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Research Article

Does Death Anxiety in a Population of Australian Health Care Workers Differ from the General Australian Population?

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Abstract

Death anxiety measured using the Templer Death Anxiety Scale (TDAS) in healthcare workers at an Australian cancer centre was compared with TDAS scores previously reported in the general Australian population.

Health care workers had mean TDAS scores of 5.8 (SD 2.6), 5.0 (SD 2.2) for males, 6.2 (SD 2.7) for females, 5.5 (SD 2.5) for doctors and 6.3 (SD 2.8) for nurses.

Healthcare workers reported significantly lower death anxiety than had been reported historically by a sample of general population in Australia (P = 0.008). Female healthcare workers reported significantly less death anxiety than females in the general population (P = 0.001). Doctors reported significantly less death anxiety than the general population (P = 0.005).

Keywords: *Does Death Anxiety; Population of Australian Health Care; General Australian Population*

Introduction

Research into the process of death and dying has been a topic of interest for psychologists and researchers alike. Hermann Feifel [1] pioneered the study of both patient and physicians attitudes to death and dying and its effect on care of the dying patient [2] A number of studies have tried to establish whether or not healthcare providers have a higher than average anxiety around death and dying. Unfortunately, the results have thus far been inconclusive [3]. The more clinically relevant question to be answered is whether or not this fear impacts on the provision of care to the dying patient.

It has been asserted that healthcare providers' personal fear of death impacts on their ability to communicate bad news [4] and impacts on the provision of care to the dying patient [5]. Healthcare providers must contend with the unspoken and often unacknowledged sense of powerlessness, failure and utter helplessness that accompanies the death of a patient in their care [6]. They may disengage emotionally and practice avoidance. This may lead to poor quality care and failure to meet patients' needs at one of the most vulnerable times in their lives. End of life care practices also differ markedly between specialties [7]. It is unclear how far death anxiety influences attitudes to death and dying. A simply administered validated measure of death anxiety is needed to study this phenomenon.

The Templer Death Anxiety Scale (TDAS) was constructed by the American clinical psychologist Dr Donald Templer [8]. Since it was first developed, the TDAS has become one of the most popular instruments of thanatological research [9].

In a previous study, the levels of death anxiety using TDAS in a sample drawn from the general Australian population have already been reported [10]. This study compares the level of death anxiety measured using the TDAS amongst a sample of Australian healthcare workers to the older results (published 30 years ago) from the general Australian population.

Method

Subjects

After receiving institutional ethical approval, the Templer Death Anxiety Scale (TDAS) was administered in an online questionnaire to all doctors and nurses working at a single specialist cancer centre in Melbourne. Participation was voluntary and all responses were anonymous. 144 subjects completed the questionnaire. Results from 17 subjects were excluded due to missing data. 127 subjects were included in the analysis (88%).

In the historical sample used for comparison [10], the investigators randomly recruited 139 subjects of varying ages from both genders belonging to a diverse range of socioeconomic statuses from the city of Melbourne to represent the general Australian population and measured their TDAS scores.

Measures

Templer death anxiety scale (TDAS)

The TDAS is a 15-item questionnaire with a binomial true/false format (as depicted in Figure 1). Total scores range from 0 to 15. A higher score indicates higher death related anxiety. The scale was constructed with the objective of better reflecting a wide range of life experiences compared other death anxiety scales that were in use at the time. The original English version was assessed for test-retest reliability (product moment correlation coefficient 0.83), for internal consistency (KR-20 0.76) and for content validity [8]. Templer and Ruff reported 7 different studies involving more than 3600 adults and adolescents in North America in which mean TDAS scores varied between 4.5 and 7.0 with standard deviations around 3 [11].

Please answer “Yes” or “No” to the following questions

1. I am very much afraid to die
2. The thought of death seldom enters my mind
3. It doesn’t make me nervous when people talk about death
4. I dread to think about having an operation
5. I am not at all afraid to die
6. I am not particularly afraid of getting cancer
7. The thought of death never bothers me
8. I am often distressed by the way time flies so very rapidly
9. I fear dying a painful death
10. The subject of life after death troubles me greatly
11. I am really scared of having a heart attack
12. I often think about how short life really is
13. I shudder when I hear people talking about a World War III
14. The sight of a dead body is horrifying to me
15. I feel that the future holds nothing for me to fear

Figure 1: *Templer’s Death Anxiety Questionnaire.*

Statistical analysis

Statistical analysis was done using GraphPad Prism 6 (GraphPad Software Inc, La Jolla, CA, USA) after entering raw data onto Excel spreadsheets (Microsoft Office for Mac, Microsoft Inc, Redmond, WA, USA).

Mean and standard deviation of TDAS scores were calculated for all respondents in our survey. Mean and standard deviation of TDAS scores for both genders were also calculated from survey raw data.

Comparison was made with previously published TDAS data from Schumaker., *et al*. [10] from a sample of general Australian population including gender specific data. The two groups were compared using multiple t tests and corresponding 2 tailed P values were calculated with corrections using the Holm Sidak method native to GraphPad Prism. An alpha value of 0.05 was deemed significant.

Results

Socio-demographic data of the respondents to our survey at a single center in Melbourne, Australia is described in table 1.

