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How age-of-death and mode-of-death impact perceptions of the deceased

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ABSTRACT

The goal of the current study was to explore how age-of-death (AOD) and mode-of-death MOD simultaneously influence ratings of sympathy, empathy, and tragedy toward the deceased in order to assess social value. Three hundred and fifty-eight participants, mainly undergraduates, responded to a series of vignettes that described a MOD (suicide, accident, or stroke) counterbalanced with three AODs (younger, middle-aged, and older). Overall, ratings of sympathy, empathy, and tragedy declined as AOD increased; however, the effect of AOD was not consistent across all MODs. The pattern of results suggests that death norms and perceived control of death impact the perception of the deceased.

The death of an individual is often perceived as a loss to society (Walter, 2014). This perception is likely impacted by the age of the deceased and the cause of death (DeSpelder & Strickland, 2015). In terms of age-of-death (AOD), the Years of Potential Life Lost (YPLL; Dempsey, 1947) places a social value on the number of years lost to society, which decreases with age. This suggests that as a person ages, their social value decreases. Accordingly, the death of an older individual may be viewed as less tragic, defined as the amount of suffering and distress caused by an event. This decrease in the perception of tragedy may also be reflected in lower levels of sympathy (i.e., feelings of sorrow for the deceased), and empathy (i.e., imagining oneself in the position of the deceased). At the same time, it is likely that mode-of-death (MOD) also impacts how people perceive the death of an individual (Stillion & Stillion, 1999). For example, there is an evidence to show that people report lower levels of sympathy toward the deceased when the MOD is a suicide (Locke & Richman, 1999). Critically, less is known about other modes of death, such as accidents or illnesses. More importantly, the interaction between AOD and MOD in terms of perception of death has not been explored. Accordingly, the goal of the current study was to investigate how AOD and MOD interact on ratings of tragedy, empathy, and sympathy toward the deceased.

Age of death

In Western cultures, there is a tendency to place greater social value on the lives of those that are younger and perceive the lives of older individuals as being less socially valuable (Nelson, 2005; Sanders, Montgomery, Pittman, & Balkwell, 1984). This age-related decrease in social value is likely related to years of potential life lost (Dempsey, 1947). The YPLL measure quantifies the number of years that a person could have lived had they not died before the natural life expectancy, resulting in an estimate of the impact of the loss to society as a result of the death (Doessel et al., 2009; Gardner & Sanborn, 1990; Pickering, 2013). YPLL scores are a function of the number of years left before the individual reaches their life expectancy multiplied by the number of deaths at that age (Gardner & Sandborn, 1990). However, for epidemiological purposes, some researchers make value judgments about certain age groups and weigh the number of years before the individual reaches their life expectancy, reflecting the perceptions of society (Gardner & Sandborn, 1990). For example, the *Investment-Producer-Consumer* model divides individuals into three age categories: 0–19 (Investment), 20–64 (Producer), and 65+ (Consumer) and weighs deaths of people in the *investment* and *consumer* stage as being less of a loss compared to people in the *producer* stage because they contribute to society less than those in the *producer* stage (Gardner &

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Sandborn, 1990). In this model, the death of an individual in the *producer* stage is weighted more heavily because they often support dependent children and older adults. Individuals in the *investment* and *consumer* stage use resources of society and in the *consumer* stage are nearing the end of life. In general, the YPLL measure suggests that AOD can be used to predict the perception of untimely and apparent premature deaths in the producer stage of life (Pickering, 2013; Lai & Hardy, 1999).

For older adults, death is expected and is associated with increased preparedness and less shock (Barry, Kasl, & Prigerson, 2002). Natural decline in health is inevitable in older age, and the majority of deaths in older adults are due to health conditions (Hill, Gallagher, Thompson, & Ishida, 1988). Older individuals often accept that death is an inevitable part of life that may occur any day and some wish for its hastening (Hill et al., 1988). Society, too, mirrors this notion. In a study by Martens, Greenberg, Schimel, and Landau (2004), in which participants were asked to complete a word association task, the words "elderly" and "death" were often associated. This finding suggested that death is a common thought when thinking of older adults. As older adults approach the end of their lifespan, many are viewed as being afflicted with the "disease" of older age and are perceived to suffer from an inevitable decline until death, leading to less perceived social value for the deceased (Nelson, 2005).

The YPLL measure is generally accurate in reflecting the lower social value placed on older adults due to fewer years of potential life lost. Additionally, individual perceptions of social value at different AODs are likely also related to other factors surrounding the death. One of these factors is the mode of death.

Mode of death

Mode-of-death (MOD) is a factor that may differentially impact perceptions of death across the lifespan. The bulk of research on MOD deals with the experience of grief in the aftermath of death (de Groot, de Keijser, & Neeleman, 2006). There has been less research regarding perceptions of the deceased based on the MOD, and the small body of existing literature focuses on suicide (Stillion & Stillion, 1999).

