This research was undertaken to explore gender, religiosity, perceived time-left-to-live and the interactions between these variables as predictors of fear of death in 144 Atlantic Canadian students using the Multidimensional Fear of Death Scale (MFODS). Predictions about cause, age, marital status, and place of death were also derived from the Do-It-Yourself-Death-Certificate and compared with actuarial data to determine accuracy. Results showed significant gender effects on 2 MFODS subscales, such that women demonstrated greater fear for significant others and fear of the dead. More religious participants expressed greater fear of the dead, fear of being destroyed, and fear of conscious death, whereas participants with lower religious conviction were more fearful of the unknown. In addition, significant interactions between the predictors on various subscales of the MFODS were observed. Finally, both men and women made inaccurate death-related predictions when compared to actuarial data but predicted differential causes of death.
the painful effects of dying has grown considerably, Canadians seem no less concerned about mortality. Becker (1973; see also Harmon-Jones et al., 1997) asserts that all human beings experience fear and anxiety at the knowledge that their death is inevitable. Yet despite universality in death concern and an increasing amount of psychological literature focusing on death-related attitudes (Neimeyer, Wittkowski, & Moser, 2004), relatively few studies have examined death-related attitudes in Canada or Atlantic Canada (e.g., Littlefield & Fleming, 1984; Lonetto, Fleming, Gorman, & Best, 1975; Robinson & Wood, 1984).

Since the beginnings of psychological explorations on attitudes toward death, researchers have sought to determine what factors are most salient. Acknowledgement of concern about death is now widely recognized in the psychological literature (e.g., Cicirelli, 1999; Feifel & Nagy, 1981; Kastenbaum & Aisenberg, 1972; Kastenbaum & Costa, 1977). Indeed, the last 30 years have seen a sharp increase in research on death, with over 1,000 death-related articles having been published by the mid-1990s (Neimeyer & Van Brunt, 1995). But what is it about death that makes people react with fear? Early psychological research traditionally viewed death as a unitary concept, although more recently it has been regarded as multidimensional (e.g., Lester, 1994; Neimeyer & Moore, 1994). For instance, Kastenbaum and Aisenberg (1972) identified six specific death-related fears from a self/other orientation that include a fear of dying, a fear about what might happen following death, and a fear of extinction.

**Gender Differences in Fear of Death**

Past studies have revealed several interesting findings with respect to differences in gender on fear of death (e.g., McDonald, 1976; Neimeyer & Moore, 1994), but conclusive findings have remained elusive. In a recent review, Neimeyer et al. (2004) highlighted numerous inconsistencies. In general, women are reported to possess a greater overall fear of death and think about their own deaths more frequently than do men. Lester (1972) suggested that women have greater fear of death in certain specific areas rather than a general fear of death. Furthermore, using the Multidimensional Fear of Death Scale (MFODS), Neimeyer and Moore (1994) found that women had greater fears on most subscales but
that they were less fearful of the unknown than were men. Yet other studies have found no gender differences in attitudes toward death (e.g., Feifel & Branscomb, 1973), thus a clear relationship has not yet been established.

**Religiosity and Fear of Death**

Given the predictions of Becker (1973) and others, one might expect that attitudes toward death might be influenced by religious ideologies. However, definitive findings are again elusive, with both positive and negative correlations existing between fear of death and degree of religious affiliation (e.g., Fortner & Neimeyer, 1999; Swenson, 1961). Swenson concluded that individuals with little religious affiliation have more fearful death attitudes than individuals with stronger religious convictions. In addition, Feifel and Nagy (1981) found that people who declared themselves as less religious reported a greater fear of death than those with stronger religious beliefs. Conversely, Feifel (1959) concluded that religious individuals are more afraid of death, and offered the explanation that greater fears arose from a concern about what might happen after death (e.g., not going to Heaven) as well as a concern about the cessation of current experiences on earth. Kastenbaum and Aisenberg (1972) also placed a fear of death in the context of a fear of an afterlife whereby punishment plays a major part.

