., Stice & Canetto, 2008; Winterrowd et al., 2017), this study assessed whether older

² Sex in this study was measured as female/male. In this paper, woman and female, and man and male, were used as synonyms.

adult suicide was rated as more acceptable, permissible, agreeable, and elicited more sympathy than younger adult suicide, and whether suicide attitudes and beliefs varied by the sex and age of the person who died by suicide, the suicide precipitant, and the respondents' sex and age. This study also assessed perceptions of the emotional adjustment of individuals who died by suicide as well as perceptions of the seriousness of their suicidal act, also depending on the sex and age of the person who died by suicide, the suicide precipitants, as well as respondents' sex and age. Finally, this study assessed the role of ageism in attitudes and beliefs about the suicide decision and in attitudes and beliefs about the person who died by suicide.

This Israel-based study expanded the cultural scope of research on attitudes and beliefs about older adult suicide and older adults who died by suicide because most studies of attitudes and beliefs about older adult suicide have been conducted in the United States. This study also extended the research on ageism and attitudes about older adult suicide and older adults who died by suicide because it included both older adult and younger adult respondents. Finally, this study built on, and expanded the design of the one study (also conducted in Israel) that examined the relation between ageism and attitudes and beliefs about older adult suicide (Gamliel & Levi-Belz, 2016). A limitation of Gamliel and Levi-Belz' study is that its sample did not include older adults while the current study did. Another limitation of Gamliel and Levi-Belz' study is that it did not measure how suicide attitudes and beliefs as well as ageism may vary depending on the demographic characteristics of the person who died by suicide (e.g., their age) or the respondents' sex or age, while the current study did.

Attitudes and Beliefs about Older Adult Suicide: Hypotheses

Based on past U.S. findings that older adult suicide is rated as “wiser”, “stronger”, “braver” and more “right” than suicide by individuals of any other age (Deluty, 1988-1989b), as

well as U.S. findings that suicide of an older adult is viewed as more normal and acceptable than suicide of a younger adult (Segal et al., 2004), it was hypothesized that older adult suicide would be perceived as more acceptable and permissible, and also that it would receive more agreement than younger adults' suicide.

It was also hypothesized that older adult suicide following a terminal debilitating physical illness would be rated as most acceptable and permissible and would receive the most agreement—based on U.S. findings that physical illness and disability are perceived as the most legitimate (Deluty, 1988-1989a), justifiable (Droogas et al., 1982-1983), acceptable (Hammond & Deluty, 1992), permissible (Range & Martin, 1990), approved of (Sawyer & Sobel, 1987), plausible and rational (Stice & Canetto, 2008; Winterrowd et al., 2017), courageous and admissible (Winterrowd et al., 2017) precipitant of suicide. Studies also found that suicidal behavior in response to physical illness is most deserving of sympathy (Dahlen & Canetto, 2002) and empathy (Parker et al., 1997). In this study no hypothesis was made regarding sympathy due to the equivocal meanings of sympathy. Sympathy could indicate suicide acceptability as well as suicide unacceptability.

Attitudes and Beliefs about Older Adults who Died by Suicide: Hypotheses

It was hypothesized that older adults whose suicide followed a terminal debilitating physical illness would be believed to have been the most serious in their suicide intent—consistent with a prior study that found that individuals were rated as most serious about killing themselves when the suicidal act was precipitated by a serious illness (Dahlen & Canetto, 1996).

Attitudes and Beliefs about Suicide and about the Person who Died by Suicide, Depending on the Sex of the Deceased by Suicide: Hypotheses

The findings of studies on attitudes and beliefs about female and male suicide have been mixed. Some studies found that male suicide was described as “less foolish”, “less wrong”, “more powerful”, and “more permissible” than female suicide (Deluty, 1988-1989b) and others reported that female suicide received the most agreement but also the least amount of sympathy and empathy (Stillion et al., 1989). In this study it was hypothesized that male suicide would be rated as more acceptable and permissible than female suicide because of theory (e.g., Canetto, 1992, 1997, 2017, 2021; Canetto & Lester, 1995) and a preponderance of evidence (e.g., Deluty, 1988-1989b; Linehan, 1973) suggest this hypothesis. No hypothesis was made regarding sympathy due to the equivocal meanings of sympathy in terms of suicide evaluations. Furthermore, it was hypothesized that females who die of suicide would be considered more emotionally maladjusted based on a U.S. study that found that women who killed themselves were perceived as less well-adjusted than men who killed themselves (Lewis & Sheppard, 1992). It was also hypothesized that females who died by suicide would be considered less serious in their suicidal intent than males who suicide, based on theory (e.g., Canetto, 1997).

*Attitudes and Beliefs about Older Adult Suicide Depending on Respondents’ Sex and Age:
Hypotheses*

It was hypothesized that attitudes and beliefs about older adult suicide would vary depending on respondents’ sex and age. Past studies found that men are less negative in their view of suicide, and more likely to agree with, and accept a suicide than women (Deluty 1988-1989b; Sawyer & Sobal, 1987). Therefore, in this study it was hypothesized that males would view older adult suicide as more acceptable and permissible and would agree with the suicide more than females. In one U.S. study men expressed less sympathy toward older adult suicide than women (Winterrowd et al., 2017), and in another U.S. study men expressed less empathy

for older adult suicide than women (Parker et al., 1997). No hypothesis was made regarding sympathy depending on respondents' sex due to the equivocal meanings of sympathy in terms of suicide evaluations. Finally, based on past studies that older adults tend to express less negative attitudes about suicide and express less negative attitudes about older adult suicide, viewing suicide and older adult suicide as more acceptable and more courageous than younger adult individuals (Segal et al., 2004; Winterrowd et al., 2017), it was hypothesized that older adults would view older adult suicide as more acceptable and permissible than younger adults. Further, a study found that older adult women showed the highest amount of empathy toward suicidal older women (Stillion et al., 1989). In this study no hypothesis was made regarding sympathy depending on respondents' age due to the equivocal meanings of sympathy in terms of suicide evaluations.

Ageism: Hypotheses

The role of ageism was examined as it pertained to attitudes about older adult suicide and older adults who died by suicide. Based on Gamliel and Levi-Belz's (2016) finding that high-ageism participants had greater acceptance of, and more permissive attitudes about older adult suicide, it was hypothesized that high-ageism individuals would perceive older adult suicide as more acceptable and permissible, and also that they would have more agreement with older adult suicide than individuals lower in ageism. No hypothesis was made regarding ageism and sympathy due to the equivocal meanings of sympathy in terms of suicide evaluations. Based on theory (Canetto, 2017), it was also hypothesized that high-ageism individuals would view older adults who died by suicide as less emotionally maladjusted and more serious in their suicide intent. Lastly, ageism as a moderator was examined. It was hypothesized that ageism would have

a moderating effect on attitudes and beliefs about suicide and on attitudes and beliefs about individuals who died by suicide.

METHODS

Participants

The study's sample comprised 1,107 individuals: 551 older adults ages 61 to 91 ($M_{\text{age}} = 72.06$, $SD = 6.77$; 276 females and 275 males) and 556 younger adults ages 21 to 37 ($M_{\text{age}} = 25.82$, $SD = 3.94$, 285 females and 271 males). Participants' economic status was measured on a 3-point self-report scale, with 1 assigned to lower-than-average income, 2 to average income, and 3 to higher-than-average income. The older adult's mean economic-status level was 1.57 ($SD = .78$) while the younger adult's mean economic-status level was 1.32 ($SD = .52$). Older adults had on average 13.01 ($SD = 3.4$) years of education. Less than half of the older adults (43.56%) were born in Israel, the rest having immigrated from the former Soviet Union (10.53%) or from Western European countries. All older-adult immigrants had been in Israel for at least the prior five years. Younger adults average amount of education years was 13.46 years ($SD = 1.85$). Most younger adults were born in Israel (89%); the rest had immigrated from the former Soviet Union (5.6%), the U.S. (1.4%), or a Western European country. A minority ($N = 91$; 12.16%) (2.53% older adults; 5.69% younger adults; 4.70% females; 3.52% males) of participants reported having had serious suicidal ideation ($N = 75$; 6.78%) (2.26% older adults; 4.52% younger adults; 3.79% females; 2.98% males) and/or had engaged in suicidal behaviors ($N = 41$; 3.70%) (1.08% older adults; 2.62% younger adults; 2.53% females; 1.17% males) in their lifetime.