Views of suicide vary, but in Western cultures, a common theme is one of disapproval. This disapproval is often rooted in religious belief or a belief that suicide indicates weakness and thoughtlessness; thus, many people may find it difficult to empathize with people who have died by suicide (Stillion & Stillion, 1999). Moreover, individuals often find it more difficult to sympathize with those who are bereaved and to have interactions with the bereaved surrounding the death (Logan, Thornton, & Breen, 2017). Feelings of blame are often attributed to those who die by suicide and their families (McIntosh, Santos, Hubbard, & Overholser, 1994). High levels of blame associated with suicide often lead to lower levels of sympathy (Locke & Richman, 1999). Suicide is often seen as a choice and in the control of the individual who died, rather than a MOD such as an accident or an illness that may be viewed as beyond the control of the individual (Stillion & Stillion, 1999).

Linking AOD and MOD for suicide has shown that the perceived impact of the loss is greater when the person who died by suicide was below the age of 60 (Stillion & Stillion, 1999). This is interesting in the context of research that shows higher rates of suicide among older adults (Cattell, 2000). For those over age 85, there is an average of 17.6 suicide deaths per 100,000 deaths, compared to 10.5 suicide deaths per 100,000 deaths for those age 15–24 (Stillion, 2014). Stillion and Stillion (1999) found that suicide in older adults has been seen by younger people as a rational and reasonable choice to escape from perils they may face. Many youths cannot empathize with the experiences of older adults and expect their death to be due to complications related to advanced age, leaving them with lower feelings of sympathy toward older adults who have died by suicide. These low feelings of sympathy may be related to the lower social value attributed to older adults, consistent with the YPLL measure (Stillion & Stillion, 1999).

While social norms appear to impact perceptions of suicide, it is unknown if social norms impact how other MODs are perceived, and how they interact with AOD. Based on the suicide research, perceptions of death in older adults may be more negative when people view the MOD as being less normative and when the deceased has perceived control over their death (i.e., suicide) (Stillion & Stillion, 1999). Perception of MODs that are both uncontrollable and either normative for older adults (e.g., a stroke) or normative for people of all ages (e.g., car accident) can be used to help understand how MOD impacts the perception of death as a function of AOD. A study by Penman et al. (2014) found that participants distanced themselves further from a stroke (a typical death) compared to a car accident (a novel death), highlighting how different MODs can impact social perceptions related to the death. An outstanding question is how these factors are impacted by the AOD.

Many of the studies conducted look solely at those who have been bereaved by death, and not at the deceased themselves; however, these results suggest that individuals may be drawn more toward novel and "exciting" death, and rather than those that are typical and every day.

Accidental deaths are a common MOD and can present in many forms including such events as accidental poisoning, falls, or most commonly, vehicle accident, and subsequent research can enhance our knowledge in the area (Hanada, 2016). Despite this, social perceptions of accidental deaths are not well known, and literature searches reveal a lack of evidence of those deaths. The majority of research on social attitudes toward death focuses on natural and suicide deaths.

Perception of the deceased

Perceptions of the deceased can be measured using social value constructs, including sympathy, empathy, and tragedy. While none of these measures directly assess social value, by using proximal measures that asses an individuals' emotional response to a death, the social value placed on the deceased can be inferred. Moreover, using proximal measures helps mask the intent of the measurement and may prevent biased responses.

Sympathy, a feeling of sorrow for the deceased and his or her loved ones, is a typical response to death, and higher rates of sympathy would reflect higher perceived social value. While the sympathetic response to death is influenced by a wide range of factors, it can be influenced by the age of the deceased, with lower feelings of sympathy associated with deaths that are perceived as having less of an impact on society (Stillion, White, Edwards, & McDowell, 1989). Higher levels of sympathy are generated by the death of younger people because their death represents more years of lost life and potential contributions (Stillion et al., 1989).

Social value could also be inferred using empathy. Empathy toward the deceased tends to increase when the deceased is considered to be more relatable to the individual perceiving the death (Schimel, Wohl, & Williams, 2006), thus suggesting that higher rates of empathy would be associated with higher social value. Interestingly, levels of empathy can be moderated by active distancing from perceptions of personal mortality. This death anxiety can be so intense that people withdraw from situations or individuals that remind them of their own death (Regehr, Goldberg & Hughes, 2002). When individuals confront death, feelings of empathy may decrease as a coping mechanism to provide distance from their own mortality (Regehr et al., 2002). This is known as Terror Management Theory (Harmon-Jones et al., 1997). Ratings of social value may be related to social norms surrounding death. Social norms provide situations and circumstances that seem socially appropriate—in this instance that death will occur in older age by means of a mode of death that is also associated with older age (i.e., stroke). When death occurs at a younger age, or by a means that is not associated with a particular age period, the norm is violated and individuals are reminded that death does not always occur when it "typically" should. With this reminder of death salience of personal mortality, surfaces and individuals may be reminded of their own death and thus detach themselves from the situation by decreasing their empathy and modifying their ratings of sympathy and tragedy. This suggests that feelings of empathy will be lower when the rater is similar to the deceased.