A non-linear trend has also been supported in the psychological literature in which individuals at both ends of the spectrum (i.e., non-religious and very religious) indicate less fear of death than those expressing ambivalence (Alexander & Alderstein, 1958; Florian & Kravitz, 1983). The strongly religious feel confident that they are bound for the afterlife and so they face death with optimism, whereas the strongly non-religious face no fear of retribution following their passing. Thus, some have argued that from a Judeo-Christian perspective, religion can be considered as either a buffer against death anxiety or as a source of special concern, such as fear of damnation, salvation, or immortality (Kastenbaum, 2000).

**How People Predict Their Death**

One might expect that the factors described above, although potentially influencing fear of death, may also have an influence on
people’s predictions of their own death. Perhaps not surprisingly, a significant amount of research has explored the ways in which individuals conceive of their own deaths. The most convincing research has asked participants about their expectations using the Do-It-Yourself-Death-Certificate (DIYDC), an adapted version of a real death certificate (e.g., Kastenbaum & Aisenberg, 1972; Lonetto et al., 1975; Sabatini & Kastenbaum, 1973). An individual’s estimates of lifespan, time left to live, cause of death, method of body disposal, and interval between onset of fatal illness or injury and death, may be learned from the DIYDC (Sabatini & Kastenbaum, 1973).

Kastenbaum and Aisenberg (1972) administered the DIYDC to participants enrolled in death education courses. They reported that heart failure was the most frequently predicted cause of death by more than half of the participants and was mentioned four times more often than the second leading cause of death—old age. Automobile accidents, murders, suicides and other forms of violent deaths combined were reported as frequently as old age as a predicted cause of death. In a Canadian study, Lonetto et al. (1975) administered the DIYDC to students enrolled in a Psychology of Death course. Their participants also projected unrealistic death estimates in comparison to actuarial data. Other findings indicated that the older one is at the time of death, the stronger the feeling that an accidental death is preferred over a natural one, that the death occur in a rural area, and that a spouse will still be surviving. Thus, the DIYDC, through estimates of time left to live (people’s age subtracted from their predicted age at death) may supply data that provides insight into a person’s fear of death when confronting one’s own mortality.

**Limitations of Past Research and Overview of Study**

Although past research has documented an impressive array of findings, a number of questions remain unanswered. Because of studies suggesting that detailed examination of specific demographic factors have a bearing on one’s fear of death, much work remains to be done with respect to examining the impact of these factors in concert with one another on fear of death. Furthermore it would be interesting to explore how the findings of previous work might apply to an Atlantic Canadian sample. Therefore,
we conducted a study to assess death attitudes and predictions regarding death in a Nova Scotia student sample. Based on the nature of this sample, being of a primarily Judeo-Christian background, we expected that participants rating themselves as less religious would have a greater fear of death than participants rating themselves as very religious. Furthermore we expected that women would have a greater fear of death than men in specific death domains; that participants would make inaccurate death-related predictions related to cause, place, age, and marital status at time of death as compared with actuarial data; and that gender differences would exist with respect to death-related predictions such that women would underestimate the probability of dying of cardiovascular disease and would overestimate the likelihood of being married at the time of death.

**Method**

**Participants**

One hundred and forty-four undergraduate students volunteered to participate. There were 111 women and 33 men, ranging in age from 18 to 57, with a mean age of 23.6 ($SD = 7.4$ years). Although most participants were from Nova Scotia, all of the other Atlantic provinces (New Brunswick, Newfoundland, and Prince Edward Island) were represented in the sample.

**Instruments**

**DEMOGRAPHICS AND RELIGIOSITY**

A demographic questionnaire was administered to obtain age and gender. Religiosity was assessed on a 4-point scale from 1 (*not at all religious*) to 4 (*very religious*). Thirty-six percent of men reported to be not religious, 24% reported themselves to be somewhat religious, 27% fairly religious, and 12% reported to be very religious. For women, 19% reported to be not religious, and 49% reported to be somewhat religious, 24% reported being fairly religious, and 6% reported to be very religious. Interestingly, there was an apparent difference in terms of religiosity reported such that more women reported themselves as somewhat religious whereas more men fell into the non-religious category. However,
despite these percentage differences, the average rating of religiosity across gender was comparable (\(M = 2.15, SD = 1.06\) for men, and \(M = 2.16, SD = .80\) for women).

