SEX DIFFERENCES IN DEATH ANXIETY: TESTING THE EMOTIONAL EXPRESSIVENESS HYPOTHESIS

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Several researchers have reported sex differences in death anxiety, but such differences have not been systematically investigated. This study attempts to test the generality of elevated death anxiety of women in a heterogeneous, racially mixed adult sample (n = 117). Moreover, we tested the viability of one explanation of this apparent gender difference. We statistically controlled for potential sex differences in self-disclosure or "social desirability" response bias. As predicted, women scored higher than men on the affectively oriented Death Anxiety Scale, but not on the more cognitively oriented Threat Index. However, in conflict with the emotional expressiveness hypothesis, this pattern of findings remained unchanged once we statistically controlled self-disclosure and social desirability. These findings suggest that sex differences in death attitudes are real rather than artifactual, and deserve more empirical study.

Introduction

Sex differences in death anxiety is one of the most frequently noted and poorly understood findings in thanatology. In his review of the death anxiety literature through 1977, Pollak (1) claims that the majority of research shows women reporting more death fear than men, whereas virtually all other studies find no difference between the sexes. Research conducted over the last decade reinforces Pollak's conclusion, and provides a slightly more refined view of this sex difference than was previously available.

The authors thank Andrea L. Nichols for her assistance in data collection.

Death Studies, 14:1-11, 1990
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As is true of the broader death attitude literature (2), the most commonly used instrument in these studies is the Death Anxiety Scale (DAS) (3), and the most commonly studied subject group consists of college students. Much of the work using this measure with this population supports the conclusion that women are more death anxious than men (4–9). Moreover, there is some indication that this is not simply an American phenomenon, since Lonetto and his associates found the same trend in a large-scale study of Irish and Canadian students (10). Other studies using the DAS found similar sex differences in demographically varied samples, ranging from rural southern high school students (11) to husbands and wives in military families (12), and rural elderly people responding to the DAS in interview form (13). Occasional reports using alternative fear of death scales also corroborate this view (4, 14).

However, the literature is far from unequivocal in finding more negative death attitudes in women. For example, Neimeyer and his associates found no differences between men and women in death threat as measured by the Threat Index (TI) (15, 16) in either college student (14) or adult samples (17, 18), and Eggerman and Dustin (19) reported similar negative results with the TI in a study of first-year medical students and physicians. Some studies with the DAS also fail to show a gender difference (20, 21), particularly in more mature, professional people (17, 22–24). Similarly, a study of elderly nursing home residents detected no sex differences. (25). Two additional studies, using rather different methods, also yielded a "no difference" conclusion. Conte, Weiner, and Plutchik (26) found that men and women scored similarly on the Death Anxiety Questionnaire, a new instrument for which they provide some preliminary validational evidence. Similarly, Viney (27) was unable to detect any sex difference in her interview-based study of nearly 800 ill and healthy adults. Although these conflicting studies call into question the robustness of a sex difference in death concern, they are quite consistent in indicating the direction of this difference when it does appear. In fact, only two recent reports counter the general trend by finding that men, rather than women, experience higher death threat (28) and anxiety (29).

In keeping with the recent emphasis on the multidimensionality of death anxiety (2), a few investigators have tried to establish more
specifically on what aspects of death concern males and females differ. For example, Neimeyer, Bagley, and Moore (5) found that women enrolled in death education courses tended to outscore men on the Dying of Self (DyS) subscale of the Collett-Lester inventory (30), but not on the Death of Self or the Death or Dying of Others subscales. This tendency for women to have higher DyS scores appeared in other studies as well (31, 32). Keller and his associates (33) also provided support for the specificity of gender differences using a 12-item questionnaire of their own design. They found that in a large, heterogeneous adult group, women scored higher than men on negative evaluation of death and anxiety regarding personal death, but did not differ from them in concerns about an afterlife. Taken together, these studies point toward women’s tendency to report more anxiety about death in general, and especially about their own dying. Moreover, this tendency may be stronger among adolescents and young adults than among middle-aged subjects.