Death is often perceived as tragic, that is an event or circumstance that results in a dreadful outcome that causes people to experience shock and/or grief (Mills, 1993). Tragedy may cause viewers of the event to feel shocked toward the outcome of the event, or pity for the individual involved (Mills, 1993). Ratings of tragedy can thus reflect how surprised individuals are of the event. People are often able to identify a tragedy because viewing others' negative situations allows viewers of the tragedy to feel as though they are better off than the victim (Mills, 1993). Even in the grief experience of death, viewers of tragedy may feel grateful or relieved for themselves because they are not in the specific situation of the affected individual (Mills, 1993).

Present study

The first goal of the study was to investigate if perceptions of death were changed as a function of AOD; that is, the death of older adults would be seen as less tragic compared to younger adults, would garner less sympathy, and empathy from younger adults. The second goal was to understand how MOD interacts with AOD in terms of perceptions of death. Factors that would likely impact this interaction were the perceptions of normativity and personal control over death. When a death was considered to be "normal" for a given age, ratings of sympathy, empathy, and tragedy would be lower. When death was perceived as under the control of the deceased, ratings of

sympathy, empathy, and tragedy would be lower still. In the current study where most raters were young, it was expected that greater sympathy and empathy would be found when the deceased was younger, even when the MOD was normative or under control of the deceased, based on documented perceptions of the deaths of older adults by younger adults (Martens et al., 2004). Knowing how individuals perceive the death of others enables us to cope with the death, build better defense mechanisms (i.e., terror management), and allows us to categorize the deceased to assess emotions.

Method

Participants

A sample of 358 participants (self-identified as 295 women, 55 men, and 8 unspecified) volunteered to complete an online questionnaire. The mean age for men was 25.60 years ($SD = 12.82$), ranging from 18 to 72 years. The mean age for women was 28.53 years ($SD = 26.41$), ranging from 17 to 72 years. The overall mean age of participants was 28.36 years ($SD = 14.09$). The majority of participants (84.2%) reported that they experienced the death of a loved one. Of the bereaved participants, 16.9% experienced the death of a parent, 67.4% experienced the death of a grandparent, 4.3% experienced the death of a sibling, 37.3% experienced the death of an aunt or uncle, 18.6% experienced the death of a cousin, 36.9% experienced the death of a friend, 27.2% experienced the death of a close family friend, and 2.9% had experienced the death of a romantic partner.

Study design

There were nine vignettes in total for this study, each with a different MOD and AOD. The three vignettes that each participant saw contained a different MOD and AOD. The vignettes were randomized and counterbalanced across all participants so that individual participants did not see the same MOD or AOD more than once. Each participant saw each MOD and each AOD once.

Materials

The questionnaire used in this study consisted of three vignettes, each briefly describing an individual's death by suicide, accident, or stroke. These vignettes were based on the *Suicide Attitude Vignette Experience Scale* (SAVE) (Stillion et al., 1989). There are two versions of the scale—adolescent and elderly—and a combination of the versions was used to develop vignettes for the current study. Names of the deceased were gender-neutral and the mode of death was described in such a way that it would be a feasible death for someone of any age. These modes included a medical condition (e.g., stroke), a car accident, and a suicide. The medical condition vignette depicted a quick-onset stroke caused by a bacterial infection, killing the individual within days and leaving a spouse and two children. The car accident vignette depicted an accident between a new sports car and a dump truck on slippery conditions. The suicide vignette depicted an individual who had just ended a relationship, without any children or family, who dies by suicide related to grief and loneliness. On the questionnaires, the age of the deceased varied for each mode of death. Ages listed in the vignettes were classified as younger (e.g., 22), middle-aged (e.g., 49), or older (e.g., 76).

An example of one of the vignettes given to participants is seen below:

> Jessy and Sam, both 76-years-old, have been together for a number of years and have just moved to a new city. Neither Jessy nor Sam have any children. One morning, Sam tells Jessy that their relationship is over and they should both see other people. In the weeks following, Jessy feels alone without family in the new city. In a fury of grief and loneliness, Jessy dies by suicide.

There were three different versions of the questionnaire with AOD crossed with MOD across all three versions. Participants only saw one of the three versions. In other words, each participant read three vignettes; each about a different mode of death, and the age of the deceased in each of the vignettes was different. The order in which the vignettes were presented to each participant was randomized. After each vignette, participants were asked to rate their sympathy, empathy, and the degree to which they thought the death was tragic on a Likert scale of 1 (*Low*) to 5 (*High*). After each vignette the participant saw the following:

> *Sympathy is the amount of pity or sorrow you feel towards someone who suffers misfortune:*
>
> ***How would you rate your sympathy towards this individual?***
>
> *Empathy is the ability to place yourself in the same situation as the affected individual:*
>
> ***How would you rate your empathy towards this individual?***
>
> *Tragedy can be defined as an event with a dreadful conclusion that causes people to feel mournful:*
>
> ***How significantly would you rate this to be a tragedy if this was someone you knew personally?***

These questions were used in order to be consistent with Stillion et al. (1989) and to keep the study short in order to avoid participant fatigue, which can increase the risk of attrition.