**RELIGION**

Participants were also asked to indicate their faith, if any. Interestingly, the disparity seen on ratings of level of religiosity above was paralleled in indications of faith. Of the 111 women, 45% were Catholic, 25% were Protestant, 7% declared no religious affiliation, and 21% declared “other” religious affiliation. Of the 33 men, 31% reported to be of Catholic faith, 15% were Protestant, 38% declared no religious affiliation, and 15% declared “other”. Thus again, a greater percentage of men rated themselves as non-religious. This apparent increase in religious affiliation among women is evenly distributed across the other categories. For both men and women, the most frequently cited “other” religion was another Christian religion (e.g., United, Anglican) with Muslim also being mentioned.

**THE MFODS**

Hoelter’s (1979) scale is a reliable and validated 42-item measure of fear of death. Items are rated on a 5-point Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). Five items are reverse-scored to control for response bias. Eight subscales have been derived from the MFODS: Fear of the Dying Process (\(M = 2.16, SD = 0.89, \alpha = .80\)); Fear of the Dead (\(M = 2.70, SD = .90, \alpha = .74\)); Fear of Being Destroyed (\(M = 2.97, SD = 1.10, \alpha = .68\)); Fear for Significant Others (\(M = 1.71, SD = .77, \alpha = .82\)); Fear of the Unknown (\(M = 2.79, SD = .74, \alpha = .50\)); Fear of Conscious Death (\(M = 3.00, SD = .99, \alpha = .77\)); Fear for the Body After Death (\(M = 3.26; SD = .96, \alpha = .78\)); and Fear of Premature Death (\(M = 2.52, SD = 1.03, \alpha = .79\)). Lower scores on each subscale represent a higher fear of death. Consistent with previous research (Hoelter, 1979; Neimeyer & Moore, 1994; Walkey, 1982), but with the exception of the Fear of the Unknown subscale, internal consistency was good.

**THE DIYDC**

The DIYDC asks respondents to complete a number of items including the predicted cause, location, marital status, and age at time of death. Although a number of additional items are assessed
(e.g., race, date of birth, place of injury) these were not examined in our analyses. According to Sabatini and Kastenbaum (1973), the DIYDC is an effective measure of attitudes toward personal mortality.

**Procedure**

Questionnaires were administered to groups of 6 to 10 participants. Participants were given envelopes containing a demographic questionnaire, and the MFODS and the DIYDC in counterbalanced order. Participants were assured that their responses would remain anonymous. Upon completion of the measures, the participants were advised to place the questionnaires back inside the envelopes, seal the envelopes, and return them.

**Results**

The first goal of this study was to determine whether levels of death fear vary as a function of a person’s gender, religiosity, and time left to live. Eleven cases were excluded from the analyses as it was evident that these participants did not understand how to indicate their age at death on the DIYDC (e.g., a 21-year-old participant reported she would die of old age yet indicated her age at death to be 21), thus time-left-to live could not be calculated for these participants. Regression analyses were conducted with gender, religiosity, time left to live, and all possible interactions among the variables as predictors. In accordance with the recommendations of Aiken and West (1991), all continuous variables were centered prior to analyses being conducted.\(^1\) Because previous research has found differing effects across different dimensions of death fear, we conducted independent analyses on the overall MFODS as well as the eight subscales. A summary of these regression analyses is provided in Table 1.

---

\(^1\) Additional exploratory curvilinear analyses were conducted for religiosity on the MFODS and its subscales to determine whether a non-linear relationship existed for religiosity and death fear. For this data, with the exception of a potential curvilinear effect on MFODS subscales 5 and 6, that is, on Fear of the Unknown and on Fear of Conscious Death, a curvilinear relationship for religiosity and death fear was not found to exist. Therefore on these data, we conducted linear regression analyses.
### Table 1