Although the existence of some gender differences in death anxiety measures is fairly clear, its explanation and significance are not. One hypothesis, as Stillion (34) suggests, is that the discrepancy in death anxiety scores simply reflects the greater tendency of women to admit troubling feelings that men are less likely to share openly. This emotional expressiveness hypothesis receives indirect support from the fact that studies reporting sex differences tend to use the DAS or similar “feeling-oriented” questionnaires, whereas those that find no such differences often use more indirect or “cognitive” measures, such as the Threat Index or Lonetto’s death personification procedure (35). A corollary of this hypothesis would be that men feel more constrained to present a socially desirable self-image on death anxiety questionnaires, and may minimize their reports of death fear for that reason. The finding that the DAS, but not the TI, is susceptible to such social desirability response bias is compatible with the conflicting results obtained with men and women using these two instruments (4, 36). Until now, the emotional expressiveness hypothesis had yet to be systematically evaluated by statistically or experimentally controlling for discrepancies in self-disclosure or social desirability between men and women, and then determining whether sex differences in death anxiety still emerge.
The primary purpose of this study was to test the existence and specificity of sex differences in death concern, and to assess the extent to which these could be attributed to sex differences in emotional expressiveness. A secondary goal of the study was to determine the generality of any possible sex differences by including subjects having a much wider range of age and socioeconomic level than those typically investigated in the death anxiety literature. In addition, we explicitly recruited both black and white participants, given the questionable tendency of most studies to generalize conclusions derived from primarily white samples. Recent reports emphasized the importance of including samples of both races. These reports suggest that blacks may report greater death fear than whites across diverse socioeconomic settings (11, 13, 37).

We hypothesized that gender differences in death concern would appear on the affectively oriented DAS, but not on the cognitively oriented TI. However, we also hypothesized that, after we statistically controlled for self-disclosure and social desirability, this sex difference would disappear, a finding that would directly support the emotional expressiveness hypothesis. On the other hand, persistence of these differences after we partialed out self-disclosure and social desirability would indicate that we must seek explanation for gender differences in other factors. Finally, given the recency and tentativeness of studies of black samples, we analyzed for possible racial differences on the various measures, but advanced no specific hypotheses about them.

Methods

Participants

To obtain a heterogeneous sample of adults, we recruited subjects from a state technical institute and blue-collar work settings in greater Memphis, Tennessee. The total sample of 117 participants included 35 white women, 34 white men, 24 black women, and 24 black men. Thirty-five percent of the sample was registered for classes in the technical institute. We recruited the remaining 65% from various occupational groups, including construction workers,
grocery store employees, park and recreation personnel, and municipal union members.

**Measures**

**Death Anxiety Scale.** The DAS (3) is a straightforward, 15-item questionnaire assessing negative reactions to situations concerning death and dying. Items take the form of short statements (e.g., "I am very much afraid to die."), to which the subject responds True or False. Although a certain amount of validational evidence has been provided for the instrument (38), researchers have begun to emphasize that it actually may measure more than one facet of death anxiety (2, 39). For this reason, Gilliland and Tømpler (40) have recently recommended that investigators report the results of factor scores to clarify future research.

**Threat Index.** The TI (15, 16) is a 30-item paper-and-pencil instrument that assesses respondents' tendencies to define their identities as living beings and their own deaths in incompatible terms on a sample of personal constructs. For example, a subject's tendency to identify her life as "predictable," and to contrast it with her own death, which she would construe as "unpredictable" would reflect death threat in this sense. A large literature supports the reliability and validity of the TI as a measure of death threat (41).

**Jourard Self-Disclosure Questionnaire.** The JSDQ (42) is the most commonly used measure of self-disclosure, conceptualized as one's willingness to make oneself known to another. The instrument consists of 25 potential disclosure topics (e.g., what you dislike most about yourself, details of your sex life), which the respondent rates as known fully or only vaguely by each of five significant others (i.e., mother, father, same and opposite sex friends, spouse/companion). The total score on the JSDQ represents the sum of full disclosures made to all figures across all 25 topics. Several studies (43-45) have provided favorable evidence for the validity and reliability of the JSDQ.
Marlowe-Crowne Social Desirability Scale. The SDS (46) is a popular 33-item questionnaire assessing the extent to which the respondent tends to answer personal questions in a socially desirable, rather than candid, fashion. It consists of a series of short statements (e.g., "I have never intensely disliked anyone," "I like to gossip at times.") to which the subject simply responds True or False. The score on the SDS reflects the number of socially desirable responses endorsed by the subject. The construct validity of the SDS has been supported by various authors (47, 48).

Procedure. Two experimenters (a black woman and a white man) administered the instruments in counterbalanced order to participants in small group settings. Participation was voluntary, but employers permitted subjects to take part in the study during work hours, to encourage participation. Subjects were debriefed about the research following completion of all questionnaires.

Results

Means and standard deviations for each measure by subject group appear in Table 1. To examine possible sex and race differences on the emotional expressiveness variables, we first performed 2 (sex: male/female) × 2 (race: black/white) analyses of variance on the JSDQ and SDS. In partial support of our rationale, we found a significant interaction between sex and race on the JSDQ (F(1, 104) = 5.26; p < .025). Follow-up tests indicated that white men disclosed significantly less than either black men (F(1, 104) = 7.52; p < .01) or white women (F(1, 104) = 4.20; p < .05). However, we found no relationship between the JSDQ and the TI or DAS, which correlated modestly with one another (r = .21; p < .025).