Procedure

This study was approved by the Psychology Program ethics review process at Grenfell Campus, Memorial University of Newfoundland. Questionnaires were administered online, using the website SurveyMonkey.com. The study was advertised through university class presentations, posters, and postings on social networking sites.

Results

First, data were collapsed across MOD in order to analyze the impact of AOD as a within-subject variable. Data were analyzed using repeated measures ANOVAs that included AOD (younger, middle-aged, and older) and Rating (sympathy, empathy, and tragedy) as within-subject factors (Figure 1). This analysis was done to ensure that the data was in-line with the general prediction that sympathy, tragedy, and empathy ratings would decline as AOD increased. A within-subjects model was chosen because of the counterbalancing procedure. All follow-up tests were controlled using the Bonferroni procedure. There was a main effect of age of death (AOD), $F(2, 710) = 7.91$, $p < .001$, $\eta_p^2 = .02$. Polynomial decompositions revealed that there was a linear decline in ratings as AOD increased, $F(1, 355) = 13.09$, $p < .001$, $\eta_p^2 = .04$. There was also a main effect of rating, $F(2, 710) = 181.71$, $p < .001$, $\eta_p^2 = .34$. Pairwise comparisons revealed that overall, sympathy ratings were lower than tragedy ratings ($p < .001$), and empathy ratings were lower than both sympathy and tragedy ratings ($p < .001$, for both). The interaction between AOD and rating was not significant ($p = .11$).

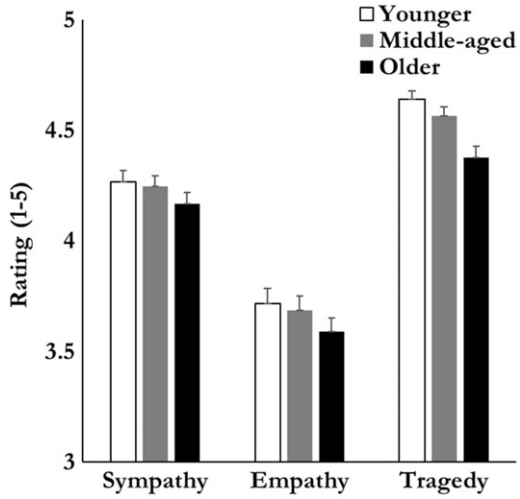

Figure 1. Ratings of sympathy, empathy, and tragedy as a function of age-of-death (AOD). Error bars represent one standard error.

Age of death and mode of death

To explore the impact of MOD, a second repeated measures ANCOVA was conducted that included AOD as a between-subject factor MOD as a within-subject factor and participant age as a covariate (AOP). The reason AOD was a between-subjects factor in the second analysis was because of the counterbalancing procedure. Each participant saw the three vignettes with three different ages, thus the design was not fully within-subjects. MOD was considered a within-subject factor, and AOD was included in the analysis by including it as a between-subject factor. This means that AOD was only meaningful for the interactions; therefore, the main effects of AOD are not reported. Follow-up tests were controlled using the Bonferroni procedure. Because data were skewed toward higher ratings (modal rating was 4 or 5 for all ratings), and not normally distributed, assumptions of sphericity were violated. Accordingly, p-values were adjusted using the Greenhouse–Geisser correction; however, the original degrees of freedom are reported.

Sympathy ratings

There was a significant interaction between MOD and AOD, $F(4, 672) = 5.59$, $p < .001$, $\eta_p^2 = .03$, as can be seen in Figure 2. When MOD was suicide, there was a simple main effect of AOD, $F(2, 354) = 5.77$, $p = .003$, $\eta_p^2 = .03$. Pairwise comparisons revealed that when AOD was older the ratings of sympathy were significantly higher compared to when the AOD was younger and middle-aged ($p = .005$ and $p = .002$, respectively). Ratings of sympathy did not differ when AOD was younger and middle-aged ($p = .75$). When MOD was an accident, there was a trend toward simple main effect of AOD, $F(2, 350) = 3.48$, $p = .032$, $\eta_p^2 = .02$. Pairwise comparisons revealed that when AOD was younger, ratings of sympathy were higher compared to when AOD was older ($p = .009$). When AOD was middle-aged, ratings of sympathy were higher than when AOD was older and lower than when AOD was younger, however, neither of these differences was significant ($p = .11$ and $p = .26$, respectively). When MOD was stroke, there was a