**Standardized Regression Coefficients, R² and Change in R², for Hierarchical Regressions on MFODS and Subscales**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>MFODS</th>
<th>Fear of dying process</th>
<th>Fear of the dead</th>
<th>Fear of being destroyed</th>
<th>Fear for significant others</th>
<th>Fear of the unknown</th>
<th>Fear of conscious death</th>
<th>Fear of body aft. death</th>
<th>Fear of premature death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td><strong>Step 1 (R²)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>(.05^)</td>
<td>(.01)</td>
<td>(.17^)</td>
<td>(.13^)</td>
<td>(.11^)</td>
<td>(.12^)</td>
<td>(.08^)</td>
<td>(.05^)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Religiosity</td>
<td>-.17^</td>
<td>-.11</td>
<td>-.32^</td>
<td>.14^</td>
<td>-.32^</td>
<td>.01</td>
<td>-.04</td>
<td>-.16</td>
<td>-.01</td>
</tr>
<tr>
<td>Time Left to Live</td>
<td>.02</td>
<td>.03</td>
<td>-.03</td>
<td>.00</td>
<td>-.03</td>
<td>-.08</td>
<td>.01</td>
<td>.11</td>
<td>.39</td>
</tr>
<tr>
<td><strong>Step 2 (ΔR²)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity x Time</td>
<td>-.09</td>
<td>.13</td>
<td>.18</td>
<td>.00</td>
<td>-.16</td>
<td>-.08</td>
<td>-.09</td>
<td>-.12</td>
<td>.09</td>
</tr>
<tr>
<td>Religiosity x Gender</td>
<td>-.31</td>
<td>-.75^</td>
<td>-.26</td>
<td>-.21</td>
<td>-.57^</td>
<td>.14</td>
<td>-.04</td>
<td>.35</td>
<td>-.26</td>
</tr>
<tr>
<td>Gender x Time</td>
<td>.94^</td>
<td>.91^</td>
<td>.18</td>
<td>.17</td>
<td>.25</td>
<td>.88^</td>
<td>1.04^</td>
<td>.61</td>
<td>.90^</td>
</tr>
<tr>
<td>3-Way Interaction</td>
<td>-.16</td>
<td>.09</td>
<td>-.34^</td>
<td>-.09</td>
<td>-.09</td>
<td>-.06</td>
<td>-.19</td>
<td>-.18</td>
<td>.11</td>
</tr>
</tbody>
</table>

**Notes:** df = 3, 117 (Step 1); 4, 113 (Step 2); Total N = 121; ^p < .10; *p < .05
Gender, Religiosity, and Time Left to Live Predicting Fear of Death

For overall MFODS score, there was a significant interaction between gender and time left to live (see Table 1). To assess this interaction, we examined individual regressions with time-left-to-live predicting fear of death for men and women. These regressions showed that for men, more time-left-to-live predicted more death fear ($b = -.01, SE = .01, t = 2.15, p < .05$) whereas this was not the case for women ($b = .00, SE = .00, t = 1.39, p = .17$). Religiosity interacted with gender (see Table 1) for scores on the Fear of the Dying Process subscale such that more religious men were less fearful of death ($b = .29, SE = .14, t = 2.15, p < .05$), whereas there was no relationship for women ($b = - .14, SE = .11, t = 1.29, p = .20$). As with the overall MFODS score, there was a significant interaction between gender and time left to live, such that for men more time left to live predicted more fear of the dying process ($b = - .02, SE = .01, t = 1.83, p = .08$) than for women ($b = .01, SE = .01, t = 1.46, p = .15$). However, it is worth noting that although the interaction was significant, the individual regression coefficients did not reach accepted levels of significance.

For the Fear of the Dead subscale, as expected, gender was a significant predictor (see Table 1) such that women were more fearful of the dead than were men. Religiosity was also significant predictor, indicating that as religiosity increased, so did fear of the dead. Interestingly, there was also a significant three-way interaction indicating that men with more time left to live were more fearful of death ($b = -.66, SE = .23, t = 2.94, p < .05$) than those with less time left to live ($b = .10, SE = .14, t = .67, p = .51$), whereas the opposite was the case for women ($b = .25, SE = .18, t = 1.39, p = .17$), for women with more time-left-to-live, and $b = -.35, SE = .12, t = 2.86, p < .01$, for those with less time-left-to-live). Although an interesting finding, this did not replicate on any of the other subscales, thus we are reluctant to draw definitive conclusions from this result.