A 2 × 2 ANOVA on the SDS yielded two main effects. A main effect for race indicated that blacks reported higher levels of social desirability than whites (F(1, 112) = 5.52; p < .025), and a main effect for sex indicated that men tended to show more such bias than did women (F(1, 112) = 30; p < .10). As in previous studies, the DAS displayed a significant social desirability confound (r = −.33; p < .001), whereas the TI and SDS were essentially uncorrelated (r = −.07; not significant).
TABLE 1  Mean Scores for Emotional Expressiveness and Death Attitude Measures for Heterogeneous Adult Group (N = 117)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Men</th>
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<th>Women</th>
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<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>White</td>
<td>Black</td>
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<tr>
<td>Death Anxiety-Scale</td>
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<tr>
<td>M</td>
<td>5.71</td>
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<td>7.89</td>
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<tr>
<td>SD</td>
<td>2.89</td>
<td>3.45</td>
<td>3.99</td>
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<tr>
<td>M</td>
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<tr>
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<td>Joumard Self-Disclosure Questionnaire</td>
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<tr>
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<td>16.94</td>
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</tr>
<tr>
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<td>19.52</td>
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<tr>
<td>SD</td>
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<td>5.17</td>
<td>5.44</td>
<td>6.67</td>
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</table>

As predicted, a third 2 x 2 ANOVA yielded a main effect for sex on the DAS, with women displaying significantly greater death anxiety than men (F(1, 113) = 5.72; p < .025). Subsequent analyses for sex differences on the DAS subfactors identified by Lonetto and Templar (49) indicated that women outscored men on factors measuring “Cognitive-Affective Response to Death” (F(1, 113) = 5.67; p < .025), and “Awareness of the Passage of Time” (F(1, 113) = 4.29; p < .05). A similar trend toward significance was detected on the “Stressors and Pain” factor (F(1, 113) = 3.49; p = .06), but no sex differences emerged on a fourth factor assessing fear of “Physical Alterations” caused by dying. Also as hypothesized, we detected no gender differences in death attitudes on the Threat Index, nor did we find racial differences on either of the death concern measures.

Finally, to test the hypothesis that sex differences in death attitudes could be accounted for by the differential emotional expressiveness of men and women, we repeated the analyses using subjects’ SDS and JSDQ scores as covariates in an analysis of covariance design. However, the adjusted means for the dependent
variables were virtually unchanged once social desirability and self-disclosure were statistically controlled, and the pattern of results based on these ANCOVAs was identical to those discussed above. That is, women still displayed greater death anxiety than men on the total score and subscales of the DAS, but did not differ from them in death threat, as assessed by the TI.

Discussion

Our results clearly support the hypothesis that women would display greater death concern than men on the Death Anxiety Scale but not the Threat Index. Moreover, the emergence of this familiar sex difference in the present heterogeneous adult sample reinforces the generality of this finding, and argues against its confinement to the white college populations used in most studies. A close inspection of subfactor scores on the DAS suggests that women’s greater anxiety is fairly global, coloring all facets of death anxiety except those centering around physical alterations caused by death. On the other hand, women and men scored similarly on the Threat Index, a more cognitively oriented measure of death concern. Taken together, these results indicate that, whereas the two sexes may conceptualize life and death in similar terms, women nonetheless report greater fear about transition from one to the other.

Contrary to our predictions, the greater death anxiety of women remained even after we statistically controlled for the effect of self-disclosure and social desirability. Thus, it seems unlikely that one can simply attribute the higher level of death fear reported by women to general sex differences in emotional expressiveness, at least as assessed by the current frequently used methods. Instead, these results raise the prospect that such sex differences are a “real” phenomenon deserving of further study.

Although the present findings argue against attributing sex differences in death anxiety to emotional expressiveness, they may, nonetheless, be the product of differential socialization of men and women. For example, an alternative hypothesis might relate women’s tendency toward greater death anxiety to their comparatively lesser sense of control over their own lives, since a number of recent studies (2) have associated an external locus of control with elevated
death anxiety. The results of Sadowski, Davis, and Loftus-Vergari (7) support the plausibility of this alternative hypothesis. They found that the women in their sample were both more death anxious than men and more external in their locus of control. But whatever explanation is put forward, it seems clear that it would have to be quite general, since recent evidence suggests that greater death anxiety among women may extend to Eastern as well as Western cultures (50).

References

ity, situational stability, and meaningfulness of the Threat Index. *Omega, 8*, 251–265.


Received January 31, 1989