Procedures

Community-dwelling older adults were recruited from day centers located in middle-class neighborhoods. The older adults who expressed interest in the study completed the informed

consent and then received the survey. Some older adult participants received assistance in completing the study due to vision problems. In this case, some questions were read out loud by the research assistants. The older adults took 25-35 minutes to complete the survey.

The younger adults were recruited from Israeli university campuses and from a diversity of workplaces. The younger adults who volunteered to participate signed an informed consent form and completed the survey in the presence of a research assistant. They took on average 15-20 minutes to complete the questionnaire.

The ethics review committee of Israel's Bar Ilan University approved the study protocol. U.S. Colorado State University Institutional Review Board reviewed the Israeli protocol and approved it for secondary data analysis.

Instruments

Stimulus Material: Suicide Precipitant

A modified version of the *Suicide Attitude Vignette Experience (SAVE)* (Stillion et al., 1984) form A, was used as the stimulus material (see Appendix). The modification involved making explicit that the protagonist died by suicide. The vignettes varied in terms of the sex (female/male) and age (70 years old/20 years old) of the person who died by suicide and in terms of suicide precipitant (1. Chronic Nonfatal Debilitating Physical Illness; 2. Terminal Debilitating Physical Illness; 3. Achievement Failure; 4. Widowhood; 5. Economic Hardship). Economic hardship and widowhood vignettes were added due to their potential relevance as precipitants of older adult suicide (Bennet & Collins, 2001; and Erlangsen et al., 2004, respectively). Vignettes varying by three features (i.e., age and sex of the person who died by suicide and suicide precipitant) were randomly assigned to participants ($z > .05$). Each participant received one vignette.

Attitudes and Beliefs about Suicide

Participants were asked to evaluate the suicide decision using Deluty's (1988-1989a, 1988-1989b) 7-point scales of suicide acceptability (1 = Not at all, 7 = A lot), permissibility (1 = Not at all, 7 = A lot), and agreement (1 = Not at all, 7 = A lot), and Stillion et al.'s (1989) 5-point scale of sympathy for the suicide, expanded to seven points to match Deluty's scales (1 = Not at all, 7 = A lot), as done in Cato and Canetto's study (2003) (see Appendix).

Attitudes and Beliefs about the Person who Died by Suicide

To assess attitudes and beliefs about the person who died by suicide, participants indicated on a 7-point scale, how emotionally adjusted they thought the person who died by suicide was (1 = Maladjusted, 7 = Well-adjusted). The scale is Dahlen and Canetto's (1996) modification of a scale by Lewis and Sheppard (1992) (see Appendix). In addition, respondents were asked to express their views about the seriousness of the suicidal intent of the person who died by suicide. Perceived seriousness of suicidal intent was assessed on a 7-point scale (1 = Hardly serious at all, 7 = Very serious), as done in prior studies (Canetto et al., 2021; Dahlen & Canetto, 1996).

Fraboni Scale of Ageism (FSA)

The Fraboni Scale of Ageism (FSA) (Fraboni et al., 1990) (see Appendix), as revised by Bodner and Lazar (2008), was the scale used to assess ageism. The original 29-item FSA was designed to measure Allport's (1958) levels of ageist prejudice. In Fraboni's original study of 100 high school students in Canada, the FSA showed adequate internal-consistency reliability—a Cronbach's alpha coefficient of .86 (Fraboni et al., 1990). Based on research conducted in Israel (Bodner & Lazar, 2008) the scale items were reduced to 22 items. Seven items were removed because they were not meaningful in Israel. For example, the item "There should be special clubs

set aside within sports facilities so that old people can compete at their own level” was removed because sports clubs are not common in Israel. An additional item, “Most old people should not be trusted to take care of infants” was removed after analyses because it loaded negatively onto the ageism factor. FSA items 14, 16, 17, 18, 20, and 21 were reverse coded. The ageism index was calculated as the average of the 21 responses from the ageism questionnaire, as done by Gamliel and Levi-Belz with their 24-item FSA (2016). The internal reliability of their 24-item ageism scale was 0.82. In this study the reliability (Cronbach’s alpha) of the 21-item ageism scale was .80.

Sociodemographic questionnaire

Sociodemographic (e.g., age, sex, country of birth, marital status, education, economic status) information was collected. In addition, information about history of suicidal ideation and behavior was obtained via questions adapted from the Suicide Ideation Questionnaire (SIQ) (Ingram & Ellis, 1995). The four SIQ questions assessed suicidal ideation and suicidal behavior in the past year and lifetime.³ These questions were slightly modified to avoid stigmatizing and gender-stereotyping language, like “attempted” suicide (Canetto, 2021).

Data Analyses

The hypotheses concerned the interaction between predictor (i.e., deceased by suicides’ sex and age, precipitant of suicide, and respondents’ sex and age) and outcome variables for attitudes and beliefs about the suicide decision (i.e., acceptability, permissibility, agreement, and

³ Ingram and Ellis’ (1995) SIQ distinguished between past suicide attempts, contemplating suicide, and suicide thoughts. They also had an item that individuals could endorse if they never considered suicide.

sympathy) and about the person who died by suicide (i.e., emotional adjustment and seriousness of suicide intent) as well as the moderator (ageism).

Previous studies that used similar scales to measure attitudes about suicide and about the person who died by suicide often conducted a principal-components factor analysis with varimax rotation (Cato & Canetto, 2003; Deluty, 1988-1989a, 1988-1989b) or an analysis of variance (Dahlen & Canetto, 1996; Stillion et al., 1989) on the scales. This study included four attitudes/beliefs measures about the suicide decision and two beliefs measures about the person who died by suicide. Further, not all measures were included in each hypothesis and in each model. Therefore, each attitude/belief outcome was analyzed in separate models. Simple linear regressions were conducted on the proposed hypotheses. A moderation analysis was conducted using the mean from the 21 FSA items, as done by Gamliel & Levi-Belz (2016). A separate moderation model was conducted for each hypothesis. All models with main effects were re-run with the moderator, and then all other models were analyzed with ageism as a moderator. Significant interaction effects within each moderation model were determined by a p value less than .05 for the interaction term. For significant interaction terms, simple slopes analyses were performed. Descriptive statistics were calculated for participants that endorsed a history of suicidality. Three participants who did not report their age were removed from the data set.

