



Death Awareness, Compassion and Attitudes Toward People With Disabilities

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Death Awareness, Compassion and Attitudes toward People with Disabilities

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Abstract

Across the world, people with disabilities have poorer economic, educational and health outcomes than people without disabilities (World Health Organization (WHO) & World Bank Group (WBG), 2011). These disadvantages are the result of the complex interaction not only of health and personal factors but also of environmental factors that hinder individuals with disabilities from full participation in society (United Nations, 2006). Negative attitudes are often the greatest environmental barrier reported by people with disabilities (Findler, Vilchinsky, & Werner, 2007). Accordingly, the current study aimed to investigate how attitudes may be improved to create more accessible environments for individuals with disabilities.

Based on evidence to-date regarding the relationship between demographic factors and attitudes toward people with disabilities, the present study hypothesized that there will be no differences in attitudes toward people with disabilities among individuals with respect to gender, race/ethnicity and income, but that there will be differences with respect to age such that older individuals will have more negative attitudes toward people with disabilities than younger individuals. Furthermore, because a relationship between death awareness and negative attitudes toward people with disabilities has already been established, the current study hypothesized that death awareness will be significantly associated with more negative attitudes toward people with disabilities. In addition, given that previous research has indicated that compassionate value reminders may moderate the effect of death awareness on political attitudes, this study further

hypothesized that reminders of compassionate values will moderate the negative impact of death awareness on attitudes toward people with disabilities.

The SurveyMonkey platform was used to recruit participants online, gather demographic information, and conduct an online experiment wherein each participant in the study was primed with two topics: (1) death and compassion, or (2) death and a neutral (control) topic, or (3) dental pain (control) and compassion, or (4) dental pain (control) and neutral (control) topic. Attitudes toward people with disabilities was measured using the Attitudes to Disability Scale (ADS; Power et al., 2010).

Study results supported the hypotheses that there are no significant differences in attitudes toward people with disabilities with respect to gender, racial/ethnic groups and income levels, but that there are significant differences with respect to age. However, the results did not support the hypothesis that older people will have more negative attitudes toward people with disabilities than younger people, and further research that takes into consideration the relationship between death awareness and age is recommended. Moreover, study results supported the hypothesis that death awareness is significantly associated with negative attitudes toward people with disabilities but does not support the hypothesis regarding the moderating effect of compassion on the negative impact of death awareness on attitudes toward people with disabilities. Rather, the data suggest that compassion may actually increase the effect.

The study provides initial evidence suggesting that compassionate value reminders may exacerbate, rather than alleviate, the negative impact of death awareness on attitudes toward disabilities. Further research on the possible confounding influence of compassion fatigue, conspicuous compassion, and empathic accuracy is recommended.

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Chapter I

Introduction

People with disabilities, individuals with physical or mental impairments that substantially limit one or more major life activities (Americans with Disabilities Act National Network, 2020), constitute a significant minority group worldwide. Over one billion people, or 15 % of the world's population, live with some form of disability globally, and about 200 million of whom experience substantial difficulties in functioning directly related to their disability (World Health Organization (WHO) and World Bank Group (WBG), 2011). In the United States in particular, the number of individuals who have a disability is estimated to be around 57 million people, or nearly 20% of the population (National Organization on Disability, 2020).

Disability will be of even greater concern going forward as its prevalence is projected to rise considerably due to rapidly aging populations and the associated higher risk of disability in older people, the pervasive increase in the number of people with chronic diseases such as diabetes, cardiovascular disease, cancer, and mental health disorders, as well as scientific and medical advances that preserve and prolong life (Sahin and Akyol, 2010; Sen and Yurtsever, 2007; Uysal et al., 2014).

Across the world, people with disabilities have higher rates of poverty, less economic participation, lower educational achievements and poorer health outcomes than people without disabilities (World Health Organization (WHO) & World Bank Group (WBG), 2011). These disadvantages are the result of the complex interaction not only of

health and personal factors but also of environmental factors that hinder individuals with disabilities from full participation in society on an equal basis with their counterparts without disabilities. Inaccessible environments create disability by creating barriers to participation and inclusion (United Nations, 2006). Disabling environmental barriers include: lack of accessibility to public services such as transportation (Gonzales, Stombaugh, Seekins, & Kasnitz, 2006; Loprest & Maag, 2001) and information, including web-based and phone-based communication and services (International Telecommunications Union, 2008); ineffective policies that fail to take into account the needs of people with disabilities (Mabbett, 2018); inadequate provision of services such as healthcare or rehabilitation (Stone, 2009), and negative attitudes toward people with disabilities (Parker, 2001; Sharkawy, Newton, & Hartley, 2006).

Negative Attitudes toward People with Disabilities

Negative attitudes are often the greatest environmental barrier reported by people with disabilities (Findler, Vilchinsky, & Werner, 2007). As such, improving negative attitudes is often a crucial step toward increasing more accessible and equitable environments for individuals with disabilities (Uysal et al., 2014).

An attitude is a learned and stable predisposition to react to a given situation, person or other set of cues in a consistent way (Corsini, 1999). Negative attitudes, such as the equation of disability with incapacity, persist in reference to people with disabilities and are deeply rooted in imagery, language, stereotypes, and stigma (Ingstad, Baider, & Grut, 2011). Such negative attitudes guide behavior toward people with disabilities (Roberts & Smith, 1999), and result in the negative treatment of individuals with disabilities across many aspects of their lives, including healthcare (Lam et al, 2010;

Loon, Knibbe, & Van Hove, 2005; Marks, 2007; Seccombe, 2007; Uysal et al., 2014) employment (Chima, 1998; Hall et al, 1994; Hunt & Hunt, 2004; International Labour Organization, 2006; Kennedy & Olney, 2001; Stone & Colella, 1996; Waghorn & Lloyd, 2005), and education (Boersma & Chapman, 1982; Huang & Diamond, 2009; Kwon, 2005; Mephram, 2010; Price, 2003; United Nations Children's Fund, 2005; Watson et al., 1999).

Negative attitudes held by healthcare providers about patients with disabilities may lead to inaccurate or inappropriate treatment and delivery of care (Lam et al, 2010; Seccombe, 2007; Uysal et al., 2014). In addition, insensitive or disrespectful treatment by healthcare providers leads to distrust of the healthcare system, reluctance or avoidance to seek care, and reliance upon self-diagnosis and treatment among people with disabilities (Loon, Knibbe, & Van Hove, 2005; Marks, 2007; Uysal et al., 2014)

With respect to employment, the negative attitudes that employers and co-workers hold regarding people with disabilities is one of the major barriers that prevent individuals with disabilities from getting hired, being employed in sufficiently challenging jobs, and advancing in their careers (Chima, 1998; Hall et al, 1994; Hunt & Hunt, 2004; Kennedy & Olney, 2001; Stone & Colella, 1996). For example, employers may discriminate against employees with disabilities because of misconceptions about their capabilities and productivity (Waghorn & Lloyd, 2005). Additionally, some people with disabilities may have low self-expectations about the ability to be employed and may not even try to find employment (International Labour Organization, 2006).

In the area of education, negative attitudes of teachers, school staff, peers, and even family members are barriers to the inclusion of children with disabilities in

mainstream schools (Huang & Diamond, 2009; Kwon, 2005; Price, 2003). Moreover, negative attitudes of educational staff and fellow students can result in aggressive acts against students with disabilities, including physical and verbal threats and abuse, as well as social isolation (United Nations Children's Fund, 2005). In fact, the fear of bullying can be as serious an issue for students with disabilities as actual bullying because it creates a vicious cycle (Mepham, 2010; Watson et al., 1999) and may cause students with disabilities and their families to avoid beneficial situations due to potential distress. For instance, children with disabilities may avoid going out or may opt to attend special schools, or their parents may restrict unsupervised activity (Watson et al., 1999). This avoidant behavior limits opportunities for students with disabilities and increases their isolation, which in turn heightens their susceptibility to further bullying (Mepham, 2010) and related mental health issues such as depression, anxiety, and post-traumatic stress disorder (Smokowski & Evans, 2019). However, even when teachers, peers, and family members are supportive, their negative attitudes about the capacity of students with disabilities to learn may still affect students' level of academic achievement (Boersma & Chapman, 1982).

Hence, negative attitudes have an immense influence on creating disabling environmental barriers that preclude the full participation and inclusion of people with disabilities in society.

Demographics

Given the important role of attitudes in the experience and extent of disability, several lines of research have investigated the origins of negative attitudes toward people with disabilities (Livneh, 1982). One line of research has focused on investigating the

relationship between demographic characteristics (e.g., gender, age, race/ethnicity, income) and attitudes toward people with disabilities. In general, the findings from this area of research have largely been inconclusive.

Gender

There is a lack of agreement among previous research as to whether there are significant differences between genders in attitudes toward people with disabilities. Several studies have shown that women display more favorable attitudes toward people with disabilities (Chen, Brodwin, Cardoso, & Chan, 2002; Donnell, Alston, Hampton, & Bell, 1999; Hampton & Xiao, 2007; Seo & Chen, 2009). For example, Seo and Chen (2009) conducted a study of 311 undergraduate and graduate students recruited from a large public university in the mid-western United States. The participants were 69% female and 31% male. The majority of the participants (60.5%) were between the ages of 18 and 20 and 38.8% were over the age of 21. Participants completed a demographic questionnaire and the Attitudes Toward Disabled Persons Scale, Form-O (ATDP-O; Yunker & Block, 1986) online. The ATDP-O is a 20-item instrument using a Likert scale from +3 (“I agree very much”) to -3 (“I disagree very much”) that assesses the extent to which respondents perceived people with disabilities as similar to those without disabilities. A score of 60 was added to the total sum of the scores of the 20 items to eliminate negative scores. The possible range of total scores was 0 to 120, with higher scores indicating more favorable attitudes toward people with disabilities. An analysis of variance (ANOVA) found that there were significant differences in attitudes toward people with disabilities in terms of gender ($p < .001$), such that female participants

showed more positive attitudes ($M = 84.00$, $SD = 11.56$) than male participants ($M = 73.72$, $SD = 14.57$) toward people with disabilities.