The only significant predictor of fear of being destroyed was religiosity (see Table 1) indicating that more religious participants had greater fears about being destroyed than did participants with less religious conviction. In terms of fear for significant others, only gender was significant (see Table 1) indicating that women were
more fearful for significant others than were men. Religiosity was also a significant predictor of fear of the unknown (see Table 1) such that participants with low religious conviction were more likely to respond with a greater fear of the unknown relative to highly religious participants. Interestingly, this is the only MFODS subscale where the relationship was in this direction. In addition, gender interacted with time left to live such that for men, having more time-left-to-live predicted a greater fear of the unknown \((b = -0.02, SE = 0.01, t = -2.36, p = .03)\) whereas this was not the case for women \((b = 0.00, SE = 0.00, t = 0.49, p = .62)\).

In terms of fear of conscious death, religiosity was again a significant predictor (see Table 1) such that participants expressing greater religious conviction were significantly more fearful of a conscious death than those participants who declared themselves less religious. Furthermore, gender once again interacted with time left to live such that a longer time left to live predicted a greater fear of conscious death for men \((b = -0.02, SE = 0.01, t = -2.65, p = .01)\), but not for women \((b = 0.01, SE = 0.01, t = 1.43, p = .16)\).

Interestingly, none of the predictors were significant for fear for the body after death (see Table 1). Finally, gender interacted with time left to live for the prediction of fear of premature death, such that, consistent with other subscales, a longer time left to live predicted a tendency toward a greater fear of premature death for men \((b = -0.02, SE = 0.01, t = -1.78, p = .09)\), but not for women \((b = 0.01, SE = 0.01, t = 1.50, p = .14)\). Having now explored the MFODS and its subscales, we turn to participants’ predictions regarding their own mortality and death.

**Participants’ Predictions of Self-Mortality**

The second goal of this study was to explore participants’ predictions about their own deaths using the DIYDC. Specifically, the predicted cause, location, marital status, and age at the time of death were examined. Analyses were conducted using cross-tabulations and a one-way analysis of variance (ANOVA). Furthermore, of interest was the exploration of differences between men and women on these death estimates and the comparison of participants’ responses to actuarial data in order to determine the accuracy of their predictions. Data comparisons were made using the 1997 Statistics Canada “Shelf Tables on Causes of Death”.
AGE AT DEATH

A one-way ANOVA revealed no significant differences between men and women on predicted age at death, $F_{(1, 120)} = .05$, $p = .82$. A comparison of the means revealed that men expected to die at age 71 and women expected death to occur at age 70. Interestingly, both men and women underestimated their expected age at death when compared to actuarial data, which report a life expectancy of 75 years for men and of 81 years for women.

PLACE OF DEATH

Of the 80 participants responding to this item of the DIYDC, 60 (75%) were women and 20 (25%) were men (see Table 2). A hospital was the most frequently reported place of death, followed by death in the home. Interestingly, only two participants expected to die in a senior citizens complex. Chi-square analyses did not reveal significant gender differences in predicted place of death.

MARITAL STATUS AT THE TIME OF DEATH

Of the 131 participants responding to this item of the DIYDC, 104 (79%) were women and 27 (21%) were men (see Table 3). Overall, nearly three quarters of participants expected to be married at the time of death and 15% expected to be widowed.