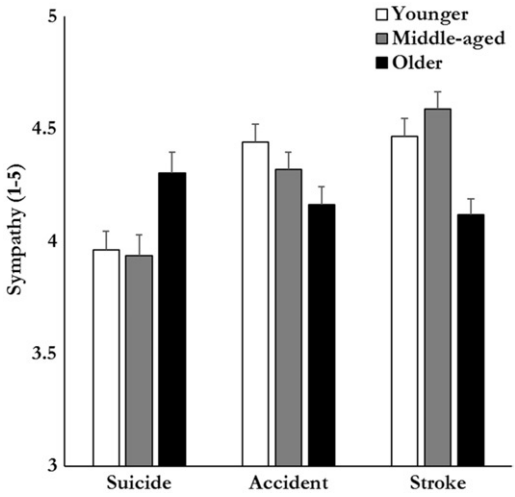

Figure 2. Sympathy ratings as a function of age-of-death (AOD) and mode-of-death (MOD). Error bars represent one standard error.

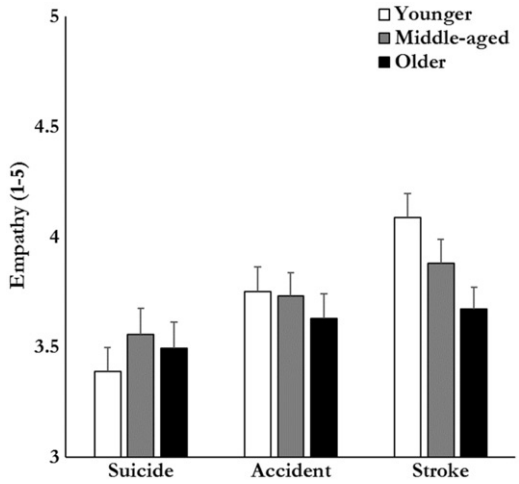

Figure 3. Empathy ratings as a function of age-of-death (AOD) and mode-of-death (MOD). Error bars represent one standard error.

simple main effect of AOD, $F(2,354) = 11.10$, $p < .001$, $\eta_p^2 = .06$. Pairwise comparisons revealed that ratings of sympathy were lower when AOD was older compared to when AOD was middle-aged and younger ($p < .01$ for both). There was no difference in sympathy ratings when AOD was younger compared to when AOD was middle-aged ($p = .22$).

The main effect of MOD was also significant, $F(2, 672) = 5.26$, $p < .007$, $\eta_p^2 = .02$. Overall, sympathy ratings were lower for suicide compared to accident and stroke ($p < .001$ for both). There was also a main effect of AOP, $F(1, 336) = 5.71$, $p < .017$, $\eta_p^2 = .02$, and no interaction between AOP and MOD, $F(2, 672) = .09$, $p = .9$, $\eta_p^2 = .00$. To further explore the impact of AOP, a regression that included AOP as a dependent measure, and sympathy ratings for suicide, accident, and stroke as independent measures highlighted that as AOP increased, there was a trend toward an increase in sympathy ratings, $r\ (340) = .15$, $p < .064$. None of the beta coefficients for any of the individual MODs were significant ($p > .2$ for all). This pattern suggests that older participants provided higher sympathy ratings across all MODs.

Empathy ratings

There was a significant interaction between MOD and AOD, $F(4, 672) = 2.55$, $p = .043$, $\eta_p^2 = .02$, as can be seen in Figure 3. When MOD was a stroke, there was a simple main effect of AOD, $F(2, 353) = 3.51$, $p = .031$, $\eta_p^2 = .02$. Pairwise comparisons showed that when AOD was younger, ratings of empathy were significantly higher than when AOD was older ($p = .009$). There was no significant difference when

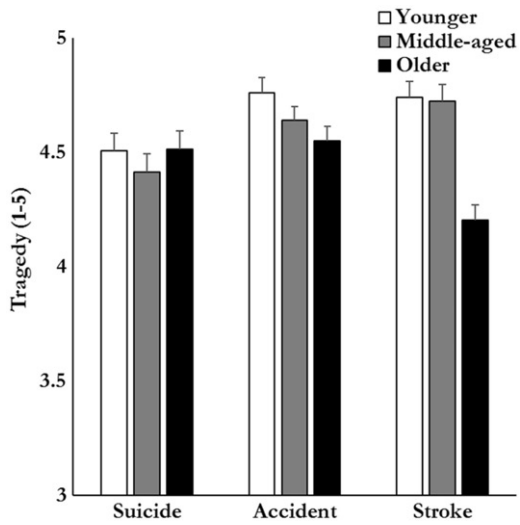

Figure 4. Tragedy ratings as a function of age-of-death (AOD) and mode-of-death (MOD). Error bars represent one standard error.

AOD was older versus middle-aged ($p = .145$) or when AOD was younger versus middle-aged ($p = .265$). There was no simple main effect of AOD when MOD was suicide or accident ($F(2, 353) = .33$, $p = .723$, $\eta_p^2 = .01$ and $F(2, 351) = .55$, $p = .577$, $\eta_p^2 = .01$, respectively).