However, numerous studies have also reported that there are no differences in attitudes toward individuals with disabilities with respect to gender (Hunt & Hunt, 2004; Lyons, 1991; Patrick, 1987; Parasuram, 2006), including Ouellette-Kuntz, Burge, Brown and Arsenault (2010), a study of 625 adults (66% female, 34% male) in a six-county area of Ontario, Canada. Participants ranged in age from 18 to 93 years and had an average age of 50.08 years ($SD = 15.92$). Participants were randomly selected from InfoCanada's electronic databank of white pages residential phone numbers. Those who agreed to participate completed a telephone interview where they were asked to provide demographic information and to complete the Social Distance Subscale of the Multidimensional Attitude Survey on Mental Retardation (MASMR; Antonak & Harth, 1994), which is an eight-item instrument using a Likert scale from 1 ("strongly agree") to 4 ("strongly disagree") that assesses the level of preferred social distance from people with mental disabilities. The scores of the eight items were averaged, with higher average scores indicating lower social distancing and more favorable attitudes toward people with disabilities. Results from an ANOVA analysis suggested that there were no significant differences in attitudes toward people with disabilities in terms of gender.

Age

While previous studies point to significant differences in attitudes toward people with disabilities with respect to age, there is a lack of consensus in terms of the direction and distribution of the differences. Some studies have indicated that older people have less positive attitudes toward people with disabilities than their younger counterparts

(Clark & Binks, 1966; Lawton, 1964; Murray, 1969; Ouellette-Kuntz et al., 2010). For instance, in the previously cited study by Ouellette-Kuntz et al. (2010), the researchers found that there were significant differences in attitudes toward people with disabilities in terms of age ($p < .01$), such that older participants compared with younger participants had more negative attitudes toward individuals with intellectual disabilities and preferred to keep a greater social distance from them. Post-hoc tests revealed significant differences between the 65+ age category ($M = 3.32$, $SD = 0.46$) and the 45-64 age category ($M = 3.49$, $SD = 0.42$), as well as between the 65+ age category and the 25-44 age category ($M = 3.54$, $SD = 0.42$).

However, research has also suggested that attitudes toward people with disabilities with respect to age oscillates over time (Chan, Livneh, Pruett, Wang, & Zheng, 2009). For example, in a study of 300 teachers (80% female, 20% male, with a median age bracket of 31-40 years) from state, municipal and private schools in Mumbai, India, Parasuram (2006) found that participants in the 41 – 50 years age bracket have significantly more negative attitudes toward people with disabilities than participants in the younger and older age categories. Participants were randomly handed a written survey to complete and were asked to provide demographic information and to complete the Attitudes Toward Disability Scale (ATDP, Berry & Dalal, 1996), which is a 12-item instrument using a Likert scale from 1 (“disagree very much”) to 5 (“agree very much”). The scores of the 12 items were averaged, with higher average scores indicating more positive attitudes toward people with disabilities. In terms of age, 62 participants (20.7%) were between the ages of 20 and 30, 125 (41.7%) were between the ages of 31 and 40, 86 (28.7%) were between the ages of 41 and 50, and 27 (9%) were between the

ages of 51 and 60. An ANOVA analysis revealed that there was a significant difference in attitudes toward people with disabilities ($p < .05$), such that the attitude scores of participants in the 41-50 age category ($M = 2.86$, $SD = .59$) were significantly more negative than that of participants in the 20-30 age category ($M = 3.18$, $SD = .56$); as well as of participants in the 51-60 category ($M = 3.30$, $SD = .68$).

Race/Ethnicity

Similar to gender, there is conflicting evidence regarding whether there are significant differences in attitudes toward people with disabilities in terms of race/ethnicity. For example, Hunt and Hunt (2004) found no significant differences in attitudes toward individuals with disabilities in terms of race/ethnicity in a study of 190 undergraduate business students (48% female, 52% male) at a medium-sized, mid-Atlantic university in the United States. The mean (M) age of the participants in the study was 20.46 years ($SD = 1.96$), and 87% were White. Participants completed a demographic questionnaire and the Attitudes Toward Disabled Persons Scale, Form-O (ATDP-O; Yunker & Block, 1986). As previously discussed in Seo and Chen (2009), the possible range of total scores for the ATDP-O was 0 to 120, with higher scores indicating more favorable attitudes toward people with disabilities. A multivariate analysis of variance indicated that there were no significant differences in attitudes toward individuals with disabilities in terms of race/ethnicity.

However, the aforementioned Seo and Chen (2009) study with 311 participants (of whom 84.2% self-identified as White, 9.3% as Black, 5.1% as Asian, and 0.3% as Hispanic) reported significant differences in attitudes toward people with disabilities in terms of race/ethnicity ($p < .001$), such that White participants showed more positive

attitudes ($M = 82.40$, $SD = 11.98$) than non-White participants ($M = 72.09$, $SD = 17.66$) toward people with disabilities.

Income

Consistent with the studies presented above on gender and race/ethnicity, results from research that have looked into whether there are significant differences in attitudes toward people with disabilities with respect to income have also been mixed. The previously discussed Ouellette-Kuntz et al. (2010) study found no significant differences in attitudes toward people with disabilities in terms of income. Of the 625 adult participants in the study, 8.3% earned less than \$20,000 per annum, 40.6% from \$20,000 to \$59,999, 25.4% from \$60,000 to \$99,999 and 9.8% earned \$100,000.

However, the Parasuram (2006) study cited above reported that participants in a higher income bracket showed more positive attitudes toward people with disabilities than participants in a lower income bracket. An ANOVA analysis showed that there were significant differences in attitudes toward people with disabilities ($p < .05$), such that the attitude scores of participants in the 20,001 – 30,000 rupee monthly income category ($M = 3.25$, $SD = .58$) were significantly more favorable than that of participants in the less than 10,000 rupee monthly income category ($M = 2.90$, $SD = .60$). Parasuram (2006) indicated that participants with a monthly family income of 20,001 – 30,000 rupee would be considered upper middle class in India, whereas those in the less than 10,000 rupee category would be considered lower middle class.

Implicit Bias

The mixed and inconclusive findings of past studies regarding the relationship between demographic factors and attitudes toward people with disabilities may stem from the inconsistency and ambivalence that characterizes bias toward people with disabilities (Katz, 2014). For instance, although expressed attitudes toward people with disabilities have become more positive and inclusive over time, negative stereotypes and misinformation about their competencies and capabilities persist (VanPuymbrouck, Friedman, & Feldner, 2020). In addition, despite laws that mandate equality and fairness, people with disabilities continue to face discrimination and lack of access to services such as healthcare, education, communication, and transportation (World Health Organization (WHO) & World Bank Group (WBG), 2011). Furthermore, although most social and cultural norms emphasize altruism and kindness, individuals with disabilities often experience derogation and rejection (Hirschberger, 2006).

Dovidio, Pagotto, and Hebl (2011) argued that bias against individuals with disabilities is often implicit, frequently occurring outside conscious intention or awareness. It is therefore important to understand the subtle cues that trigger implicit bias, and previous research has suggested that death awareness may be one such cue (Wilson, Thomas, & Deuling, 2016).

Death Awareness

According to terror management theory, death awareness is emotionally distressing for humans (Greenberg, Pyszczynski, & Solomon, 1986). Unfortunately, people with disabilities implicitly remind people of the fragility and finitude of human life, and consequently, evoke death-related thoughts and fears in others. This was

demonstrated by Hirschberg, Florian, and Mikulincer (2005, Studies 3 and 4) in two experiments. In both studies, Jewish Israeli undergraduates from several colleges and universities in Israel read a vignette describing a typical day of a similarly-aged ingroup member (Jewish Israeli) or outgroup member (Arab Israeli) who was either a person with or without a physical disability. Participants then completed a distraction questionnaire, in line with previous studies that found death awareness occurs after brief distractions (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). After the distraction task, the 124 participants (60 women and 64 men, ranging in age from 17 to 42 years, with a median age of 24 years) in the first experiment performed a word completion task designed to assess the accessibility of death-related thoughts. Participants filled in word fragments that could be completed with either a death-related or neutral word. In contrast, the 146 participants (79 women and 67 men, with an age range of 19- 55 years, and a median age of 24 years) in the second experiment completed the Fear of Personal Death Scale (Florian & Kravetz, 1983). Participants rated 20 possible reasons for fear of personal death using a scale from 1 (“totally incorrect for me”) to 7 (“totally correct for me”), with higher scores indicating more heightened fear of death. Both experiments used three-way ANOVA with gender (men, women), target type (with disability, without disability), and target ethnicity (ingroup, outgroup) as factors. The dependent measure was the number of death-related words for the former experiment, and fear scores for the latter. Study results showed that, regardless of target ethnicity, men expressed a significantly ($p < .05$) higher level of death-related thoughts and a heightened fear of personal death when exposed to a person with a physical disability. By contrast, female participants experienced a significantly ($p < .05$) higher level of fear of personal death

only when exposed to an outgroup target with a physical disability. Taken together, while considering gender and outgroup confounds, the experiments provided evidence that people with disabilities activated death-related cognitions and fears in others.