Normality was calculated for all outcome variables using the Shapiro-Wilk (1965) normality test. The outcome variables (i.e., acceptability, permissibility, agreement, sympathy, emotional adjustment, and seriousness of suicide intent) were not normally distributed according to p values $<.05$. No outliers were present in the variables as no variables exceeded + or – three standard deviations from the mean. Skewness was then tested. All outcome variables were negatively skewed, meaning their values were concentrated toward the higher values of the

scales (acceptability = -1.103, permissibility = -0.947, agreement = -1.310, sympathy = -0.853, emotional adjustment = -1.082) except for seriousness of suicidal intent which was positively skewed (seriousness = 0.962). The highest values (7) on the suicide decision meant that suicide was the most acceptable, the most permissible, the most agreeable, and elicited the most sympathy. The highest values (7) regarding the person who died by suicide meant the suicidal person was viewed as emotionally well-adjusted and very serious in their suicidal intent. Log and square root transformations were performed on all outcome variables. These transformations did not affect the distribution of the variables according to p values < .05 on Shapiro-Wilk (1965) normality test. Studies indicate that regression is robust to violations of normality, particularly when sample size is large (Li et al., 2012), therefore analyses were conducted. Lastly, the correlations of the six outcome variables were calculated. The outcome variables for attitudes and beliefs about suicide (i.e., acceptability, permissibility, agreement, and sympathy) were strongly correlated. The outcome variables for attitudes and beliefs about the person who died by suicide (i.e., emotional adjustment and seriousness of suicide intent) were not correlated (see Table 1).

Table 1

Means, Standard Deviations, and Correlations with Confidence Intervals for the Outcome Variables.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Acceptability	5.66	1.74					
2. Permissibility	5.47	1.81	.79**				
			[.76, .81]				
3. Agreement	5.83	1.70	.79**	.71**			
			[.77, .81]	[.68, .74]			
4. Sympathy	5.34	1.99	.73**	.67**	.74**		
			[.70, .76]	[.64, .70]	[.71, .77]		
5. Emotional Adjustment	5.53	1.62	.29**	.32**	.33**	.25**	
			[.23, .34]	[.26, .37]	[.28, .38]	[.20, .31]	
6. Seriousness of Suicide Intent	2.68	1.92	.15**	.15**	.14**	.20**	-.02

[.09, .21] [.09, .21] [.09, .20] [.14, .25] [-.08, .04]

Note. Values in square brackets indicate the 95% confidence interval.

The confidence interval is the range in which the population correlation is most likely to be found.

* $p < .05$. ** $p < .01$.

RESULTS

Attitudes and Beliefs about Older Adult Suicide

The decision to suicide, across sex and age of the person who died by suicide and across suicide precipitants, was rated as the following: acceptability ($M = 5.656, SD = 1.778$), permissibility ($M = 5.466, SD = 1.912$), agreement ($M = 5.826, SD = 1.661$), sympathy ($M = 5.337, SD = 2.104$). The older adults' decision to suicide was rated as relatively less acceptable ($M = 5.443, SD = 1.905$) than the younger adults' decision to suicide ($M = 5.849, SD = 1.627$), ($\beta = -0.117, t(1106) = -3.907, p < .001$), less permissible ($M = 5.221, SD = 2.025$) than the younger adults' decision to suicide ($M = 5.688, SD = 1.764$), ($\beta = -0.129, t(1103) = -4.304, p < .001$), and less worthy of agreement ($M = 5.545, SD = 1.881$) than the younger adults' decision to suicide ($M = 6.081, SD = 1.404$), ($\beta = -0.158, t(1105) = -5.310, p < .001$) (see Table 5).

Older adult suicide following a terminal debilitating physical illness was not rated as more acceptable, permissible, or deserving of agreement than older adult suicide following other situations. Older adult suicide following a terminal illness was viewed as least acceptable ($M = 4.702, SD = 2.329$), permissible ($M = 4.767, SD = 2.303$), and agreeable ($M = 4.835, SD = 2.318$) when compared to the other conditions. Older adult suicide following a terminal illness also received the lowest amount of sympathy ($M = 4.510, SD = 2.495$) when compared to other conditions involving both older and younger adults, except to younger adult suicide following a terminal illness ($M = 4.474, SD = 2.405$).

Younger adult suicide following achievement failure received the most agreement ($M = 6.449, SD = 0.898$) and sympathy ($M = 6.322, SD = 1.111$) and was evaluated as most acceptable ($M = 6.686, SD = 0.571$) and permissible ($M = 6.239, SD = 1.180$) across all conditions (see

Table 2). Younger adult suicide following achievement failure received more agreement ($\beta = 1.851, t(1105) = 8.666, p < .0001$) and sympathy ($\beta = 1.812, t(1106) = 7.147, p < .0001$), and was rated as more permissible ($\beta = 1.472, t(1103) = 6.296, p < .0001$) and acceptable ($\beta = 1.747, t(1106) = 7.944, p < .0001$) than older adult suicide following terminal debilitating physical illness (see Tables 2 and 3).

Attitudes and Beliefs about Older Adults who Died by Suicide

The person who died by suicide, across sex and age of the person who died by suicide and across suicide precipitants, was rated as the following: emotionally adjusted ($M = 5.535, SD = 1.712$), seriousness of suicide intent ($M = 2.681, SD = 2.035$). Younger adults whose suicide followed a terminal debilitating physical illness were rated as significantly less serious in their suicide intent ($M = 2.155, SD = 1.431$), when compared to older adults whose suicide followed a terminal debilitating physical illness ($M = 2.683, SD = 1.971$), ($\beta = -0.528, t(1102) = -2.057, p = .040$). A younger adult whose suicide followed an achievement failure was rated as significantly more serious in suicide intent than the suicide of an older adult in response to a terminal debilitating physical illness ($M = 2.683, SD = 1.971$), ($\beta = 0.642, t(1102) = 2.508, p = .012$) (see Tables 2 and 4).

Table 2*Attitudes and Beliefs about the Suicide Decision and the Person who Died by Suicide Depending on Suicide*