There was no main effect of MOD ($p = .97$). There was, however, a main effect of AOP, $F(1, 336) = 21.75$, $p < .001$, $\eta_p^2 = .06$, and an interaction between AOP and MOD, $F(2, 672) = 4.18$, $p = .016$, $\eta_p^2 = .01$. A regression that included AOP as a dependent measure, and empathy ratings for suicide, accident and stroke highlighted that as AOP increased, so did empathy ratings, $r(341) = .29$, $p < .001$. Interestingly, this effect was mainly driven by empathy ratings for a stroke

($\beta = 3.15$, $p < .001$), and neither accident nor suicide ($p = .37$ and .86, respectively).

Tragedy ratings

There was a significant interaction between MOD and AOD, $F(4, 672) = 10.14$, $p < .001$, $\eta_p^2 = .06$, as seen in Figure 4. There was no simple main effect of AOD when MOD was suicide, $F(2, 354) = .69$, $p = .501$, $\eta_p^2 = .01$. When MOD was accident, there was a trend toward a simple main effect of AOD, $F(2, 350) = 2.93$, $p = .055$, $\eta_p^2 = .02$. Pairwise comparisons showed that when AOD was older ratings of tragedy were lower than when AOD was younger ($p = .016$). There was no significant difference when AOD was middle-aged versus older or younger ($p = .267$ and $p = .162$, respectively). When MOD was stroke, there was a simple main effect of AOD, $F(2, 353) = 20.48$, $p < .001$, $\eta_p^2 = .10$. Pairwise comparisons showed that when AOD was older, ratings of tragedy were lower than when AOD was middle-aged and younger ($p < .001$ for both). There was no significant difference when AOD was younger and middle-aged ($p = .925$).

The main effect of MOD was not significant ($p = .18$). The AOP had no impact on tragedy ratings as the main effect of AOP and the interaction between MOD and AOP were not significant ($p = .42$ and .17, respectively).

Confirmation of interaction effects

Because of the counterbalancing and design of the study, the data was not fully crossed. That is, each participant only saw three vignettes each with one MOD and AOD. Had we fully crossed the design, participants would have seen each AOD with each MOD, and this may have introduced a social desirability bias that could have impacted the results. In the above analysis, we choose to include MOD as a within-subject factor and AOD as a between-subject factor. To ensure the interaction effects were robust we re-calculated the analysis using AOD as a within-subject factor, MOD as a between-subject factor and AOP as a covariate. The AOD by MOD interactions were significant for measures of sympathy, $F(4, 672) = 17.39$, $p < .001$, $\eta_p^2 = .09$; empathy, $F(4, 672) = 9.85$, $p < .001$, $\eta_p^2 = .06$; and tragedy, $F(4, 672) = 6.28$, $p < .001$, $\eta_p^2 = .04$.

Discussion

The purpose of the present study was to explore the impact of AOD and MOD on perceptions of the deceased, specifically on levels of sympathy, empathy, and tragedy. The main findings were that ratings of sympathy, empathy, and tragedy decreased as the AOD increased and that ratings of sympathy, empathy, and tragedy were lowest when MOD was suicide; however, these ratings were qualified by a series of significant interactions between MOD and AOD. When MOD was suicide, sympathy ratings were highest when the deceased was older, and no differences in ratings were found when the deceased was middle-aged or younger. Neither tragedy nor empathy ratings for suicide were impacted by AOD. When MOD was an accident, both sympathy and tragedy ratings decreased as the AOD increased; however, there was no significant difference in empathy ratings. When MOD was a stroke, sympathy, empathy, and tragedy ratings were lower when AOD was older but did not differ between younger and middle-aged deceased individuals. These results suggest that perceptions of the deceased are simultaneously influenced by both AOD and MOD. One important caveat is that every death is unique and these results only begin to investigate the interactions between MOD and AOD. More complex patterns of results may emerge as follow-up studies investigate factors within different MODs. The following section will discuss how social norms around death and perceptions of control likely contributed to the pattern of interactions observed in the current study.

Perceived norms and perceived control over death

The pattern of results suggests that social norms may influence our perception of death. Social norms are passed down from older generations and lead a particular society to conform to what is acceptable and "fits" with what seems "normal" (Cialdini & Trost, 1998). Actions that do not conform to what is expected can alter social feelings and change perceptions toward the individual who is considered deviant (Cialdini & Trost, 1998; Schultz, Nolan, Cialdini, Golderstein & Griskevicius, 2007). The normative information available to society, in this case, is that death occurs in older age and by an appropriate mode for the age. For example, in the current study, a stroke would be normative for an older adult. This normative information could shape perceptions of many social constructs, including sympathy, empathy, and tragedy. The case of death by stroke highlights this proposed effect, as tragedy ratings were lower when the deceased was older.