TABLE 2 Cross-Tabulations for Place of Death for Men ($N = 20$) and Women ($N = 60$) on the DIYDC

<table>
<thead>
<tr>
<th>Place of death</th>
<th>Gender</th>
<th>Hospital</th>
<th>Senior citizen complex</th>
<th>Home</th>
<th>Other*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percentage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td>60</td>
<td>0</td>
<td>20</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td>65</td>
<td>3</td>
<td>23</td>
<td>8</td>
<td>75</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>64</td>
<td>2</td>
<td>23</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td>12</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td>39</td>
<td>2</td>
<td>14</td>
<td>5</td>
<td>60</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>51</td>
<td>2</td>
<td>18</td>
<td>9</td>
<td>80</td>
</tr>
</tbody>
</table>

*Includes plane, water, road, railway, outside and inside other than hospital, senior citizen complex and home
### TABLE 3: Statistics Canada Marital Status Data at the Time of Death and Cross-tabulations at the Time of Death for Men ($N = 27$) and Women ($N = 104$)

<table>
<thead>
<tr>
<th>Gender</th>
<th>StatsCan married</th>
<th>Married</th>
<th>StatsCan never married</th>
<th>Never married</th>
<th>StatsCan widowed</th>
<th>Widowed</th>
<th>StatsCan divorced</th>
<th>Divorced</th>
<th>StatsCan total*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>59</td>
<td>63</td>
<td>16</td>
<td>11</td>
<td>18</td>
<td>22</td>
<td>6</td>
<td>4</td>
<td>97</td>
<td>100</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>28</td>
<td>75</td>
<td>11</td>
<td>9</td>
<td>54</td>
<td>13</td>
<td>5</td>
<td>3</td>
<td>98</td>
<td>100</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>44</td>
<td>73</td>
<td>14</td>
<td>9</td>
<td>35</td>
<td>15</td>
<td>6</td>
<td>3</td>
<td>98</td>
<td>100</td>
</tr>
</tbody>
</table>

Count:

- **Men**
  - 64749
  - 17
  - 17364
  - 3
  - 19750
  - 6
  - 7000
  - 1
  - 108863
  - 27
- **Women**
  - 29193
  - 78
  - 11852
  - 9
  - 55879
  - 14
  - 5002
  - 3
  - 101926
  - 104
- **Overall**
  - 93942
  - 95
  - 29216
  - 12
  - 75629
  - 20
  - 12002
  - 4
  - 210789
  - 131

*Does not include deaths in which marital status is unknown or undeclared*
# Table 4: Statistics Canada Cause of Death Data and Cross-tabulations for Cause of Death for Men ($N = 28$) and Women ($N = 89$) on the DIYDC

<table>
<thead>
<tr>
<th>Gender</th>
<th>StatsCan heart attack</th>
<th>Heart attack</th>
<th>StatsCan old age*</th>
<th>Old age</th>
<th>StatsCan fatal illness</th>
<th>Fatal illness</th>
<th>StatsCan traffic accident</th>
<th>Traffic accident</th>
<th>StatsCan other**</th>
<th>Other***</th>
<th>StatsCan total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>21</td>
<td>39</td>
<td>N/A</td>
<td>29</td>
<td>68</td>
<td>7</td>
<td>2</td>
<td>14</td>
<td>10</td>
<td>11</td>
<td>52</td>
<td>24</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>19</td>
<td>16</td>
<td>N/A</td>
<td>40</td>
<td>74</td>
<td>29</td>
<td>1</td>
<td>14</td>
<td>6</td>
<td>1</td>
<td>48</td>
<td>76</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>20</td>
<td>38</td>
<td>N/A</td>
<td>38</td>
<td>71</td>
<td>24</td>
<td>1</td>
<td>14</td>
<td>8</td>
<td>3</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percentage</th>
<th>StatsCan heart attack</th>
<th>Heart attack</th>
<th>StatsCan old age*</th>
<th>Old age</th>
<th>StatsCan fatal illness</th>
<th>Fatal illness</th>
<th>StatsCan traffic accident</th>
<th>Traffic accident</th>
<th>StatsCan other**</th>
<th>Other***</th>
<th>StatsCan total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>23824</td>
<td>11</td>
<td>N/A</td>
<td>8</td>
<td>75631</td>
<td>2</td>
<td>1953</td>
<td>4</td>
<td>10577</td>
<td>3</td>
<td>111985</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>19702</td>
<td>14</td>
<td>N/A</td>
<td>36</td>
<td>76625</td>
<td>26</td>
<td>914</td>
<td>12</td>
<td>6443</td>
<td>1</td>
<td>103684</td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>43526</td>
<td>25</td>
<td>N/A</td>
<td>44</td>
<td>152256</td>
<td>26</td>
<td>2867</td>
<td>16</td>
<td>17020</td>
<td>4</td>
<td>215669</td>
<td>117</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Old age does not appear as a Statistics Canada cause of death.
**Comprised of death resulting from all other causes not otherwise stated.
***Comprised of death resulting from drugs and alcohol, suicide, poison, stabbing, gunshot.
As predicted, these estimates were highly inaccurate when compared to Statistics Canada (1997) actuarial data (see Table 3). However, chi-square analyses did not reveal significant differences between men and women.