Outcomes	Precipitant of Suicide									
	Terminal Debilitating Physical Illness		Chronic Nonfatal Debilitating Physical Illness		Widowhood		Achievement Failure		Economic Hardship	
	Older Adults	Younger Adults	Older Adults	Younger Adults	Older Adults	Younger Adults	Older Adults	Younger Adults	Older Adults	Younger Adults
Acceptability	<i>M</i> = 4.702	<i>M</i> = 4.802	<i>M</i> = 5.202	<i>M</i> = 5.504	<i>M</i> = 5.371	<i>M</i> = 6.228	<i>M</i> = 6.204	<i>M</i> = 6.449	<i>M</i> = 5.705	<i>M</i> = 6.259
	<i>SD</i> = 2.329	<i>SD</i> = 2.248	<i>SD</i> = 1.803	<i>SD</i> = 1.835	<i>SD</i> = 1.874	<i>SD</i> = 1.182	<i>SD</i> = 1.240	<i>SD</i> = 0.898	<i>SD</i> = 1.792	<i>SD</i> = 1.199
	<i>M</i> = 4.767	<i>M</i> = 4.724	<i>M</i> = 4.846	<i>M</i> = 5.359	<i>M</i> = 5.019	<i>M</i> = 6.105	<i>M</i> = 5.880	<i>M</i> = 6.239	<i>M</i> = 5.567	<i>M</i> = 6.017
Permissibility	<i>SD</i> = 2.303	<i>SD</i> = 2.348	<i>SD</i> = 2.072	<i>SD</i> = 1.890	<i>SD</i> = 2.096	<i>SD</i> = 1.293	<i>SD</i> = 1.499	<i>SD</i> = 1.180	<i>SD</i> = 1.860	<i>SD</i> = 1.484
	<i>M</i> = 4.835	<i>M</i> = 5.164	<i>M</i> = 5.135	<i>M</i> = 5.692	<i>M</i> = 5.438	<i>M</i> = 6.307	<i>M</i> = 6.407	<i>M</i> = 6.686	<i>M</i> = 5.867	<i>M</i> = 6.552
	<i>SD</i> = 2.318	<i>SD</i> = 2.039	<i>SD</i> = 2.018	<i>SD</i> = 1.723	<i>SD</i> = 1.935	<i>SD</i> = 1.124	<i>SD</i> = 0.965	<i>SD</i> = 0.571	<i>SD</i> = 1.621	<i>SD</i> = 0.802
Agreement	<i>M</i> = 4.510	<i>M</i> = 4.474	<i>M</i> = 4.635	<i>M</i> = 5.299	<i>M</i> = 4.848	<i>M</i> = 5.640	<i>M</i> = 5.880	<i>M</i> = 6.322	<i>M</i> = 5.276	<i>M</i> = 6.302
	<i>SD</i> = 2.495	<i>SD</i> = 2.405	<i>SD</i> = 2.170	<i>SD</i> = 2.024	<i>SD</i> = 2.435	<i>SD</i> = 1.880	<i>SD</i> = 1.575	<i>SD</i> = 1.111	<i>SD</i> = 2.308	<i>SD</i> = 1.116
	<i>M</i> = 5.096	<i>M</i> = 5.087	<i>M</i> = 5.136	<i>M</i> = 5.282	<i>M</i> = 5.592	<i>M</i> = 5.895	<i>M</i> = 6.083	<i>M</i> = 5.821	<i>M</i> = 5.629	<i>M</i> = 5.696
Emotional Adjustment	<i>SD</i> = 2.183	<i>SD</i> = 1.808	<i>SD</i> = 1.793	<i>SD</i> = 1.759	<i>SD</i> = 1.556	<i>SD</i> = 1.495	<i>SD</i> = 1.245	<i>SD</i> = 1.521	<i>SD</i> = 1.693	<i>SD</i> = 1.652
	<i>M</i> = 2.683	<i>M</i> = 2.155	<i>M</i> = 2.519	<i>M</i> = 2.803	<i>M</i> = 2.442	<i>M</i> = 2.500	<i>M</i> = 3.047	<i>M</i> = 3.325	<i>M</i> = 2.838	<i>M</i> = 2.487
	<i>SD</i> = 1.971	<i>SD</i> = 1.431	<i>SD</i> = 1.808	<i>SD</i> = 1.829	<i>SD</i> = 1.929	<i>SD</i> = 2.030	<i>SD</i> = 2.288	<i>SD</i> = 2.490	<i>SD</i> = 2.200	<i>SD</i> = 2.026

Precipitant

Note. Table 2 displays means and standard deviations for both attitudes and beliefs about the suicide decision (acceptability, permissibility, agreement, sympathy) and the person who died by suicide (emotional adjustment, seriousness of suicide intent) across suicide precipitants (terminal debilitating physical illness, chronic nonfatal debilitating physical illness, widowhood, achievement failure, economic hardship).

Table 3*Attitudes and Beliefs about the Suicide Decision Depending on Suicide Precipitant (Regressions)*

Predictors	Acceptability			Permissibility			Agreement			Sympathy		
	<i>Estimate</i>	<i>CI</i>	<i>p</i>	<i>Estimate</i>	<i>CI</i>	<i>p</i>	<i>Estimate</i>	<i>CI</i>	<i>p</i>	<i>Estimate</i>	<i>CI</i>	<i>p</i>
(Intercept)	4.70	4.39 – 5.02	<0.001	4.77	4.43 – 5.10	<0.001	4.83	4.53 – 5.14	<0.001	4.51	4.15 – 4.87	<0.001
older chronic non deb illness	0.50	0.06 – 0.94	0.028	0.08	- 0.39 – 0.55	0.742	0.30	0.13 – 0.73	0.174	0.12	-0.39 – 0.64	0.633
older widow	0.67	0.23 – 1.11	0.003	0.25	- 0.22 – 0.72	0.294	0.60	0.17 – 1.03	0.006	0.34	- 0.17 – 0.85	0.195
older achieve failure	1.50	1.06 – 1.94	<0.001	1.11	0.64 – 1.58	<0.001	1.57	1.14 – 2.00	<0.001	1.37	0.86 – 1.88	<0.001
older economic hardship	1.00	0.56 – 1.45	<0.001	0.80	0.33 – 1.27	0.001	1.03	0.60 – 1.46	<0.001	0.77	0.25 – 1.28	0.003
younger terminal deb phy illness	0.10	0.33 – 0.53	0.651	-0.04	- 0.50 – 0.42	0.855	0.33	0.09 – 0.75	0.126	-0.04	- 0.54 – 0.46	0.889
younger widow	1.53	1.09 – 1.96	<0.001	1.34	0.88 – 1.80	<0.001	1.47	1.05 – 1.89	<0.001	1.13	0.63 – 1.63	<0.001

younger achieve failure	1.75	1.32 – 2.18	<0.001	1.47	1.01 – 1.93	<0.001	1.85	1.43 – 2.27	<0.001	1.81	1.31 – 2.31	<0.001
younger economic hardship	1.56	1.12 – 1.99	<0.001	1.25	0.79 – 1.71	<0.001	1.72	1.30 – 2.14	<0.001	1.79	1.29 – 2.29	<0.001
younger chronic non deb illness	0.80	0.37 – 1.23	<0.001	0.59	0.13 – 1.05	0.011	0.86	0.44 – 1.28	<0.001	0.79	0.29 – 1.29	0.002

Note. Table 3 displays four regressions with the same predictors and different outcome variables (Acceptability, Permissibility, Agreement, and Sympathy). The condition not included in this model, older adult terminal debilitating physical illness (older terminal deb phy illness), is the reference group for these regressions. The suicide precipitant conditions are: older adult chronic nonfatal debilitating physical illness (older chronic non deb illness), older adult widowhood (older widowhood), older adult achievement failure (older achieve failure), older adult economic hardship (older economic hardship), younger adult terminal debilitating physical illness (young terminal deb phy illness), younger adult widowhood (young widowhood), younger adult achievement failure (young achieve failure), younger adult economic hardship (young economic hardship), and younger adult chronic nonfatal debilitating physical illness (young chronic non deb illness).

Table 4

Attitudes and Beliefs about the Person who Died by Suicide Depending on Suicide Precipitant (Regressions)

<i>Predictors</i>	<i>Seriousness of Suicide Intent</i>		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>
(Intercept)	2.68	2.32 – 3.05	<0.001
older chronic non deb illness	-0.16	-0.68 – 0.35	0.535
older widow	-0.24	-0.76 – 0.28	0.362
older achieve failure	0.36	-0.15 – 0.88	0.164
older economic hardship	0.16	-0.36 – 0.67	0.554
younger terminal deb phy illness	-0.53	-1.03 – -0.02	0.040
younger widow	-0.18	-0.69 – 0.32	0.478
younger achieve failure	0.64	0.14 – 1.14	0.012
younger economic hardship	-0.20	-0.70 – 0.31	0.447
younger chronic non deb illness	0.12	-0.38 – 0.62	0.637

Note. Table 4 displays one regression with the same predictors and same outcome variable (Seriousness). Variable not included in this model, older adult terminal debilitating physical illness (older terminal deb phy illness), is the reference group for these regressions. The suicide precipitant categories are: older adult chronic nonfatal debilitating physical illness (older chronic non deb illness), older adult widowhood (older widowhood), older adult achievement failure (older achieve failure), older adult economic hardship (older economic hardship), younger adult terminal debilitating physical illness (young terminal deb phy illness), younger adult widowhood (young widowhood), younger adult achievement failure (young achieve failure), younger adult economic hardship (young economic hardship), and younger adult chronic nonfatal debilitating physical illness (young chronic non deb illness).