Moreover, terror management theory posits that to cope with death-related fears, people use anxiety-buffering strategies that validate the belief systems that give their lives order and meaning (Burke, Martens, & Faucher, 2010). Consequently, death awareness leads to more positive responses toward those that reinforce one's belief systems and more negative responses toward those that threaten them. Indeed, empirical studies found that death awareness led to stereotypic thinking (Schimel et al., 1999), as well as preferential responses toward ingroup members and exclusionary responses toward outgroup members (Fritzsche, Jonas, & Fankhanel, 2008; Greenberg et al., 1990; Pyszczynski, Solomon, & Greenberg, 2015). Thus, the same anxiety-buffering strategies that help people cope with death fears may result in negative outcomes toward others, especially those that threaten one's belief systems, such as people with disabilities (Sher et al., 2017).

As expected, a similar pattern of negative outcomes was found in research studies that investigated the impact of death awareness on responses to people with disabilities (Hirschberger, 2006; Hirschberger, Ein-Dor, and Almakias, 2008; Hirschberger, Florian, and Mikulincer, 2005). For example, Hirschberger, Ein-Dor, and Almakias (2008) demonstrated that death reminders led to decreased helpful behavior toward people with disabilities. Seventy-four female participants from Tel-Aviv University (Israel) aged 19 to 42, with a median age of 23, were approached near the entrance of a library by a research assistant who handed them a flier either about death or pain. Upon entering the

library, participants were approached by another research assistant, either walking or seated in a wheelchair, who asked if the participant was willing to help her by completing a questionnaire for a class assignment. A $2 \times 2 \times 2$ log-linear analysis revealed a significant ($p < .05$) three-way interaction among mortality salience (death, pain), confederate condition (wheelchair, walking), and the willingness to help (yes, no). Further analyses showed that when the confederate was walking, death awareness led to more help: 35% helped when reminded of pain, and 70% helped when reminded of death ($p < .05$). However, when the confederate was in a wheelchair, death awareness led to less help: 89% helped when reminded of pain, whereas only 58% helped when reminded of death ($p < .05$). Hence, the findings indicated that participants were less likely to help a person with a disability when in a state of death awareness.

In addition, Hirschberger (2006) and Hirschberger, Florian, and Mikulincer (2005) found that death reminders led to more negative attitudes toward individuals with disabilities. Both studies used a typical mortality salience study design to prime participants with thoughts of death. After a cover questionnaire designed to mask the purpose of the study, participants in the experimental group were primed with thoughts of death by answering two open-ended questions about their own mortality, whereas those in control groups wrote about a non-death topic. Hirschberger (2006) had one control group about dental pain, while Hirschberger, Florian, and Mikulincer (2005) had two control groups about failure and watching TV. Participants then completed a neutral questionnaire to distract from the death prime.

After the distraction task, the 142 participants in Hirschberger (2006) who were undergraduate students from Bar-Ilan University (Israel) ranging in age from 18 to 49

years, with a median age of 23 years (88 females, 51 males, and 3 who did not report their gender) were presented with a vignette describing the daily difficulties of “Dan”, a similarly-aged peer who was portrayed as one of three characters: a clumsy person, a person with a mild injury, or a person with a permanent physical disability. After reading the vignette, participants completed a six-item Attribution of Blame Scale that measured the extent to which participants attributed blame to Dan regarding his daily difficulties. Responses were made on a scale from 1 (“strong disagreement”) to 7 (“strong agreement”), with higher scores indicating greater attribution of blame. A 2 x 2 ANOVA with mortality salience (death, pain) and target characteristic (clumsy, mild injury, physical disability) as factors, and blame scores as the dependent measure, yielded a significant main effect of target characteristic ($p < .001$) such that less blame overall was assigned to the physically disabled target ($M = 2.93$, $SD = .58$), than to the mildly injured target ($M = 4.43$, $SD = .98$), and the clumsy target ($M = 4.77$, $SD = 1.13$). However, the main effect was moderated by a significant interaction between mortality salience and target characteristic ($p < .05$). Tests for simple main effects revealed that when the target had a physical disability, death primes led to significantly ($p < .01$) greater attributions of blame ($M = 3.24$, $SD = .48$) compared to pain primes ($M = 2.67$, $SD = .54$). Thus, while targets with physical disabilities were attributed the least amount of blame overall, they were attributed a greater amount of blame when participants were reminded of death.

In contrast, after the distraction task, the 116 participants in Hirschberger, Florian, and Mikulincer (2005) who were undergraduate students from several Israeli academic institutions (64 females and 52 males, with an age range of 17-23 years, and a median age of 23 years) were presented with a vignette describing the typical day of a similarly-aged,

same-sex peer with a physical disability. After reading the vignette, participants completed a 24-item scale that consisted of 14 compassion items (Florian, Mikulincer, & Hirschberger, 2000) and ten filler items. Responses were made on a scale from 1 (“not at all”) to 6 (“very much”), with higher scores indicating more compassionate responses. A 2 x 2 ANOVA with mortality salience (death, failure, neutral) and gender (female, male) as factors, and compassion scores as the dependent measure, yielded a significant main effect ($p < .01$) for gender, with women reporting higher levels of compassion ($M = 4.30$, $SD = .14$) than men ($M = 3.71$, $SD = .38$). The main effect was moderated by a significant 2-way interaction between mortality salience and gender ($p < .05$). Tests for simple main effects revealed that for women, no significant differences were found in compassion scores across the three conditions. For men however, death awareness led to significantly ($p < .05$) lower levels of compassion scores ($M = 3.19$, $SD = .81$), than the watching TV condition ($M = 4.14$, $SD = .80$), or failure condition, ($M = 3.82$, $SD = 1.22$). Hence, while men responded with less compassion toward a target with a physical disability in general, they responded with significantly less compassion when reminded of death.

Overall, findings from the aforementioned studies have demonstrated that death awareness is related to more negative outcomes toward people with disabilities. Nevertheless, research has also suggested that the negative effects could be mitigated. For example, Ben-Naim, Aviv, and Hirschberger (2008) found that interpersonal contact moderates the link between death reminders and negative attitudes toward people with disabilities in a study of 102 undergraduates aged 18-34 from Bar-Ilan University (Israel; 68 females, 34 males). Using a similar study procedure as the previously mentioned

Hirschberger (2006), participants completed a cover questionnaire, two questions that were either about death or dental pain, and a distraction task from the death prime. They were then led to another room where a confederate was waiting either in a wheelchair or a regular chair. The participant and confederate were given shape-completion tasks that were designed to be accomplished either individually or collaboratively. After either working alone or with the confederate to complete the shape task, participants evaluated the confederate against a list of traits (e.g., “friendly”, “smart”, “honest”) in a 15-item questionnaire on a scale from 1 (“not at all”) to 7 (“very much”), with higher scores indicating a more positive evaluation of the confederate. A 2 x 2 x 2 ANOVA with mortality salience (death, pain), confederate characteristic (wheelchair, regular chair), and task type (individual, collaborative) as factors, and confederate evaluation scores as the dependent measure, yielded a significant three-way interaction among the factors, ($p < .05$). Tests for simple main effects showed that in the individual task condition, the confederate in the wheelchair was evaluated significantly ($p < .01$) more negatively by the participants who were reminded of death ($M = 4.7$, $SD = .44$) than the participants who were reminded of pain ($M = 5.49$, $SD = .66$). However, when the participant collaborated with the confederate in the wheelchair, death awareness did not lead to more negative evaluations of the confederate. These results indicated that collaborative interpersonal contact moderated the relationship between death awareness and negative attitudes toward people with disabilities.

Additionally, Gailliot et al. (2008) suggested that when social norms are highlighted, death primes may lead to increased helping behavior toward people with disabilities. The researchers conducted a field study in the US of 113 participants (57

females, 56 males) walking either by a cemetery or a parking lot that was out of view of the cemetery. Participants encountered a female confederate who was either in a wheelchair or was standing. The confederate primed participants with the social norm of helping by dropping a book when the participant was about 1.5 meters away, leaving enough time for the participant to pick up the book or continue walking. Results from a logistic regression found that the main effect of confederate characteristic (wheelchair, standing) was significant ($p < .001$), and was qualified by a significant interaction between mortality salience (cemetery, parking lot) and confederate characteristic ($p < .05$). Further analyses indicated that when participants were primed with death thoughts (cemetery), they were more likely to help the confederate in the wheelchair than the standing confederate ($p < .001$). In addition, the confederate in the wheelchair was more significantly more likely ($p = .05$) to be helped by participants reminded of death (cemetery) than those who were not (parking lot). Hence, findings showed that social norm reminders may not only mitigate, but also reverse, the expected relationship between death awareness and attitudes toward people with disabilities.

Compassion

Taken together, the study results above have demonstrated that the link between death and disability is not deterministic and may be moderated by factors such as interpersonal contact and social norm reminders. One possible mitigating factor that has not been examined to date is compassionate value reminders, which has been shown to influence the impact of death awareness on political attitudes (Rothschild, Abdollahi, & Pyszczynski, 2009; Vail, Arndt, Motyl, & Pyszczynski, 2009).

For instance, Vail, Arndt, Motyl, and Pyszczynski (2009) demonstrated that when compassionate values were salient, death awareness led to increased support for the more compassionate candidate in the 2008 US presidential elections. The study of 91 undergraduate students (64 females, 27 males) at a mid-western US university with a mean age of 18.34 years ($SD = .72$) used a similar study design as the previously cited Hirschberger (2006) study where participants completed a cover questionnaire, followed by short essays that were either about death or uncertainty, and a distraction task from the death prime. Participants then used a 10-point scale from 1 (“strongly disagree”) to 10 (“strongly agree”) to rate their agreement with each of four quotations that were either all about compassion, to prime thoughts of compassionate values; or a variety of food-for-thought items that do not refer to compassionate values. Lastly, participants completed a 6-item measure of candidate support, with each item scored on a 10-point scale from 1 (“John McCain”) to 10 (“Barack Obama”). Lower scores indicated more support for McCain, and higher scores indicated more support for Obama, who was perceived to be the more compassionate candidate (Steinhauser, 2008). A 2 x 2 ANOVA with mortality salience (death, uncertainty) and compassion salience (compassion, neutral) as factors, and candidate support scores as the dependent measure, revealed a significant two-way interaction between mortality salience and compassion salience, $p = .004$. Further analyses showed that when participants were not reminded of death, candidate support did not differ significantly as a function of the compassionate value reminders. However, when participants were primed with death thoughts, compassionate value reminders led to significantly ($p < .001$) greater support of Obama, ($M = 7.76$, $SD = .45$) than neutral reminders ($M = 6.45$, $SD = .40$). Hence, the study findings indicated that compassionate

value reminders influenced the impact of death awareness on political support toward the more compassionate option.