CAUSE OF DEATH

Of the 117 participants responding to this item 89 (76%) were women and 28 (24%) were men. Table 4 shows percentage responses and counts for men, women and an overall total for each cause of death, as well as Statistics Canada (1997) data. Chi-square analyses revealed a significant difference between men and women on cause of death, \( \chi^2(4, N = 117) = 16.40, p = .01 \). As can be seen in Table 4, for men the leading cause of death listed was heart attack (39%) followed by old age (29%). Traffic accidents and fatal illnesses comprised the subsequent causes of death at 14% and 7%, respectively. For women, the leading cause of death was by old age (40%) followed by fatal illness (29%). Death by heart attack was mentioned by only 16% of women, a statistic slightly higher than the next most mentioned cause of death, which was by traffic accident at 14%.

General Discussion

Gender and Fear of Death

The hypothesis that women express greater concerns in certain specific death fear domains was confirmed, and our results support previous research findings (e.g., Cicirelli, 2001; Neimeyer & Moore, 1994; Suhail & Akram, 2002). Specifically, our study revealed that women expressed greater fears on two MFODS subscales, Fear for Significant Others and Fear of the Dead, and therefore supports the general consensus that women tend to express greater fears than men do in some death domains.

It is possible that women do not actually have a higher level of death fear than do men but are simply more willing to acknowledge negative feelings and report fears in some cases (Fortner & Neimeyer, 1999; Kastenbaum, 2000). Alternatively, Dattel and Neimeyer (1990) concluded that after controlling for self-disclosure and social desirability, women did indeed have more elevated
death fears. It could be that women’s elevated fear for significant others is attributable to instinctive maternal characteristics, which tend to foster stronger familial bonds. Women in Atlantic Canada do not differ significantly from women globally in that they expressed elevated death fears in certain specific death domains. Although Atlantic Canada has historical, religious, and cultural characteristics relatively unique to the area, the fact that women from this area tend to show higher death fears in certain specific domains makes them similar to women studied in numerous other regions and countries (e.g., Neimeyer & Moore, 1994; Suhail & Akram, 2002; Okafor, 1994; Tang, Wu, & Yan, 2002).

An unexpected gender-related finding in this study was that men expecting to have a greater amount of time-left-to-live had greater fear of death than women on a number of subscales; a result that lends partial support to findings reported by both Cicirelli (2001) and Neimeyer and Moore (1994). However, in both the Cicirelli (2001) and Neimeyer and Moore studies, gender was the primary predictor of the fear of death, whereas in the present study—while the interaction was significant—gender did not independently predict fear of death (see Table 1). Increased fear of death for men has also been attributed to an indirect link with religiosity (Cicirelli, 1999), such that stronger religious beliefs tend to result in lower death fears. Thus because women tend to have stronger religious convictions than men do, men may have a higher fear of death. Interestingly, in this sample, women were no more religious on average than men (see Method above) but were less likely to indicate they were “not religious”.

Religiosity and Fear of Death

The results of the present study revealed that the more religious participants had higher fear of the dead, fear of being destroyed, and fear of conscious death, whereas participants with lower religious conviction were more fearful of the unknown. Perhaps this is due to the predominantly Christian culture of the Atlantic Provinces (Statistics Canada, 2005). Ideas of salvation and damnation are still very much culturally entrenched, thus those without religious convictions may still be aware of both their failure to meet the expectations for salvation and its implications for damnation.
In addition, for those without strong religious beliefs, a life beyond the present world is uncertain. The devout are more confident in the better life to follow. Without an opportunity to, for example, see deceased loved ones or to find solace from the suffering of the corporeal world in the afterlife, death threatens to be a finite terminus to the unfinished business of living.