Ratings of sympathy, empathy, and tragedy were lowest when MOD was suicide. The overall low sympathy ratings for suicide may be due to attributions of blame (Stillion & Stillion, 1999). An important factor when determining the perceptions of sympathy felt toward an individual is the notion of blame or personal responsibility attributed to the individual in trouble, or thus the deceased (Russell & Mentzel, 1990). Generally, when considering the cause of death, the less blame placed on the deceased the more sympathy experienced (Locke & Richman, 1999). Suicide is a direct action of the deceased and is often viewed as a personal choice to end life (Stillion & Stillion, 1999). Pompili et al. (2013) found that attributions of blame were unique to suicide. The lower ratings of sympathy and tragedy for an individual who died by suicide could be due to attributions of blame. Another possible explanation for the lower ratings is that suicide does not follow an associated death norm for any age (Stillion & Stillion, 1999).

While overall ratings of sympathy were the lowest for suicide, ratings were highest when the deceased was older, which is in contrast to what was predicted. Presently, there is a focus on prevention of youth suicide, with much less attention given to suicide in older adults despite being an age group with a high number of suicides (Shah, Bhat, Zarate-Escudero, DeLeo, & Erlangsen, 2016). This focus may lead to an increased availability heuristic for youth suicide. That is, media exposure depicting youth suicide may lead individuals to believe that suicide in this age group is the most frequent (Pachur, Hertwig, & Steinmann, 2012), thus leaving the participant surprised to read of the suicide of an older person. In terms of sympathy, Schneewind (1994) suggested that individuals more easily sympathize with acts of desperation. Accordingly, when participants, in the current study, read a vignette involving the suicide of an older person, they may have experienced surprise, which could increase their level of sympathy for the deceased. Moreover, loneliness is a real concern for older adults. The vignette described an individual at the end of a relationship who had no immediate family and portrayed that the individual felt grief-stricken, isolated, and alone. Thus, high sympathy ratings may reflect pity toward the changes in the life of older adults and the personal decision to end life.

Interestingly, tragedy ratings were not impacted by AOD when the MOD was suicide. This is in contradiction to the other two MODs, where the impact of AOD was similar for both ratings of sympathy and tragedy, where ratings decreased as AOD increased. Suicide is considered preventable, likely because it is perceived as being a choice (Stillion & Stillion, 1999). This perception may contribute to lower tragedy ratings for suicide and may explain why there was no impact of AOD on tragedy ratings. Participants may have rated death by suicide as being less tragic overall because they felt that the deceased chose to die, with the lack of an age effect likely related to. Other modes of death could have been considered less tragic for older people because it was outside their control, and death in older age is considered normal. Death by suicide may have been considered as being within the individual's control, and thus perceived as abnormal, even though the death occurred in older age.

When MOD was an accident, ratings of sympathy decreased with AOD, consistent with what would be predicted based on the linear versions of YPLL. Accidents caused by another person are out of the control of the individual. Moreover, death in a car accident caused by another person is typically not related to age. It is, therefore, possible that participants did not believe that the deceased had any control over their death. Accordingly, people tend to sympathize more and view death as a greater tragedy when the AOD is younger, consistent with the age-related linear decrease suggested by the YPLL theory. That is, there is younger individuals have greater perceived social value. At the same time, measures of empathy were similar for all AODs when MOD was a car accident, suggesting that people were able to imagine themselves in that situation at any age. In terms of tragedy, ratings were highest for an accident. Again, this overall effect may be due to the fact that the deceased was not seen as having any control over their death. At the same time, accidents are the only MOD of the three that are readily reported in the media. Individuals may rate their tragedy as higher because they are more exposed to violent, unnatural causes of death (Combs & Slovic, 1979). Disease is under-reported in the media because it is a "normal" cause of death, and many suicides go unreported to avoid copycats. A lack of media reporting may lead people to rate their tragedy lower because these forms of death are not sensationalized (Combs & Slovic, 1979).

For the stroke MOD, sympathy, empathy, and tragedy ratings were lower when AOD was older but did not differ when AOD was middle-aged or younger. Death as a result of a stroke may be seen as a more natural cause of death when compared to accidents or suicides. At the same time, a stroke is unlikely to be considered normal in healthy middle-aged or

younger adults. Unlike suicide, stroke is not likely to generate perceptions of blame. This might have been reflected in higher sympathy and tragedy ratings, particularly, when the deceased was younger or middle-aged. For older adults, sympathy and tragedy ratings were lower compared to the other AODs. This is possibly due to the fact that death from stroke is more commonly associated with older adults. Therefore, participants did not experience high levels of sympathy or tragedy because stroke could be perceived as an accepted and normal cause of death in the elderly (Pound, Gompertz, & Ebrahim, 1998). For this same reason, it is possible that participants felt highly empathy toward younger and middle-aged individuals who do not normally die from a stroke. Continuing from this, as AOP increased empathy ratings for the stroke MOD also increased but did not for the other two MODs. Because stroke is an accepted cause of death, it is possible that older participants realize that this may be a viable cause of their personal mortality, and thus feel more empathic toward the deceased in the vignette because they could easily see themselves in the same position.