Similarly, Rothschild, Abdollahi, & Pyszczynski (2009) found that reminders of compassionate values, when culturally relevant, mitigated the effect of death reminders toward a more compassionate response. The study of 120 Shiite Muslim undergraduates aged 18 to 31 ($M = 21.69$, $SD = 3.15$) from two Iranian universities (66 females, 54 males) demonstrated that compassionate values from the Koran decreased anti-Western attitudes among participants primed with death thoughts. The study design was also similar to the aforementioned Hirschberger (2006) study in that participants completed a cover questionnaire, followed by short essays that were either about death or dental pain. To prime participants with thoughts of compassion, the participants read statements that described compassionate values that were either directly taken from the Koran or were secularized interpretations of the Koran passages. After some distraction tasks, the participants completed a questionnaire which included five items that assessed anti-Western attitudes and some filler items. Results from a regression analysis showed that the significant main effects of mortality salience (death, pain) ($p < .05$), and compassion (Koran, secular) ($p < .01$), were qualified by a significant two-way interaction ($p < .01$). Further analyses indicated that when participants were reminded of compassionate values in secular format, death awareness led to more anti-Western attitudes ($b = 1.35$, $p < .01$). However, when participants were reminded of compassionate values from the Koran, death reminders led to less anti-Western attitudes, ($b = -.61$, $p < .01$). Taken together, the results from previous research has indicated that compassionate value reminders may moderate the effect of death awareness on political attitudes.

In this regard, the results of the studies above should be considered in light of several limitations. All of the discussed experiments used either written descriptions of individuals with disabilities or a confederate playing the role of a person with a disability. Outcomes may vary versus studies using videos of individuals with disabilities or a confederate who is a person with a disability. Also, the use of non-representative samples limits the generalizability of results beyond the cultural and age groups of the participants. In addition, because there is a discrepancy between the values most people ascribe to and their actual reactions when encountering a person with a disability (Wright, 1983), the self-report measures used in the above studies may be subject to social desirability response bias.

Hypotheses

Overall, results from past studies regarding the relationship between demographic factors and attitudes toward people with disabilities have been inconclusive. Specifically, there are conflicting findings as to whether there are significant differences in attitudes toward people with disabilities with respect to gender, race/ethnicity, and income. Based on the lack of definitive evidence to showing differences, the present study hypothesizes that there will be no significant differences in attitudes toward people with disabilities with respect to gender, race/ethnicity, and income.

In addition, previous research suggests that there are significant differences in attitudes toward people with disabilities with respect to age with older ages evidencing more negative attitudes when compared to younger people. However, more specific findings regarding the direction and distribution of these age differences have been unclear. Given the evidence-to-date, the present study hypothesizes that there will be

significant differences in attitudes toward people with disabilities with respect to age, such that older people will have more negative attitudes toward people with disabilities than younger people.

Furthermore, due to the strong relationship between death primes and negative outcomes toward people with disabilities found in previously discussed studies (Hirschberger, 2006; Hirschberger, Ein-Dor, and Almakias, 2008; Hirschberger, Florian & Mikulincer, 2005), the present study hypothesizes that death awareness will be significantly associated with more negative attitudes toward people with disabilities.

Moreover, previous research has indicated that compassionate value reminders may moderate the effect of death awareness on political attitudes (Rothschild, Abdollahi, & Pyszczynski, 2009; Vail, Arndt, Motyl, & Pyszczynski, 2009). This study aims to investigate if a similar relationship could be established with respect to attitudes toward individuals with disabilities and hypothesizes that reminders of compassionate values will moderate the negative impact of death awareness on attitudes toward people with disabilities.

To date, no published work has concurrently examined the relationships among death awareness, compassionate value reminders, and attitudes toward people with disabilities. Negative attitudes are a cross-cutting issue in the lives of people with disabilities, creating barriers to participation and inclusion in education, health care, rehabilitation, social protection, labor, and law enforcement (WHO & WBG, 2011). Awareness of the mechanisms behind the implicit bias triggered by death-related thoughts and fears could allow people to exert more conscious control over their attitudes toward individuals with disabilities. This could lead not only to diminished

manifestations of subtle bias, but to more equitable and compassionate social policies and action for people with disabilities. This study hopes to expand the current knowledge with regard to the manner by which attitudes toward people with disabilities may be channeled toward creating more accessible environments that facilitate participation and inclusion for individuals with disabilities.

Chapter II

Method

The study is a between-subjects experiment that was conducted using an online study format administered and hosted via the SurveyMonkey platform (www.surveymonkey.com). A power analysis for a two-way ANOVA with four groups conducted in G*Power 3.1 using an alpha of 0.05, a power of 0.95, and an effect size of 0.50 returned a sample size of 73 (Faul, Erdfelder, Buchner, & Lang, 2009). Therefore, the target sample size was 80 participants, distributed equally among the four experimental groups of the study. The SurveyMonkey Audience (“Audience”) service was used to screen and recruit 120 participants. The Audience service enables researchers to purchase survey responses from SurveyMonkey’s two proprietary panels of voluntary respondents, online and mobile, who are primarily sourced from SurveyMonkey customers. Online panelists completed surveys via web-based applications, whereas mobile panelists completed surveys via mobile applications. Per Audience terms of service, personal identifiable information from panelists were not collected. All survey responses were collected over a secure HTTPS connection, and all other communications and traffic between a respondent’s web browser and the SurveyMonkey website were conducted over an encrypted connection using Transport Layer Security (TLS). In addition, respondents only had access to the data through password-protected applications, and never directly to SurveyMonkey servers.

Participants

Online and mobile Audience panelists who met the study's eligibility criteria (i.e., must be living in the United States and must be 18-60 years old at the time of survey administration) were invited by SurveyMonkey to participate in the study via email, text or push notifications. Only data from participants who provided consent and answers to all the survey questions, and who self-identified as a person without a disability, were considered for analyses. Among the 120 responses, data from 22 participants were excluded from analyses: three did not provide consent to participate, six did not answer all the survey questions, ten self-identified as a person with a disability, and three preferred not to respond as to whether they identify as a person with a disability.

Procedure

The study was posted to the SurveyMonkey survey platform, where participants completed study procedures either through online (web-based) applications or mobile applications. Interested panelists who clicked or tapped on a link to the study on the SurveyMonkey invitations sent via email, text, or push notification were routed to a consent form, where the purpose and procedures of the research were outlined. Participants were notified on the consent form that "the purpose of this research is to assess attitudes toward people with disabilities following reminders about various topics that have been previously shown to impact said attitudes." The specific subject matter of the primes was withheld to minimize response bias and were fully disclosed following completion of all study procedures. Participants were also informed on the consent form of the names and relevant contact details of the researcher and the university, as well as the anonymous nature of the data collected. Per SurveyMonkey Audience terms of

service, the study did not collect personal identifiable information such as email addresses, phone numbers, mailing addresses, user-names, IP addresses, MAC addresses, or anything else that could constitute personal data under law. Participants were also advised that, in line with their right to withhold information, each question will have a “prefer not to respond” option. Participants who did not click on the “I agree” button were unable to continue. Participants who clicked on the “I agree” button indicated that they have understood the consent form, were freely consenting to participate, and were directed to the study.

Participants who provided consent proceeded to Phase 1 of the study, which replicated a priming procedure using the Mortality Attitudes Personality Survey developed by Rosenblatt, Greenberg, Solomon, Pyszczynski, and Lyon (1989). Participants were assigned, utilizing the Logic random assignment feature of the SurveyMonkey platform, to one of two experimental conditions, *mortality salience* or *control*. Participants in the *mortality salience* condition were primed with thoughts of death by answering two open-ended questions: (1) “Please briefly describe the emotions that the thought of your own death arouses in you”; and (2) “What do you think happens to you as you physically die and once you are physically dead?” In the *control* condition, participants were asked to answer two parallel questions about severe dental pain: (1) “Please briefly describe the emotions that the thought of severe dental pain arouses in you”; and (2) “What do you think happens to you as you physically experience severe dental pain?”

Participants who completed Phase 1 proceeded to Phase 2, which replicated a priming procedure developed by Vail et al., (2009). Participants were randomly assigned

via the Logic feature of the SurveyMonkey platform to one of two experimental conditions: *compassionate value salience* or *control*. In the *compassionate value salience* condition, participants were primed with thoughts of compassion by rating their agreement with each of four quotations that all refer to the value of compassion:

- “When it comes to our enemies, we should try to understand them.”
- “If we pass judgment on others, we should not be surprised when others pass judgment on us.”
- “Our #1 responsibility is to love others.”
- “We should not treat anyone any differently than we would want to be treated ourselves.”

In the *control* condition, they rated four quotations about a variety of neutral food-for-thought topics that do not refer to the value of compassion:

- “If a man begins with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties.”
- “A single conversation across the table with a wise man is worth a month’s study of books.”
- “Never regret yesterday. Life is in you today, and you make your tomorrow.”
- “The man who believes he can do something is probably right, and so is the man who believe he can’t.”

Participants used a 10-point scale to rate their agreement from 1 (“strongly disagree”) to 10 (“strongly agree”). However, because priming was the principal function of the rating procedure, scores were not calculated.