Interestingly, discrepant findings are a hallmark of previous research on the relationship between religiosity and death fear. Inconsistent findings in the present study with respect to both religious and non-religious participants expressing a fear of death may be attributable to the differing domains in which these fears surfaced (i.e., to the multidimensional nature of death fear). One possible explanation for the more strongly religious committed participants evidencing greater fears on some subscales is that many religions practice very specific postmortem rituals and hold the body to be sacred. The less religious participants’ greater fears of the unknown may reflect doubts about their fate after their corporeal death.

**Death-Related Predictions**

It is interesting (though not surprising) that both men and women made inaccurate predictions related to age, location, marital status, and cause of death compared with actuarial data. It is difficult to determine whether these inaccuracies are due to ignorance of actual death statistics or to an overly skewed outlook of one’s own future. Although statistics relating to average life expectancy and cause of death are relatively accessible, Lonetto et al. (1975) and Simpson (1975) noted that by avoiding conscious exploration of death statistics we create an emotional distance between our lives and our eventual death.

Another explanation may simply be that these inaccuracies are a consequence of how death is portrayed in the media. When the media report on death, these deaths tend to be of a catastrophic or violent nature, thus we tend to overestimate the likelihood of our experiencing such an eventuality (the so-called “availability heuristic”; Tversky & Kahneman, 1973). Seldom is a camera in a hospital room or a senior citizens home as the patient expires, thus there may be a perception perpetuated by the media that this type of death is a less common occurrence.
Another interesting finding is that participants made inaccurate predictions regarding marital status at the time of their death. This seems due in part to the fact that women underestimated being widowed at the time of death. Statistically, it is virtually impossible for women to outlive men by six years and not be more likely to be widowed at the time of death. The fact that women did not accurately predict their age and marital status at death may have some significant implications for their quality of life in later years (as many women may find themselves unexpectedly as widows living longer than they expected).

It is interesting to note that men and women differed in their prediction of cause of death. For women, old age was the most often predicted cause of death, yet old age is not a cause of death in either the DIYDC or Statistics Canada data. Perhaps participants’ understanding of “old age” comes from other less formal agents of socialization such as family, media, or peer groups. For men, heart disease was the most often predicted cause of death, although it was substantially overestimated when compared to actuarial data. Again, this may be in part due to the availability heuristic (Tversky & Kahneman, 1973) as we frequently hear of and see media depictions of men dying of heart attacks (but rarely see depictions of women having heart attacks).

Limitations and Future Directions

Possible directions for future research might include a study of participants from broader religious backgrounds and could take into account not only strength of religious conviction but the multidimensionality of religiosity as well. It is interesting that men and women appeared to differ in terms of their religious convictions. However, as noted in the Methods section, this seems primarily due to women being less likely to report being “non-religious” and more likely to report themselves as “somewhat” religious. This could indicate that women might be somewhat more ambivalent concerning their religious convictions, and this could contribute to how women feel about death. This being the case, continued research on this aspect of the findings would be worthwhile.

Future study might also include some more indirect measures of fear of death that circumvent social desirability issues. Sabatini and Kastenbaum (1973) found that discussion with participants
after completing the DIYDC revealed that some predictions about cause of death were too threatening for participants to identify. In addition, it could be that once participants are aware of the different actuarial categories that are used to designate place and cause of death, they might become more accurate in their predictions concerning their own deaths. Thus, it would be worthwhile to explore this issue in future studies by specifically informing participants of these categories before they are asked to make their predictions.

Overall, the present research not only supports the applicability to Atlantic Canadians of the general trends found in prior research regarding death attitudes and predictions, it also underscores the need for the examination of interaction effects among the correlates of death fear. Because a number of significant interactions were found between these predictors, it would be worthwhile to further examine such issues. Given the relative absence of information regarding death attitudes and fears in Atlantic Canada, and the potential interactive effects of different predictors, the findings of this study represent one departure point for future research in this and other regions.

References


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