Terror management theory

As mentioned in the introduction, there is a possibility that individuals base their perceptions of the deceased in part subconsciously through TMT (Harmon-Jones et al., 1997). Rating scenarios in which individuals can see themselves enhances personal mortality and may impact ratings of the social value. As an overall example, sympathy ratings increased as the AOP increased. This may be attributed to older participants approaching the "natural" age of death, and thus more aware of their own personal mortality. Regardless of the age of the deceased in the vignette personal morality salience in increased with age, and thus this may contribute to increased feelings of sympathy toward death at any age.

In the case of an accident, empathy ratings were similar across all AODs, while ratings of sympathy and tragedy decreased as a function of AOD. Most participants were closest in age to the younger AOD. Given that an accident is possible for someone of any age, participants felt closest to the victims when they were younger. High sympathy and tragedy ratings may have been a mechanism to help manage thoughts of their own mortality. Empathy may have remained stable across all AODs because participants could imagine themselves in a car accident at any age.

In the case of suicide, empathy ratings were lowest overall because participants may have distanced themselves from that MOD by believing in the idea that suicide is a choice. When a participant was less empathic with a victim of suicide, they may have suppressed thoughts of suicide they have had throughout their lives by not imagining themselves in the position of the deceased. In other words, they manage the terror of suicide. One study has suggested closeness to suicide prolongs grief, so participants may have attempted to create distance by providing lower tragedy ratings for suicide (Cerel et al., 2017). At the same time, the higher sympathy ratings when AOD was older suggest that the younger adult participants may have felt that suicide was a more rational choice for older adults.

When MOD was a stroke, ratings of sympathy and tragedy were lowest for older adults but equal for middle-aged and younger adults. This pattern suggests that there is an increased fear of this death when it occurs in anyone but older adults. To manage their fear of this death, participants may have reported higher levels of sympathy and tragedy for younger and middle-aged adults. Interestingly, empathy ratings were highest for when a younger adult died of a stroke. TMT would suggest that when AOD was young, empathy should be lower because the participants could imagine themselves having a stroke, like what was observed when MOD was suicide. The difference between these two MODs may be feasibility. A stroke in a young adult is rare, thus there may be less "terror" when empathizing with the deceased. A suicide is more common in younger adults, and contemplating suicide (but not acting on those thoughts) is even more common in younger adults. Thus, the stroke may have felt so rare as to be impossible, while the suicide was not. Alternatively, because the participants in this study were largely younger, higher empathy ratings may reflect group cohesion. Because higher levels of empathy reflect higher cohesion and understanding, the younger participants may have been better able to place themselves in the situation of a younger stroke and relate to the individual to express higher levels of empathy.

Limitations

It is important to highlight some limitations with both the design and interpretation of this study. One possible limitation was the use of a previously defined scale to measure the ratings of sympathy, empathy, and tragedy. The SAVE scale (Stillion et al., 1989) was

used to determine participant attitudes and is proven to be ecologically valid; however, this scale does not account for any other variable, such as family status. In the vignettes, some deceased individuals left behind family, which may have influenced the participant's ratings of the three variables. One systematic review found that there were significant differences in ratings of grief when there were spouses or children left behind (Logan, Thornton, & Breen, 2017). While differences in the perceptions of death related to other non-MOD details in the vignettes would have been accounted for in the counterbalancing and randomization procedure, it is important to note that this effect was not controlled for. Future research should examine how other situational factors impact perceptions of death.

A second limitation is the presence of social desirability bias. Overall means for each rating was above 3/5. This suggests most participants reported high levels of sympathy, empathy, and tragedy for the deceased. Despite these high scores, there was enough variability in the data to observe statistically robust effects of both AOD and MOD. Future work could use a 7- or 9-point scale to allow for more variability at the high ends of the scale. Other ways to limit social desirability bias could be by carefully crafting questions that address similar underlying social constructs without introducing overt awareness of those constructs in the participant. In all circumstances, we present that administering questions like this anonymously, and online, as was done here, is the best practice to minimize social desirability bias.

Conclusion

The current study investigated how AOD and MOD impact sympathy, empathy, and tragedy ratings of the deceased. The results suggested that perceptions of the deceased are simultaneously influenced by the age at which the person died and the way in which the person died. Based on the YPLL theory, it was expected that ratings of sympathy, empathy, and tragedy should decrease as AOD increases, and in general, this pattern was observed. Most critical, it was qualified by a series of interactions with MOD. These interactions were likely caused by individuals modifying their perceptions of the deceased based on social norms, death norms, and terror management. The present research suggested that perceptions of the deceased are significantly impacted by how they die. This pattern of results may highlight the far reaches of social norms; they are not only important when living, but also for those who are deceased. Finally, knowing that how a person dies can impact perceptions of the deceased may offer a starting point for bereaved loved ones, as it is often bereaved who suffer the consequences of social judgments about the deceased. It is also critical for the community around the bereaved to understand these issues when providing support and counsel to bereaved individuals.

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