Participants who completed Phase 2 proceeded to Phase 3, wherein all participants completed the Attitudes to Disability Scale (Power et al., 2010), and responded to the question as to whether they identify as a person with a disability.

Participants who completed Phase 3 were directed to a debrief page that fully disclosed the purpose and procedures of the study. Participants, even after they have answered all the questions, were given the option to withdraw from the study after debriefing; this was in line with the right of participants to change their mind after deciding to participate in the study, as well as SurveyMonkey's terms and conditions.

All online panel participants who completed study procedures via web-based applications were immediately eligible to receive a \$0.50 donation that SurveyMonkey makes on their behalf to the participating charity of their choice, and a sweepstakes entry to win a \$100 Amazon gift card that SurveyMonkey provides. The odds to win is 1:60,000 and SurveyMonkey randomly selects one winner per month. All mobile panel participants who completed study procedures via mobile applications were immediately eligible to receive a \$0.25 credit which respondents can, after a certain threshold has been met (e.g., \$5), redeem for either a gift card that SurveyMonkey provides or a donation to a charitable organization that SurveyMonkey matches and makes on their behalf.

Measure

The study used the Attitudes to Disability Scale (ADS; Power et al., 2010) to assess attitudes toward people with disabilities.

Attitudes to Disability Scale (ADS)

The Attitudes to Disability Scale (ADS; Power et al., 2010) is a validated self-report measure of attitudes toward people with disabilities. The scale consists of 16 items scored on a five-point Likert scale from 1 (“strongly agree”) to 5 (“strongly disagree”):

1. People with a disability find it harder than others to make new friends.
2. People with a disability have problems getting involved in society.
3. People with a disability are a burden to society.
4. People with a disability are a burden on their family.
5. People often make fun of disabilities.
6. People with a disability are easier to take advantage of (exploit or treat badly) compared with other people.
7. People tend to become impatient with those with a disability.
8. People tend to treat those with a disability as if they have no feelings.
9. Having a disability can make someone a stronger person.
10. Having a disability can make someone a wiser person.
11. Some people achieve more because of their disability (e.g., they are more successful).
12. People with a disability are more determined than others to reach their goals.
13. Sex should not be discussed with people with disabilities.
14. People should not expect too much from those with a disability.
15. People with a disability should not be optimistic (hopeful) about their future.
16. People with a disability have less to look forward to than others.

A total score was calculated by summing the scores of all the 16 items, and ranged from 16 to 80, with higher scores indicating more positive attitudes toward people with disabilities. The ADS has a general version and a personal version. Although both versions assess the same items and have the same scoring method, items are phrased differently for each. The general version utilizes third person phrasing and is used to assess attitudes of people without disabilities. The personal version utilizes first person phrasing and is used to assess attitudes of people with disabilities. The present study used the general version, as it focuses on attitudes of people without disabilities. The ADS was validated in a global field study of 3,772 participants from 14 countries, and has a reliability rating of Cronbach's $\alpha = 0.76 - 0.80$ (Power et al., 2010), which is considered good. In the current sample, the internal consistency of the scale was acceptable with a Cronbach's α of .64 (Taber, 2016).

Data Analysis

Prior to hypothesis testing, descriptive statistics including means, standard deviations and number of participants for each group and for the overall sample were reviewed to check for missing and out-of-range data. To test the hypothesis that there would be significant differences in attitudes toward people with disabilities with respect to age, but not with respect to gender, race/ethnicity and income, a series of one-way analysis of variance (ANOVA) tests were conducted with Attitudes to Disability (ADS) as the dependent variable and demographic variables (1. gender; 2. age; 3. race/ethnicity; 4. income) as the independent variable. Then to test the hypothesis that death awareness would be significantly associated with more negative attitudes toward people with disabilities, a two-way ANOVA with one dependent variable (Attitudes to Disability) and

two independent variables (Death Prime and Compassion Prime) was performed, and significant main and interaction effects were evaluated. Further analyses using an interaction plot were conducted to examine the nature and direction of the significant interaction effect in order to test the hypothesis that compassionate value salience would moderate the negative impact of death awareness on attitudes toward people with disabilities.

Chapter III

Results

The final sample included in this study consisted of 98 participants (see Table 1). All participants were US residents between 18-60 years old who self-identified as persons without disabilities. Within the sample, 56 (57%) were females and 42 (43%) were males. The median age group of the sample was 30-44 years, with 37 participants (38%) in the 18-29 age group, 37 (38%) in the 30-44 group, and 24 (25%) in the 45-60 group. With respect to race/ethnicity, the sample was predominantly White, with 65 respondents (66%) self-identifying as White, 6 respondents (6%) as Black or African American, 15 respondents (15%) as Hispanic or Latino or Spanish origin, 10 respondents (10%) as Other (e.g., American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander), and 2 respondents (2%) preferred not to self-identify. The median income bracket of the sample was \$50,000 - \$99,999, with 40 participants (41%) in the \$0 - \$49,999 bracket, 33 participants (34%) in the \$50,000- \$99,999 bracket, 12 participants (12%) in the \$100,000 - \$149,999 bracket, 5 participants (5%) in the \$150,000 and above bracket, and 8 participants (8%) preferred not to respond.

Table 1*Sample Demographics - Frequency Distributions*

Variable	<i>N</i>	Percent
Gender		
Female	56	57.1
Male	42	42.9
Age Group		
18-29	37	37.8
30-44	37	37.8
45-60	24	24.5
Race/Ethnicity		
White	65	66.3
Black or African American	6	6.1
Hispanic or Latino or Spanish Origin	15	15.3
Other ^a	10	10.2
Preferred not to respond	2	2
Income Bracket		
\$0 - \$49,999	40	40.8
\$50,000 - \$99,999	33	33.7
\$100,000 - \$149,999	12	12.2
\$150,000+	5	5.1
Preferred not to respond	8	9.2

^a American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander.

Attitudes toward disability were measured by summing the responses to the 16-item Attitudes to Disability Scale (ADS; Power et al., 2010) to provide a total score. The total score ranges from 16 to 80, with a higher score indicating more positive attitudes toward people with disabilities. In the present sample, the internal consistency of the scale was acceptable with a Cronbach's alpha of .64 (Taber, 2016). The mean (*M*) ADS total score for the study sample was 49.92, with a standard deviation (*SD*) of 6.78. The sample viewed individuals with disabilities significantly more positively ($t(97) = 3.65, p < .05$) (Uanhoro, 2017) when compared to a field study with 2,614 participants from 14 countries, which had a mean (*M*) ADS total score of 45.73, with a standard deviation (*SD*) of 8.97 (Power et al., 2010). Table 2 provides the mean and standard deviation of the attitudes to disability score for the study sample by participant gender, age group, race/ethnicity, and income bracket.

Table 2*Attitudes to Disability (ADS) Score by Sample Demographics*

Variable	Mean (<i>M</i>)	Std. Dev (<i>SD</i>)	<i>N</i>
Gender			
Female	50.7500	6.19164	56
Male	48.8095	7.42520	42
Age Group ^a			
18-29	48.3784	5.47393	37
30-44	49.0541	7.34070	37
45-60	53.6250	6.57936	24
Race/Ethnicity			
White	49.4000	6.80257	65
Black or African American	54.1667	7.19491	6
Hispanic or Latino or Spanish Origin	51.9333	6.63827	15
Other ^b	48.9000	6.11828	10
Preferred not to respond	44.0000	4.24264	2
Income Bracket			
\$0 - \$49,999	48.3750	6.81886	40
\$50,000 - \$99,999	50.7576	7.42896	33
\$100,000 - \$149,999	52.2500	4.47468	12
\$150,000+	50.20000	6.37966	5
Preferred not to respond	50.5000	6.65475	8
Total	49.9184	6.78031	98

^a Mean difference is significant at the .05 level. ^b American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander.

Difference in Attitudes across Demographics

To examine the difference in attitudes toward people with disabilities among the sample groups in terms of gender, race/ethnicity, age group, and income, a series of one-way analysis of variance (ANOVA) tests were conducted with Attitudes to Disability (ADS) as the dependent variable and demographic variables (1. gender; 2. age; 3. race/ethnicity; 4. income level) as the independent variable. Results revealed that there were no significant differences in attitudes toward people with disabilities between females and males ($F(1,96) = 1.986, p = .162$), among racial/ethnic groups ($F(4,93) = 1.481, p = .214$), or among income levels ($F(4,93) = 1.017, p = .403$).

However, a one-way ANOVA with the ADS total score as the dependent variable and age group as the independent variable revealed that the mean score was significantly different among age groups ($F(2,95) = 5.267, p < .05$). Post-hoc Least Significant Difference (LSD) tests showed that while there were no significant mean differences between the attitude score of the 18-29 and 30-44 age groups, there were significant mean differences between the attitude score of the 18-29 and 45-60 age groups, $p < .05$, as well as between the 30-44 and 45-60 age groups, $p < .05$, such that the 45-60 age group had a significantly more positive attitudes toward people with disabilities ($M = 53.6, SD = 6.6$) versus the 18-29 age group ($M = 48.4, SD = 5.5$) and the 30-44 age group ($M = 49.1, SD = 7.3$).

Difference in Attitudes Due to Death Awareness

Each participant in the study was primed with two topics: (1) death and compassionate value quotes, or (2) death and neutral quotes, or (3) dental pain and compassionate value quotes, or (4) dental pain and neutral quotes. Table 3 outlines the descriptive statistics of the four experimental groups of the study.