Attitudes and Beliefs about Suicide and about the Person who Died by Suicide, Depending on the Sex of the Deceased by Suicide

Males' suicide decision was rated as significantly more permissible ($M = 5.588$, $SD = 1.794$) than females' suicide decision ($M = 5.345$, $SD = 2.024$), ($\beta = 0.067$, $t(1103) = 2.230$, $p < .026$). Females' ($M = 5.651$, $SD = 1.787$) and males' ($M = 5.661$, $SD = 1.771$) suicide decision was evaluated similarly in terms of acceptability ($\beta = 0.003$, $t(1106) = 0.093$, $p = .926$). Females' ($M = 5.430$, $SD = 2.027$) and males' ($M = 5.244$, $SD = 2.179$) suicide decision was also evaluated similarly in terms of sympathy ($\beta = -0.187$, $t(1106) = -1.558$, $p = .119$). Females ($M = 5.467$, $SD = 1.790$) and males ($M = 5.602$, $SD = 1.634$) who died by suicide were perceived as equally emotionally adjusted ($\beta = 0.042$, $t(1100) = 1.381$, $p = .168$). However, males who died by suicide were rated as less serious ($M = 2.505$, $SD = 1.865$) in suicidal intent than females who died by suicide ($M = 2.858$, $SD = 2.188$), ($\beta = -0.092$, $t(1102) = -3.071$, $p = .002$) (see Table 5).

Attitudes and Beliefs about Older Adult Suicide Depending on Respondents' Sex and Age

Attitudes and beliefs about the older adult suicide decision were similar across respondent characteristics (i.e., their sex and age). No differences were found between females ($M = 5.371$, $SD = 1.960$) and males ($M = 5.517$, $SD = 1.850$) in terms of suicide acceptability ($\beta = 0.041$, $t(525) = 0.938$, $p = .348$), between females ($M = 5.151$, $SD = 2.031$) and males ($M = 5.293$, $SD = 2.019$) in terms of suicide permissibility ($\beta = 0.038$, $t(523) = 0.879$, $p = .380$), between females ($M = 5.496$, $SD = 1.890$) and males ($M = 5.595$, $SD = 1.869$) in terms of agreement with the suicide ($\beta = .027$, $t(524) = 0.623$, $p = .534$), or between females ($M = 4.974$, $SD = 2.330$) and males ($M = 5.100$, $SD = 2.242$) in terms of sympathy for older adults' suicide decision ($\beta = 0.127$, $t(525) = 0.693$, $p = .489$). Further, no differences were found between how older adults ($M = 5.315$, $SD = 2.015$) and younger adults ($M = 5.565$, $SD = 1.796$) viewed suicide

acceptability ($\beta = 0.070$, $t(525) = 1.602$, $p = .110$), how older adults ($M = 5.114$, $SD = 2.112$) and younger adults ($M = 5.323$, $SD = 1.942$) viewed suicide permissibility ($\beta = 0.057$, $t(523) = 1.294$, $p = .196$), or how older adults ($M = 5.140$, $SD = 2.272$) and younger adults ($M = 4.937$, $SD = 2.293$) responded in terms of sympathy for older adults' suicide decision ($\beta = -0.203$, $t(525) = -1.113$, $p = .266$) (see Table 5).

Table 5

Attitudes and Beliefs about the Suicide Decision and the Person who Died by Suicide Depending on Target and

Outcomes	Target Age		Target Sex		Respondent Age		Respondent Sex	
	Older Adults	Younger Adults	Females	Males	Older Adults	Younger Adults	Females	Males
Acceptability	$M = 5.443$ $SD = 1.905$	$M = 5.849$ $SD = 1.627$	$M = 5.651$ $SD = 1.787$	$M = 5.661$ $SD = 1.771$	$M = 5.315$ $SD = 2.015$	$M = 5.565$ $SD = 1.796$	$M = 5.371$ $SD = 1.960$	$M = 5.517$ $SD = 1.850$
Permissibility	$M = 5.221$ $SD = 2.025$	$M = 5.688$ $SD = 1.764$	$M = 5.345$ $SD = 2.024$	$M = 5.588$ $SD = 1.794$	$M = 5.114$ $SD = 2.112$	$M = 5.323$ $SD = 1.942$	$M = 5.151$ $SD = 2.031$	$M = 5.293$ $SD = 2.019$
Agreement	$M = 5.545$ $SD = 1.881$	$M = 6.081$ $SD = 1.404$	$M = 5.779$ $SD = 1.720$	$M = 5.874$ $SD = 1.602$	$M = 5.375$ $SD = 2.030$	$M = 5.706$ $SD = 1.726$	$M = 5.496$ $SD = 1.890$	$M = 5.595$ $SD = 1.869$
Sympathy	$M = 5.036$ $SD = 2.286$	$M = 5.609$ $SD = 1.887$	$M = 5.43$ $SD = 2.027$	$M = 5.244$ $SD = 2.179$	$M = 5.140$ $SD = 2.272$	$M = 4.937$ $SD = 2.293$	$M = 4.974$ $SD = 2.330$	$M = 5.100$ $SD = 2.242$
Emotional Adjustment	$M = 5.512$ $SD = 1.738$	$M = 5.555$ $SD = 1.691$	$M = 5.467$ $SD = 1.790$	$M = 5.602$ $SD = 1.634$	$M = 5.348$ $SD = 1.955$	$M = 5.670$ $SD = 1.513$	$M = 5.564$ $SD = 1.772$	$M = 5.459$ $SD = 1.697$
Seriousness of Suicide Intent	$M = 2.708$ $SD = 2.050$	$M = 2.656$ $SD = 2.023$	$M = 2.858$ $SD = 2.188$	$M = 2.505$ $SD = 1.865$	$M = 2.910$ $SD = 2.260$	$M = 2.517$ $SD = 1.826$	$M = 2.602$ $SD = 1.972$	$M = 2.818$ $SD = 2.127$

Respondent Sex and Age

Note. Table 5 displays means and standard deviations for both attitudes and beliefs about the suicide decision (acceptability, permissibility, agreement, sympathy) and the person who died by suicide (emotional adjustment, seriousness of suicide intent) across target and respondent sex and age.

History of Suicidality

Ninety-one participants (12.16%) (2.53% older adults; 5.69% younger adults; 4.70% females; 3.52% males) reported having had serious suicidal ideation ($N = 75$; 6.78%) (2.26% older adults; 4.52% younger adults; 3.79% females; 2.98% males) and/or had engaged in suicidal behaviors ($N = 41$; 3.70%) (1.08% older adults; 2.62% younger adults; 2.53% females; 1.17% males) in their lifetime. Individuals with a history of suicidality rated the decision to suicide, across sex and age of the person who died by suicide and across suicide precipitants, as follows:

acceptability ($M = 4.813$, $SD = 2.242$), permissibility ($M = 4.560$, $SD = 2.210$), agreement ($M = 4.956$, $SD = 2.332$), sympathy ($M = 4.264$, $SD = 2.537$). Respondents with a history of suicidality rated that the person who died by suicide, across sex and age of the person who died by suicide and across suicide precipitants, as follows: emotionally adjusted ($M = 5.178$, $SD = 1.932$), seriousness of suicide intent ($M = 2.418$, $SD = 1.831$). Individuals with a history of suicidality rated the decision to suicide by an older adult as the following: acceptability ($M = 4.813$, $SD = 2.242$), permissibility ($M = 4.560$, $SD = 2.210$), agreement ($M = 4.956$, $SD = 2.232$), sympathy ($M = 4.264$, $SD = 2.537$). They evaluated older adults who died by suicide as follows: emotionally adjusted ($M = 5.178$, $SD = 1.932$) and seriousness of suicide intent ($M = 2.418$, $SD = 1.831$). Further, their scores on the FSA resulted in an average ageism score of 2.963 ($SD = 0.755$).