Table 3

Attitudes to Disability (ADS) Score by Experimental Groups

Death Prime	Compassion Prime	Mean (<i>M</i>)	Std. Dev (<i>SD</i>)	<i>N</i>
Death	Compassion	46.5769	7.96077	26
	Neutral (Control)	50.0417	6.09689	24
	Total	48.2400	7.26906	50
Pain (Control)	Compassion	52.5833	5.77036	24
	Neutral (Control)	50.7500	5.81041	24
	Total	51.6667	5.80291	48
Total	Compassion	49.4600	7.55986	50
	Neutral (Control)	50.3958	5.90254	48
	Total	49.9184	6.78031	98

It was hypothesized that death awareness would lead to more negative attitudes toward people with disabilities. To test this hypothesis, a two-way ANOVA with one dependent variable (Attitudes to Disability) and two independent variables (Death Prime and Compassion Prime) was conducted. Results revealed that the main effect of Death Prime was significant ($F(1, 94) = 6.51, p < .05$), which indicates that participants had

more negative attitudes toward people with disabilities after being reminded of death ($M = 48.24$, $SD = 7.27$) versus after being reminded of pain ($M = 51.67$, $SD = 5.80$). The main effect of Compassion Prime was not found to be significant, which indicates that participants had similar attitudes toward people with disabilities when primed with compassionate value quotes versus neutral quotes (Table 4).

Table 4

Two-way ANOVA – Tests of Between-Subjects Effects

Source	Sum of Squares	Mean Square	<i>F</i>	<i>p</i>
Corrected Model	477.709	159.236	3.759	.013
Intercept	244588.249	244588.249	5774.331	.000
Death Prime	275.831	275.831	6.512	.012
Compassion Prime	16.282	16.282	.384	.537
Death Prime x Compassion Prime	171.720	171.720	4.054	.047

Moderation of Death Awareness Effects on Attitudes

In addition to a significant Death Prime main effect ($F(1, 94) = 6.51$, $p < .05$), the results of the 2 x 2 ANOVA also revealed that the interaction term (Death Prime x Compassion Prime) was significant ($F(1, 94) = 171.72$, $p < .05$). Further analyses using an interaction plot (Figure 1) were conducted to examine the nature and direction of the significant interaction effect.

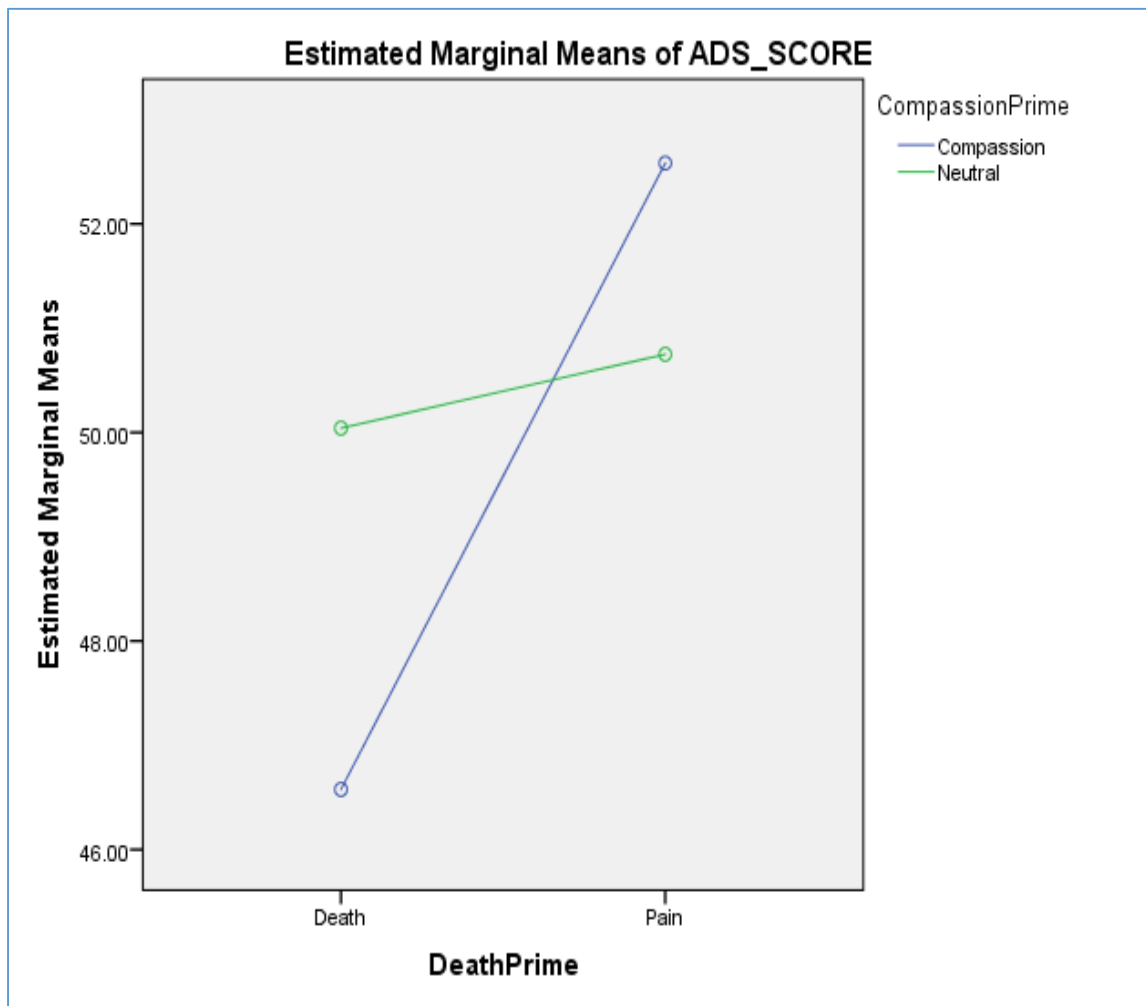


Figure 1. Interaction Plot - Death Prime x Compassion Prime.

Mean Attitudes to Disability (ADS) Total Score following Death and Compassion Primes.

The interaction plot indicated that when compassionate value primes followed pain (control) primes, participants had more positive attitudes toward individuals with disabilities ($M = 52.58$, $SD = 5.77$), as compared to when neutral (control) primes followed pain (control) primes ($M = 50.75$, $SD = 5.81$). However, when compassionate value primes followed death primes, participants had more negative attitudes toward

people with disabilities ($M = 46.58$, $SD = 7.96$), as compared to when neutral (control) primes followed death primes ($M = 50.04$, $SD = 6.10$). These results suggest that the significant main effect of Death Prime is moderated by the significant Death Prime x Compassion Prime interaction term, such that the attitudes toward people with disabilities of participants who were primed with death awareness were more negative when compassionate values were made salient following death reminders, rather than when neutral values were made salient following death reminders.

Chapter IV

Discussion

The purpose of this study was to investigate how attitudes could be improved to create more accessible environments for individuals with disabilities. The study first investigated whether there would be differences in attitudes toward people with disabilities with respect to several demographic factors (e.g., gender, age, race/ethnicity, income). This was followed by an examination of whether death awareness would lead to more negative attitudes toward people with disabilities. Finally, this study explored whether compassionate value salience would moderate the negative impact of death awareness on attitudes toward people with disabilities.

Difference in Attitudes across Demographics

The investigation of the demographic correlates of attitudes toward people with disabilities supported the study hypothesis that there were no significant differences in attitudes toward people with disabilities between females and males, among racial/ethnic groups, or among income levels. However, while results supported the hypothesis that there were significant differences in attitudes toward people with disabilities with respect to age, it did not support the hypothesis that older people would have more negative attitudes toward people with disabilities than younger people. Study findings instead showed that participants belonging to the 45-60 age group, the oldest age group of the sample, had significantly more positive attitudes than their younger counterparts in the

18-29 and 30-44 age groups. A possible explanation for this unanticipated result is the relationship between death awareness and age. Previous research has demonstrated that older individuals react to increased awareness of mortality in more pro-social ways (Maxfield et al., 2014; Roberts & Maxfield, 2019) than their younger counterparts.

As an example, in a study of 124 adults aged 18 to 86 years old ($M = 51.85$, $SD = 20.7$) recruited from a university, a research participant database and the general community in the United States, Roberts and Maxfield (2019) showed that reminders of death increased charitable giving in older adults, but not in their younger counterparts. The study sample was comprised of 41 young adults ($M = 25.17$, $SD = 6.92$), 39 middle-aged adults ($M = 57.21$, $SD = 5.85$), and 44 older adults ($M = 71.95$, $SD = 5.75$). Each participant was paid \$15 at the beginning of the study. Using a similar study procedure as the previously mentioned Hirschberger (2006), participants completed a demographic questionnaire, two questions that were either about death or dental pain, and a distraction task from the death prime. This was followed by a charitable giving request from a student charity drive. A 2 (death, pain) x 3 (young, middle-aged, old) ANOVA yielded no significant main effect for death awareness or age but yielded a significant two-way interaction effect. Further analyses indicated that young adults who were made aware of death donated significantly ($p = .05$) less money to charity ($M = 1.05$, $SD = 1.75$) compared to young adults in the pain condition ($M = 4.05$, $SD = 5.62$). In addition, there were no significant differences in donations by middle-aged adults between the two conditions. However, older adults who were reminded of death significantly ($p = .04$) donated more money to charity ($M = 3.52$, $SD = 5.06$) compared to older adults in the pain condition ($M = 1.09$, $SD = 3.25$).

Additionally, Maxfield et al. (2014) determined that older adults reported greater preference for pro-social outcomes in a study of 74 young adults (ages 18-33, $M = 19.02$, $SD = 2.02$), of whom 59% were female, who were recruited from undergraduate courses at a university in the United States, and 84 older adults (ages 60-90, $M = 72.00$, $SD = 6.94$), of whom 90% were female, who were recruited from surrounding retirement communities and a senior learning facility. Participants completed a series of questionnaires and were either primed with death-related words or neutral words by completing a word search puzzle. Participants were then asked to read two scenarios: (1) one in which they imagine producing something of great social benefit but produces little recognition and no fame (pro-social), or (2) one in which they imagine a scenario that produces great recognition and fame but is of no social benefit (pro-self). After each scenario, the participants answered four questions that were modeled after the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) on a scale from 1 (“strongly disagree”) to 11 (“strongly agree”) to assess how satisfied they would be if the events described happened to them. Responses for the four questions were averaged for each scenario, then the pro-self average was subtracted from the pro-social average to calculate a score that ranged from -10 to 10, with higher scores indicating greater preference for the pro-social outcome. A 2 (death, neutral) x 2 (young adult, older adult) ANOVA resulted in significant ($p < .01$) main effects for death awareness and age that were qualified by a significant ($p = .05$) two-way interaction. Further analyses revealed that, whereas the pro-social preference of young adults did not differ as a function of death reminders, older adults responded with significantly ($p < .01$) greater preference for

pro-social outcomes in the mortality salience condition ($M = 2.99$) compared to the control condition ($M=0.80$).

Thus, further research should evaluate the findings of the present study in light of the potential pro-social influence of mortality salience on older individuals. In addition, future studies should also consider the results of the current study in relation to previous research outcomes that have presented unclear evidence regarding the direction and distribution of attitudes toward people with disabilities with respect to age.

Difference in Attitudes Due to Death Awareness

The examination of the relationship between death awareness and attitudes toward people with disabilities supported the study hypothesis that death awareness is significantly associated with more negative attitudes toward people with disabilities. This finding adds to the existing literature that strongly suggests a link between reminders of mortality and negative attitudes toward individuals with disabilities.

Moderation of Death Awareness Effects on Attitudes

The results of the analysis regarding the moderating effect of compassionate value salience on the negative impact of death awareness on attitudes toward people with disabilities did not support the study hypothesis. Contrary to expectations, compassionate value salience following death awareness led to more negative attitudes toward people with disabilities. However, compassionate value salience after the pain (control) reminders led to less negative attitudes toward people with disabilities. Possible explanations to this unanticipated study outcome are discussed in detail below.

Compassion Fatigue

One way to understand study results is the concept of compassion fatigue, which is defined as the “apathy or indifference toward the suffering of others or to charitable causes acting on their behalf, typically attributed to numbingly frequent appeals for assistance” (Oxford English Dictionary, 2002). The term compassion fatigue has its origins in studies of the job burnout experience by helping and caregiving professionals (e.g., doctors, nurses, etc.) that was characterized by a decline in compassionate feelings toward patients or clients over time. The usage of the term has since expanded to describe the desensitization and burnout of the public toward social problems. Moeller (2001) argued that the public can become desensitized or resistant to helping people who are suffering if news sources are saturated with decontextualized images of tragedy and suffering.

For instance, in a study of 316 adult residents from the greater-metropolitan Atlanta area in the US, Kinnick, Krugman, and Cameron (1996) concluded that compassion fatigue exists such that pervasive media coverage entrenches negative feelings and foster desensitization toward victims of a social problem. Participants were recruited via an unsolicited call to their phone numbers, using random number generator software. Those who agreed to participate completed a phone survey consisting of 35 items scored on a Likert-type scale to measure attitudes toward four social problems (homelessness, violent crime, child abuse, AIDS) and the media coverage of these issues. Participants also provided answers to six open-ended questions related to manifestations of compassion fatigue. A discriminant function analysis was performed for each issue to predict membership in “burned-out” and “not-burned out” groups. The “burned-out”

group was defined as those respondents who rated themselves as a 1 or a 2, and the “not-burned-out” group as those who rated themselves as a 3, 4, or 5 on this survey item: “Some people might say that the amount of media coverage they see about these issues has sensitized them toward the issues; while other people might say that the amount of coverage had the opposite effect, and caused them to be burned out on the issues. On a scale of 1 to 5, where 5 is highly sensitive and 1 is burned out, how has the amount of media coverage about [homelessness/ violent crime/ child abuse/ AIDS] made you feel?”

The authors used the term “burnout”, which is more familiar and colloquial, synonymously with “compassion fatigue”. Participants indicated the change in their level of compassion toward victims from 1 (“less compassionate”) to 5 (“more compassionate”) from before seeing media coverage for each of the issues to after seeing media coverage. In a series of univariate F tests, there were significant differences ($p < .05$) in compassion scores toward victims for each of the issues between the “burned-out” and the “non-burned-out” group, such that the mean compassionate scores for the “burned-out” group ($M = 3.67, M = 2.67, M = 2.56, M = 4.00$) for violent crime, homelessness, AIDS, and child abuse, respectively, were significantly less versus those of the “non-burned out” group ($M = 4.39, M = 4.12, M = 3.19, M = 4.56$). The results suggest that those suffering from compassion fatigue feel less compassion toward victims of social problems.

This finding is supported by Eckel & Milano (2007), who studied the responses of 265 undergraduate and graduate students in the United States to a call for help for hurricane victims, about 8 and 15 months after Hurricane Katrina. The study investigated the charitable giving decisions of two groups of students: 122 students from University of

Texas at Dallas (UTD), which was located in an area that was directly and heavily impacted by hurricane evacuees; and 143 students from Saint Cloud State University (SCSU) in Minnesota, which was in an area that was not impacted by the hurricane. Participants were recruited from undergraduate or graduate-level classrooms. Those who agreed to participate were given descriptions of charities that would receive actual monetary donations from the researchers. Participants in the Control (No Prime) condition received general information about the charities, while participants in the Prime condition received information that was phrased specifically to address the involvement of each charity in disaster relief after Hurricane Katrina, as well as a small fact sheet describing the aftermath of Hurricane Katrina. Participants were given charitable giving decision forms, which were sealed after completion and collected by a researcher, who picked two at random after all the forms were collected. The charitable giving decisions on the two selected forms became the basis of actual monetary donations to charities. Analyses using logit models indicated that participants in the Prime condition were significantly less likely to make donations than participants in the Control condition ($b = -0.668, p < .01$). Further analyses of interaction terms revealed the negative effect of Prime was driven by UTD participants ($b = -.895, p < .05$), which indicated compassion fatigue among the participants who were more exposed to the disaster and its victims. As a point of reference, the authors noted that there were 1,962 and 878 Hurricane Katrina articles in the Dallas Morning News in 2005 and 2006, respectively, and only 186 and 52 in the St. Cloud Times for the same years.

Taken together, previous research studies suggest that people who experience compassion fatigue are more likely to react apathetically or less compassionately toward

victims of social problems than those who do not. In the present study compassionate value salience following death awareness led to more negative attitudes toward people with disabilities, but compassionate value salience after the pain (control) reminders led to less negative attitudes toward people with disabilities. This suggests the possibility that compassion fatigue could be a confounding factor that influenced the attitudes toward people with disabilities of participants who were reminded of compassion after being made aware of their own mortality. Further research should take into account the potential impact of compassion fatigue on attitudes toward people with disabilities.

Conspicuous Compassion

Another possible explanation for the unexpected result of the present study is conspicuous compassion, the idea that what drives compassionate behavior is the need to be seen to care in public in order to signal wealth, a prosocial reputation, and other personal qualities (Glazer & Konrad, 1996; Griskevicius, Tybur, & Van den Bergh, 2010; Hardy & Van Vugt, 2006; Mellstrom & Johannesson, 2008; Sargeant & Woodliffe, 2007; Van Vugt & Hardy, 2010; West, 2004). Previous research studies have argued that often prosocial behavior is driven by the social rewards that an individual receives in return for the performance of the prosocial behavior in public (Bekkers & Wiepking, 2011; Kottasz, 2004). Numerous research studies have shown that individuals often act more altruistically and prosocially in a public setting compared to a private setting (Benabou & Tirole, 2006; Hardy & Van Vugt, 2006; Kottasz, 2004; Sexton & Sexton, 2011; White & Peloza, 2009).

For instance, in a study of 86 students from the University of Kent in the United Kingdom (70 women and 16 men with a mean age of 21 years), Van Vugt & Hardy

(2010) showed that contributions toward a group goal are higher when giving decisions are conspicuous rather than anonymous. Participants were told that they had a £1 endowment that they can either contribute to a group fund or keep in a personal fund. If the group attained their group goal, each member received the amount in their personal fund and a bonus of £1.50. If the group failed to attain their goal, each member received the amount in their personal fund only. Participants were told that they were the third member of a three-person group, and that the first two members had attended previous experimental sessions and had already made contributions toward the group goal. Participants were assigned either to the meaningful contribution condition, wherein the total contributions of the first two members were below that of the group goal and presented the participant the opportunity to make a meaningful contribution toward the achievement of the goal; or the wasteful contribution condition, wherein the total contributions of the first two members already exceeded the group goal and wherein any contribution made by the participant would only serve to decrease her or his personal earnings. In addition, participants were assigned either to the anonymous or conspicuous condition, wherein they were informed that their decisions would either be kept anonymous from or shared with the two other members of the group, respectively. A 2 (meaningful contribution, wasteful contribution) x 2 (anonymous, conspicuous) ANOVA analysis revealed a significant main effect for conspicuousness ($p < .001$), such that the contributions were higher under the conspicuous condition ($M = 61.16$, $SE = 2.87$) than under the anonymous condition ($M = 41.32$, $SE = 4.23$). Further analyses of the significant ($p < .05$) interaction effect indicated that when participant contributions were wasted (i.e., did not matter toward the achievement of the group goal), individuals

contributed more in the conspicuous condition ($M = 53.0$, $SE = 4.01$) than in the anonymous condition ($M = 20.71$, $SE = 5.87$). However, when contributions were meaningful toward the achievement of the group goal, there were no significant differences between the contributions made under the conspicuous and anonymous conditions. The findings indicate that people behaved more prosocially in a conspicuous setting compared to an anonymous setting.