Ageism

Endorsement of ageism across respondent characteristics (i.e., their sex and age) was ($M = 2.966$, $SD = 0.683$). A t-test found a significant difference between younger and older adults' ageism scores, with younger adults ($M = 2.891$, $SD = 0.716$) holding significantly less ageist beliefs as compared to older adults ($M = 3.044$, $SD = 0.629$), $t(1060) = -4.14$, $p < .001$). A t-test also determined significant differences between females' ($M = 2.927$, $SD = 0.659$) and males' ($M = 3.005$, $SD = 0.706$) ageism scores, with females holding significantly less ageist beliefs than males $t(1058) = 2.108$, $p = .035$).

Ageism was not a significant predictor of older adult suicide acceptability ($\beta = -0.030$, $t(499) = -0.678$, $p = .498$), permissibility ($\beta = -0.021$, $t(498) = -0.474$, $p = .635$), agreement ($\beta = -0.034$, $t(499) = -0.765$, $p = .444$) or sympathy ($\beta = -0.043$, $t(499) = -0.282$, $p = .778$). Ageism was also not a significant predictor of beliefs about the emotional adjustment ($\beta = 0.008$, $t(497)$

= 0.138, $p = .855$) or the perceived seriousness of the suicide intent of older adults who died by suicide ($\beta = 0.072$, $t(498) = 1.607$, $p = .109$).

Ageism was also examined as a moderator variable for the models. Ageism was added as an interaction term in each individual model and was determined significant if the interaction term had a p value less $< .05$. Ageism did not moderate the association between the outcomes (i.e., acceptability, permissibility, agreement, sympathy, emotional adjustment, or seriousness of the suicide intent) and predictors (i.e., deceased by suicides' sex and age, precipitant of suicide, and respondents' sex and age) in any of the models.

DISCUSSION

This study examined attitudes and beliefs about older adult suicide, and about older adults who died by suicide among younger and older adults in Israel. This study also examined the possible role of ageism in attitudes and beliefs about suicide and in attitudes and beliefs about individuals who died by suicide.

A main finding of this study was that older adult suicide was rated as less acceptable, less permissible, and less agreeable than younger adult suicide. These findings are in contrast to the findings of studies conducted in the U.S. For example, a U.S. study by Deluty (1988-1989b) found that older adult suicide was rated as “wiser”, “stronger”, “braver”, and more “right”. Similarly, a U.S. study by Segal et al. (2004) found that older adult suicide was rated as more “normal” and “acceptable” than younger adult suicide.

In this study older adult suicide following a terminal debilitating physical illness was also considered less acceptable, less permissible, and less deserving of agreement when compared to suicide in response to other conditions (e.g., younger adult widowhood, older adult achievement failure). Older adult suicide following a terminal illness also received the lowest amount of sympathy when compared to other conditions involving both older and younger adults, except for younger adult suicide following a terminal illness. Further, older adults whose suicide followed a terminal debilitating physical illness were rated as more serious in their suicide intent when compared to younger adults whose suicide followed a terminal debilitating physical illness, but not to younger adults whose suicide followed achievement failure. In fact, younger adults whose suicide followed achievement failure were rated as most serious in their intent relative to all other precipitant conditions.

Younger adult suicide following achievement failure was viewed as most acceptable, most permissible, and most deserving of agreement and sympathy. By contrast, in U.S. studies physical illness/disability has been considered the most legitimate (Deluty, 1988-1989a), justifiable (Droogas et al., 1982-1983), acceptable (Hammond & Deluty, 1992), permissible (Range & Martin, 1990), approved of (Sawyer & Sobel, 1987), plausible and rational (Stice & Canetto, 2008; Winterrowd et al., 2017), courageous and admissible (Winterrowd et al., 2017) suicide precipitant, independent of the age of the respondents.

This study's findings on attitudes and beliefs about the person who died by suicide were both similar to and different from U.S. findings about attitudes and beliefs about the person who died by suicide. This study's results are consistent with previous U.S. results that male suicide is more permissible than female suicide (Deluty, 1988-1989b; Linehan, 1973). However, in this study male suicide was not rated as more acceptable than female suicide. Further, males who died by suicide were rated to be less serious in their suicidal intent when compared to females, and no significant differences were found between females' and males' emotional adjustment. Prior studies found that females who died by suicide were rated as less serious in their suicidal intent and less emotionally adjusted than males (Lewis & Sheppard, 1992).

No significant differences between females and males or between younger and older participants were found with regards to attitudes and beliefs about older adult suicide. Prior studies reported that males are less opposed to suicide than females (Deluty, 1988-1989b; Sawyer & Sobal, 1987), and that males view older adult suicide with less sympathy than females (Winterrowd et al., 2017). Past studies also found that older adults express more positive and favorable attitudes about suicide and about older adult suicide, viewing suicide and older adult

suicide as more acceptable, normal, and courageous than younger adults (Segal et al., 2004; Winterrowd et al., 2017).

The differences between the findings of this study and those of related U.S. studies may result from a number of factors. One possibility is national context, and culture, including the difference between Israel and the U.S. in terms of suicide rates. Israel has low overall suicide rates (4.45-6.76 per 100,000) while the U.S. has high suicide rates (10.7-14.2 per 100,000) (World Health Organization, 2021). Israel has lower suicide mortality rates among older adults (11.82 per 100,000) than the U.S. (19.6 per 100,000) (World Health Organization, 2019). At the same time both in Israel and the U.S. suicide rates increase with age. In Israel younger adult suicide precipitated by achievement failure was rated as most acceptable, most permissible, and most deserving of agreement and sympathy even though in Israel younger adults have lower suicide mortality rates than older adults.

An explanation for the suicide attitudes and beliefs recorded in this Israeli study with regard to precipitant is that in Israel an achievement failure by a younger person may be considered particularly shameful. A psychological autopsy of 67 suicides by young adult Israeli soldiers (49 men and 18 women, ages 18-21 years old) found that recent stressors reported by family and friends, on prerecruitment and active service data, included achievement failures (e.g., failure in a course or disappointments over assignments to army duties), problems coping in a closed system environment such as the army (e.g., disobedience to authority and to the law, such as refusal to obey an order/suspicion of stealing), and in interpersonal relationships (e.g., romantic rejection and separation or conflict with a close associate) (Orbach et al., 2007). These findings suggest the relevance of achievement failure in the suicide of Israeli younger adults. The findings also highlight specific conditions when suicidal behavior may be viewed as relatively

permissible and understandable in Israel, consistent with cultural scripts of suicide theory (Canetto, 1992-1993, 1997, 2015; Canetto & Lester, 1998; Canetto & Sakinofsky, 1998).

Sample issues may also be a factor in the findings of this study. Only half of older adult (43.56%), and more than half of younger adult participants (89%) were born in Israel. The remainder had immigrated from the former Soviet Unions, the U.S., or a Western European country. Studies on suicide in Israel indicate differences in suicide rates by national origin. One study found that in older cohorts of Israeli Jews suicide rates were highest among Jews of European or American ancestry (mostly Ashkenazi). The next higher suicide rates were recorded among Israel-born, the Asia-born, and the Africa-born Jews respectively. These differences were not found in the younger cohorts (Kohn et al., 1997). While no studies have been able to examine attitudes and beliefs about suicide and the person who died by suicide in Israel specifically, this study does display evidence for a cultural influence on the impact and prevalence of suicide across various national origins. In other words, an individual's national origin impacts their suicide beliefs, and may therefore influence their perception of what is acceptable suicide. In addition, 31% of the sample identified themselves as not religiously observant, 20% as a little observant, 26% as medium observant, 15% as highly observant, and 8% as highly observant. Studies on suicide patterns in Israel indicate differences by religious observance. Hamdan and Peterseil-Yaul (2020) found that among Modern Orthodox Jews, those less involved in religious practices and those who perceived religion as less important were more likely to report suicide ideation or suicidal behaviors. The fact that this study's sample was diverse in terms of religious observance means that the recorded attitudes and beliefs about suicide and about the person who died by suicide could have been influenced by their connection to religion. The fact that this study's sample was diverse in terms of religious observance could also explain why no

differences were found among female and male and older and younger participants. Variability in the participants' religious observance may have had a stronger influence on suicide attitudes and beliefs than their sex or age.

Lastly, the interpretation by participants of this study's questions could have influenced the results. For example, asking whether suicide is acceptable could have been interpreted as a question about suicide making sense. It could also have been interpreted as a question about suicide being morally permissible. For instance, Stillion and colleagues (1989) found that older adult women receive the most agreement for their suicidal behavior. By contrast, Deluty (1988-1989b) found that suicide by women received the least agreement. Stillion and colleagues (1989) interpreted their findings as suggesting the de-valuing of women. Deluty (1988-1989b) suggested that many may view suicide by women as more "abnormal" because suicide in the U.S. is considered a masculine act. In a study conducted in Israel, Gamliel and Levi-Belz (2016) found that how the suicide was framed influenced suicide attitudes and beliefs. Specifically, ageism moderated how suicide was evaluated depending on how it was framed. High-ageism participants had more permissive attitudes about older adult suicide than low-ageism participants when suicide was framed in a relatively positive way (*as not prolonging life*). These findings suggest that the ways in which suicide is framed influence suicide beliefs and attitudes. Further, the ways in which participants understood differences between our outcome measures (e.g., acceptability versus permissibility) could have influenced this study's results. The scores for four outcome variables (i.e., acceptability, permissibility, agreement, and sympathy) were strongly correlated. These correlations suggest that participants did not perceive the four items as distinct. Also, the ways in which individuals understood the presumed suicide precipitant could have had an impact on their attitudes and beliefs responses. Specifically, what individuals believed was

meant by an “achievement failure” or a “terminal debilitating physical illness” could have influenced their perception of acceptability of suicide following that presumed precipitant. Lastly, it is also possible that when the measures developed in English and in the United States were translated in Hebrew their meaning changed in ways that contributed to the Israel-U.S. differences in the findings.

In this study younger adults endorsed less ageist beliefs than older adults. By contrast prior studies conducted in the U.S. and Israel found that younger adults endorsed more ageist beliefs, including more stereotypes and avoidant behaviors towards older adults (Bodner et al., 2012), than any other age group. In Bodner and colleagues’ study (2012) middle-aged individuals in Israel had the highest ageism score in terms of perception of older adults’ contribution to society. In Rupp and colleagues’ study (2005), younger adults held more avoidant attitudes towards older adults. While the Israeli and U.S. studies and our study all measured ageism via the FSA, is it plausible that the demographics of our sample, or some other cultural factor, such as religiosity, accounted for the reverse differences in ageism scores between younger and older adults. An Israeli study by Bergman and colleagues (2013) found that Muslim Arab respondents displayed less ageist attitudes about older adults and expressed less fear of growing old and fewer concerns over their physical appearance in older age than Jewish respondents.

In this study ageism was not a predictor of attitudes and beliefs about the older adults’ suicide decision or older adults who died by suicide. No significant differences were found among ratings of acceptability, permissibility, agreement, or sympathy with the suicide decision, or among ratings of emotional adjustment or seriousness of the suicide intent of older adults who died by suicide depending on ageism. By contrast, another Israeli study that used the FSA

(Gamliel & Levi-Belz, 2016) found that individuals high in ageism had more permissive attitudes towards older adult suicide. A reason for the contrasting findings may be the different belief and attitudes measures used in the two studies. Gamliel and Levi-Belz measured suicide attitudes and beliefs via a modified version of Renberg and Jacobsson's scale (2003). This scale examined more attitudes and beliefs towards suicide, including for example, the preventability and incomprehensibility of suicide.

Finally, in this study ageism was not a significant moderator for the relationships between predictors (the person who died by suicides' sex and age, the suicide precipitant, and the respondents' demographic characteristics) and the outcome variables (acceptability, permissibility, agreement, and sympathy with the suicide decision, and the perceived emotional adjustment and seriousness of the suicide intent of the person who died by suicide). One limitation, and a possible explanation of this study's findings, is how ageism was measured. Using a mean score of ageism, as was done in this study could have led to measurement error that influenced the power to detect associations. At the same time, Gamliel and Levi-Belz (2016) also used a mean score of ageism but found that ageism moderated attitudes and beliefs about suicide. In both Gamliel and Levi-Belz's and in this study reliability of the FSA was good (Cronbach's alpha = .82 and Cronbach's alpha = .80, respectively).

Implications

The findings of this study have implications for theory and for future research. Overall, this study's findings point to the time and culture-specific nature of cultural scripts.

The findings of this study suggest that achievement failure may hold unique meaning for young adult suicide in Israel. This supports the theory that scripts of suicide are culturally specific (Canetto, 1997, 2021). In Anglophone countries, suicide attitudes and beliefs,

specifically suicide acceptability, have been shown to predict actual suicidality in the U.S. general population (Phillips & Luth, 2018). However, in this study, suicide by older adults was not rated as most acceptable when compared to suicide by younger adults. In this sense attitudes and beliefs about suicide in Israel do not appear to align with actual suicide behavior. At the same time the fact that in psychological autopsy studies, achievement failure was reported as a significant factor in young adult suicide suggests the significance of the achievement failure script for young adults. Psychological autopsy and cultural scripts of suicide studies can be thought of as providing complementary information about who is at risk for suicide, and therefore who should be identified and targeted for suicide prevention.

Second, older adults whose suicide followed a terminal debilitating physical illness were rated as more serious in their intent when compared to younger adults whose suicide followed a terminal debilitating physical illness. Since older adults experience more serious health problems in later life, this suicide attitude and belief may influence how older adults view and see themselves, or how others see them, in terms of the potential rationality of their suicide, and even shape how they act in relation to suicide. It is possible older adults with health problems may come to think of lethal suicide as an understandable, reasonable, or even rational option for their circumstances (Stice & Canetto, 2008). Further, while older adults whose suicide followed a terminal debilitating physical illness were rated as more serious in their suicide intent as compared to younger adults whose suicide followed a terminal debilitating physical illness, older adults suicide that followed a terminal debilitating physical illness were rated as less acceptable, less permissible, and less deserving of agreement than suicide that followed other conditions. Suicide by older adults with health issues may be thought of as more serious in intent but less acceptable, permissible, and agreeable perhaps because people thought that older adults should

not take a drastic action like suicide given that they have lived a long life already and likely have survived many adversities--and death is imminent anyway.

Lastly, in this study ageism was found to differ among older and younger adult participants, with younger adult participants holding less ageist attitudes. This finding is in contrast to U.S. and Israeli studies that found that younger adults hold the most ageist attitudes. Further, in this study, ageism was not found to be a significant predictor or moderator to suicide attitudes and beliefs as it was in previous studies. These differences may be the product of measurement error. They could also be explained by differences in the participant's demographics (e.g., national origin, religion). Given the latter possibility, it is important to understand demographic characteristics associated to ageism in Israel. It would also be important that older adults in Israel are educated on the effect that ageist beliefs have on their self-concept, their well-being, and potentially their risk for suicide.