Similarly, in a study of 93 students (35 women, 58 men) at a large public US university who participated for course credit, Griskevicius et al. (2010) reported that individuals were more likely to act more environmentally responsible and choose green (i.e., environmentally friendly) products in public settings compared to private settings. Participants were assigned either to a status condition, where they read a short story to elicit status motives; or the control condition, where they read a non-status-related story, per procedures developed by Griskevicius et al. (2009). Then participants were further assigned to the public condition, where they were given instructions to imagine that they were out shopping at a store; or the private condition, where they were given instructions to imagine that they were shopping online alone at home. Participants were then presented with a green and a non-green option for a backpack, batteries, and a table lamp, and were asked to indicate their preference for each product category on a 9-point scale from 1 (“definitely Product A”) to 9 (“definitely Product B”). A 2 (status, control) x 2 (public, private) ANOVA revealed a significant interaction ($p = .005$). Further analyses indicated that when shopping in public, status motives significantly increased the preferences for green products relative to control motives ($p = .023$). However, when

shopping in private, there were no significant differences in the preferences for green products between the status and control motives.

Overall, previous research indicates that prosocial behavior may sometimes be a self-presentation, other-signaling strategy that is more likely to occur in conspicuous settings. Thus, it is possible that the unexpected results of the present study, in particular among participants who were reminded of their own death, may be influenced by the inconspicuous nature of the online and anonymous experiment. Further research should therefore take into consideration the possible confounding influence of conspicuous compassion on participants.

Empathic Accuracy

One other way to understand the unanticipated study result is related to the concept of empathic accuracy; the accurate identification of others' emotions (Ickes, Stinson, Bissonnette, & Garcia, 1990; Levenson & Reuf, 1992). Death awareness is stressful for humans according to terror management theory (Greenberg, Pyszczynski, & Solomon, 1986) and previous studies have indicated that stress negatively impacts empathic accuracy. For example, Crenshaw, Leo and Baucom (2019) found that stress significantly impacted empathic accuracy for women vs. men. The study consisted of 96 participants or 48 couples in romantic relationships (46 heterosexual and 2 same-sex) between the ages of 18 and 50 who were recruited from a university subject pool, flyers and online advertisements. The majority of participants (76%) self-identified as White, and the median individual annual was \$18,600 ($SD = \$17,586$). Participants completed the Problem Areas Questionnaire (PAQ, Heavey, Christensen, & Malamuth, 1995), a measure of common areas of conflict in romantic relationships. Couples were asked to

discuss the topic with the highest cumulative PAQ disagreement scores between them for ten minutes while being video-taped. Next, participants completed a post-discussion questionnaire and were then asked to individually complete a two-part video recall procedure to measure empathic accuracy (Ickes, Stinson, Bissonnette, & Garcia, 1990). For the first review of the conflict discussion video, participants were instructed to record thoughts or feelings they recalled having during the conversation with their partner. Prior to the second review of the video, participants were randomly assigned to either the stress condition, wherein they completed the well-validated Trier Social Stress Test (Kudielka, Hellhammer, Kirschbaum, Harmon-Jones, & Winkielman, 2007); or the control condition, wherein they rated nature pictures for an equivalent period of time. For the second review of conflict discussion video, participants recorded thoughts or feelings they believed their partner had. Analyses using multilevel models to examine the effects of stress and gender on empathic accuracy revealed that there was a significant main effect for gender ($b = .048, p < .032$), such that women were more empathetically accurate than men in the control (non-stress) condition. This was qualified by a significant interaction ($b = -.079, p < .013$). Further analyses indicated that there were no significant differences in men's empathic accuracy in either condition. However, women's empathic accuracy was significantly lower ($b = -.086, p < .002$) in the stress condition compared to the control condition.

Furthermore, previous research has indicated that compassionate value reminders may not increase empathic accuracy under certain conditions. For example, Côté et al. (2011) found that compassionate value reminders did not increase empathic accuracy for those in perceived low-power positions. The study had a total of 124 participants (80

women and 44 men) with a median age of 21.76 years ($SD = 4.29$) who were recruited from a research participation system in Toronto, Canada. Those who agreed to participate reported to a lab where they were randomly assigned to social power experimental conditions involving a confederate. Social power is the relative capacity to modify the behaviors and outcomes of other individuals by providing or withholding resources (Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003; Magee & Galinsky, 2008). Participants were assigned to role play either a supervisor, a high-power role, or an employee, a low-power role, in a series of individual tasks; and the confederate was assigned the role opposite that of the participant. Then participants were assigned to view either a compassion video, depicting helplessness and vulnerability, or a neutral video of equal length. Participants were then asked to watch a prerecorded interview of the confederate. To measure empathic accuracy, the interview video was stopped several times to ask participants the degree to which the confederate felt “afraid”, “nervous”, and “scared” at the same point in time and on the same scale used by the confederate from 1 (“not at all”) to 7 (“extremely”) (Lerner & Keltner, 2001). An empathic accuracy score was derived by multiplying the average absolute deviation of participant ratings from confederate ratings by -1, where less negative values represent higher empathic accuracy. A 2 (high-power, low-power) x 2 (compassion, neutral) ANOVA yielded a significant interaction effect ($p < .05$) such that participants in the high-power group exhibited significantly higher empathic accuracy ($M = -2.36$, $SD = .69$) in the compassionate condition than in the neutral condition ($M = -2.73$, $SD = .74$). However, there were no significant differences in empathic accuracy between the compassionate and neutral conditions among participants in the lower-power group.

Overall, previous research studies suggest that death reminders and compassionate value reminders may impact participants' emotions (e.g., stress, power, etc.) and in turn, influence empathic accuracy, or the ability to accurately identify emotions in others. In addition, research also indicates that empathic accuracy is associated with more positive attitudes and prosocial behaviors that benefit others (Marsh, Kozak, & Ambady, 2007; Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008). The present study showed that compassionate value salience following death awareness led to more negative attitudes toward people with disabilities, but compassionate value salience after the pain (control) reminders led to less negative attitudes toward people with disabilities. This suggests the possibility that empathic accuracy could be a confounding factor that influenced attitudes toward people with disabilities. Specifically, reminders of compassionate values after death awareness may have negatively influenced the ability of participants to accurately perceive the emotions of people with disabilities, resulting in more negative attitudes toward them; whereas reminders of compassionate values following pain salience may have positively influenced the empathic accuracy of participants, resulting in less negative attitudes toward people with disabilities. For instance, people without disabilities generally perceive themselves to be in a higher-power position than those with disabilities (Shannon, Tansey, & Schoen, 2009). The death and compassion reminders of the present study may have negatively impacted the perceived social power of participants compared to people with disabilities, thereby unfavorably influencing their empathic accuracy and attitudes. Further research should take into account the potential impact of empathic accuracy on attitudes toward people with disabilities.

General Discussion

To date, no published work has concurrently examined the relationships among death awareness, compassionate value salience, and attitudes toward people with disabilities. This study provides initial data on how compassionate value reminders may exacerbate, rather than alleviate, the negative impact of death awareness on attitudes toward disabilities. More broadly, this suggests that initiatives aiming to improve attitudes toward people with disabilities (e.g., public awareness campaigns via mass or social media, or training and education programs for professionals in the healthcare, educational or business fields) that utilize compassionate value reminders without taking into consideration the impact of factors such as compassion fatigue, conspicuous compassion, and empathic accuracy may not only fail to deliver the desired results, but produce harmful outcomes. This study highlights that disability, death awareness and compassion are complex concepts, and that their interactions are even more so. It is therefore important that these complicated interactions be considered and measured in formulating policies and interventions to improve attitudes toward people with disabilities.

Limitations and Future Directions

Although the present study adds to the body of literature on attitudes toward people with disabilities, it is important to understand the limitations of its findings and take these limitations into account in designing and conducting future studies.

Firstly, as discussed above, future studies should consider the possible effects of the relationship between death awareness and age, compassion fatigue, conspicuous compassion, and empathic accuracy. In addition, election and response biases are

possible threats to the internal validity of the present study. For example, because the study used an online platform, only people with Internet access were recruited. Studies have found that people with Internet access tend to be non-minority members who are younger, and who have a higher level of education than the general population (Bethlehem, 2010). Thus, certain groups (e.g., minority, older, lower level of education) may be under-represented in the sample. In addition to having Internet access, respondents must also be members of the SurveyMonkey Audience panel and must actively decide to participate. Using this process of self-selection, rather than probability sampling, may have resulted in a nonrandom sample with biased estimates.

Furthermore, research has suggested that it is increasingly difficult to assess negative attitudes through self-report measures due to greater social awareness and sensitivity (Fazio, Jackson, Dunton, & Williams, 1995; Griffiths & Lunsky, 2000). Hence, participants may have exhibited social desirability bias, the tendency to respond in a manner viewed favorably by others, when self-reporting their attitudes toward people with disabilities (Leary, 2012). In this regard, some participants may have also shown acquiescence bias, the tendency to agree regardless of content; or nay-saying bias, the tendency to disagree (Leary, 2012). The study also used Likert scales, which may be subject to extreme response bias, the tendency to choose extreme ends of the scale; or midpoint response bias, the tendency to choose the midpoint of the scale (He, Bartram, Inceoglu, & Van de Vijver, 2014).

Note also that this study did not consider the prior personal interactions or relationships (e.g., familial, social) of participants with people with disabilities. Studies have shown that rewarding, cooperative, and meaningful interactions with people with

disabilities result in positive attitudes, whereas negative interactions result in negative attitudes (Yuker, 1994). The presence of this factor in participants may be another threat to the internal validity of the study.

Additionally, only data from people without disabilities were considered for analyses. The exclusion of the unique insights of people with disabilities (WHO & WBG, 2011) is a threat to the study's external validity.

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