Strengths

The current study expanded the cultural scope of research on attitudes and beliefs about suicide. Most studies done on attitudes and beliefs about older adults' suicide decision and older adults who died by suicide have been conducted in the United States and have focused on younger adult respondents. This study took place in Israel, a non-Anglophone country, and included both older and younger adult participants. Further, this research extended the research done on ageism and its influence on attitudes and beliefs about suicide. The one previous study to examine the relationship between ageism and attitudes and beliefs about older adults' suicide decision and older adults who died by suicide (Gamliel & Levi-Belz, 2016) did not include an older adult sample, while this study did. Further, Gamliel and Levi-Belz's study (2016) did not examine how attitudes and beliefs about suicide, as well as how ageism, varied by the

demographic characteristics of the person who died by suicide or the respondents' characteristics, while this study did.

This study examined attitudes and beliefs about the suicide decision and the person who died by suicide and explored the moderating role of ageism among younger and older adults in Israel. Many prior studies have not conducted research on attitudes and beliefs about the suicide decision of older adults and attitudes and beliefs about older adults who died by suicide, as well as the moderating effect of ageism on suicidal attitudes and beliefs in non-Anglophone countries. Further, most of the prior research on attitudes and beliefs about the suicide decision and the person who died by suicide have been conducted on younger adults.

Limitations and Future Research

In Israel, as in many Anglophone countries, older adults have the highest suicide rate of all age groups. However, in Israel overall suicide mortality rates are low, compared to the overall suicide mortality rates recorded in high-income Anglophone countries. Future studies about attitudes and beliefs about suicide should be conducted in countries that have a diversity of suicide mortality rates, to explore the possible association between attitudes and beliefs about suicide and suicide rates. Psychological autopsy studies are important in understanding the context and potential precipitants of suicide and for identifying how context and potential precipitants may vary by culture. At the same time psychological autopsy studies also have major limitations. To start with, in psychological autopsy studies the information gathered about the deceased by suicide comes from close family members and friends soon after the suicide has occurred. The suicide explanations of psychological autopsy studies are influenced by the trauma of the loss and filtered by the relation that the deceased by suicide had with the psychological-autopsy-study informant. Second, national and local systems and practices of recording a death

as a suicide influence official suicide records. Therefore, information from psychological autopsy studies should be evaluated in context. Lastly, future studies could explore how a history of suicidality impacts attitudes and beliefs about the suicide decision and about the person who died by suicide.

Future research in Israel should pursue a sample that is more heterogenous in terms of background religion. In this Israeli study all participants were Jewish. It would be informative to explore the attitudes and beliefs of Israelis from Muslim and Christian communities. Further, ageism has been shown to vary by religion and age. While our study did not examine the role of religion on suicide attitudes and beliefs, prior studies suggest differences in ageism by religion (Bergman et al., 2013). The current study also found differences in ageism between older and younger participants. It would be important for future research to assess how the dominant religion of one's community is related to ageism, in participants of different age groups.

This study included measures of suicide acceptability, permissibility, agreement, and sympathy as well as measures of beliefs about the emotional adjustment of the deceased by suicide and about the seriousness of their suicide intent. Future research should consider using a broader range of measures of suicide attitudes and beliefs

In future research the validity of attitude and belief measures should be examined. The suicide attitude and belief methods used in this study were adapted from U.S. studies. Researchers should also consider qualitative methods to explore attitudes and beliefs about suicide in under-studied cultural and linguistic settings, including in non-Anglophone countries. Finally, future studies should attend to the different dimensions of ageism and also use a diversity of measures of ageism.

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APPENDIX

Questionnaire

Below is a suicide vignette. Please read it and immediately after indicate your views about the decision to suicide. There are no correct or incorrect answers. What we are interested in is your personal views of the decision. Mark the number which best expresses your views on a scale ranging from 1 to 7.

A modified version of the Suicide Attitude Vignette Experience (SAVE)

Sample Vignette (Old Female, Terminal Debilitating Physical Illness Version)

I.R., a woman in her mid 70s, has been healthy and physically active through all her life. Six weeks ago she was diagnosed with a terminal, debilitating physical illness. She is someone who has always been proud of her independence. She can ‘t bear the limitations that come with her illness, and kills herself.

Sample Vignette (Young Male, Achievement Failure Version)

E.Z., a man in his mid 20s, has always been economically independent. Six weeks ago his job was cut and he realizes that his savings will soon run out. He can’t bear the shame of having to seek help from others and kills himself.

Attitudes and Beliefs about Suicide

How much do you sympathize with the decision to suicide in this case?

Not at all 1 2 3 4 5 6 7 A lot

How much do you agree with the decision to suicide in this case?

Not at all 1 2 3 4 5 6 7 A lot

How much does the decision to suicide seems acceptable to you in this case?

Not at all 1 2 3 4 5 6 7 A lot

How much does the decision to suicide seems permissible to you in this case?

Not at all 1 2 3 4 5 6 7 A lot
Attitudes and Beliefs about the Person who Died by Suicide

Based on what you read, how serious would you say the vignette protagonist was about suicide?

Hardly serious at all 1 2 3 4 5 6 7 Very serious

Based on what you read how emotionally adjusted would you say the vignette protagonist was?

Maladjusted 1 2 3 4 5 6 7 Well-adjusted

The Fraboni Scale of Ageism (FSA)

	Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree
1. Many old people are stingy and hoard their money and passions						
2. Many old people are not interested in making new friends, preferring instead the circle of friends they have had for years	1	2	3	4	5	6
3. Many old people just live in the past	1	2	3	4	5	6
4. Most old people should not be trusted to take care of infants	1	2	3	4	5	6
5. Many old people are happiest when they are with people their own age	1	2	3	4	5	6
6. Most old people can be irritating because they tell the same stories over and over again	1	2	3	4	5	6
7. Old people complain more than other people do	1	2	3	4	5	6
8. Teenage suicide is more tragic than suicide among the old	1	2	3	4	5	6
9. I sometimes avoid eye contact with old people when I see them	1	2	3	4	5	6
10. I don't like it when old people try to make conversation with me	1	2	3	4	5	6
11. Complex and interesting conversation cannot be expected from most old people	1	2	3	4	5	6
12. Feeling depressed when around old people is probably a common feeling	1	2	3	4	5	6
13. Old people should find friends their own age	1	2	3	4	5	6
14. Old people should feel welcome at the social gatherings of young people	1	2	3	4	5	6
15. It is best that old people live where they won't bother anyone	1	2	3	4	5	6
16. The company of most old people is quiet enjoyable	1	2	3	4	5	6
17. Old people should be encouraged to speak out politically	1	2	3	4	5	6
18. Most old people are interesting, individualistic people	1	2	3	4	5	6
19. I personally would not want to spend much time with an old person	1	2	3	4	5	6
20. Old people deserve the same rights and freedom as do other members of our society	1	2	3	4	5	6

21. Old people can be very creative	1	2	3	4	5	6
22. Old people do not need much money to meet their needs	1	2	3	4	5	6

Sociodemographic, Health Status and History of Suicidality Questionnaire

Please fill out the following information about yourself. This information will be used in the aggregate with that of others for statistical comparisons

1. Sex _____
2. Age (in years) _____
3. Years of education _____
4. Country of birth: _____
5. If not born in Israel, at what year did you immigrated to Israel: _____
6. The average salary is 8000 shekel per month, is your salary: a. Lower than the average; b. Like the average; c. Higher than the average
7. Did you ever seriously consider suicide in the past year? Yes___ No__
8. Did you ever seriously consider suicide in your lifetime, excluding the past year? Yes_ No_
9. Did you engage in suicidal behavior in the past year? Yes___ No__
10. Did you engage in suicidal behavior in your lifetime, excluding the past year? Yes_ No_ .