	N (%)
Gender (%)	
Male	41(32%)
Female	86(68%)
Occupation (%)	
Doctors	69(54%)
Nurses	58(46%)
Age range, years (%)	
18-24	1
25-34	50
35-44	38
45-54	19
55-64	16
>65	3
Years of clinical experience	
<10	50
10-20	42
>20	37

Table 1: *Socio Demographic Characteristics of Survey Respondents.*

Responses from 127 health professionals were included in the analysis. 69 (54% of respondents) were doctors and 58 (46% of respondents) were nurses. 41 (32% of respondents) were male and 86 (68% of respondents) were female. 69% of respondents were between 25 and 44 years of age. The average duration of postgraduate clinical experience amongst subjects was 15 years (range 1 - 44 years).

In comparison, the study population used to report TDAS scores in the historical sample from the general Australian population, of the 139 subjects, 69 (49.6%) were male and 70 (50.4%) were female. Their ages ranged from 17 - 69 (mean 31.88 years, standard deviation 11.4).

Means and standard deviations for TDAS scores in both population samples are summarised in table 2.

	Mean	SD	N
Healthcare professionals	5.8	2.6	127
Male healthcare professionals	5.0	2.2	41
Female healthcare professionals	6.2	2.7	86
Doctors	5.5	2.5	69
Nurses	6.3	2.8	58
General Australian population *	6.76	3.2	139
Males: general Australian population *	5.7	3.0	70
Females: general Australian population *	7.8	3.4	69

Table 2: *TDAS Scores.*

** Adapted from Schumaker et al. (1991). Death anxiety in Japan and Australia. J Soc Psychol, 131,4, 511-518.*

Overall, TDAS scores were higher for the general population compared to medical professionals. This trend was observed when scores were examined by gender for both populations. This trend was also observed when TDAS for the general population was compared with TDAS scores for doctors and nurses (as depicted in Figure 2).

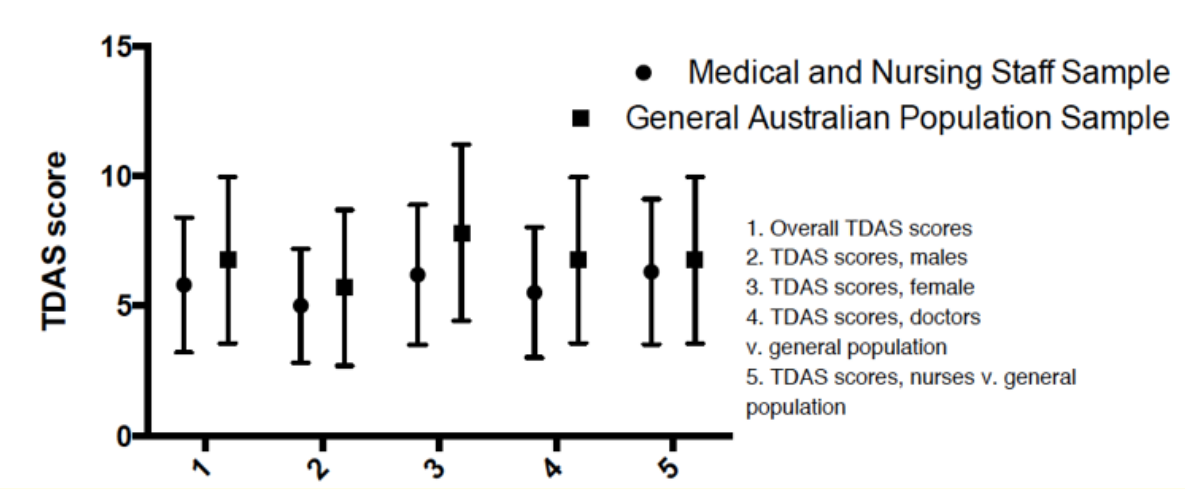

Figure 2: *TDAS General Population vs. Healthcare Workers*

The trend achieved statistical significance for the difference of means for the total population (P = 0.008), female health professionals (P = 0.001) and doctors (P = 0.005). The results are detailed in table 3.

	Difference 0f Means	Standard Error 0f Difference	P Value
General Population v Healthcare Professionals	-0.96	0.359	0.008
General Population v Healthcare Professionals: Males	-0.7	0.538	0.196
General Population v Healthcare Professionals: Females	-1.6	0.489	0.001
Doctors v General Population	-1.26	0.439	0.005
Nurses v General Population	-0.46	0.483	0.342

Table 3: *Difference in TDAS scores between healthcare professionals and general population.*

Discussion

Much of the literature published by clinical psychologists at the forefront of research into death and the experience of dying has alluded to an unusually high fear of death amongst clinicians. Whilst the personal rationale behind such fear may be varied, the question remains as to what impact this has on a clinicians' care of the dying patient. Feifel asserted that patients prefer to be informed candidly about the severity of their health status and despite this, physicians are often reluctant to discuss impending death with their patients [1]. A review in 2004 found evidence of difficulty communicating with and caring for of dying patients amongst clinicians with higher scores on fear of death scales [2]

Multiple studies have tried to replicate the high death anxiety scores amongst clinicians since Feifel's papers, but without consistent results. While some studies have supported Feifel's original hypothesis [2,12], others have failed to demonstrate that clinicians display a higher level of death related anxiety than the general population [13].

We hypothesised that death anxiety scores amongst health professionals at our specialist cancer institution, where dying and death are frequently encountered during care of our patients, would be different to that of the general Australian population. The results indeed reveal a lower level of death anxiety measured on Templer's Death Anxiety Scale amongst health professionals at our centre compared to the general population. This was noted to be a consistent trend even where the groups were examined for differences in death anxiety by gender and profession (nurse or doctor). This unveils a number of perplexing questions.

At first glance, the fact that death anxiety is lower amongst clinicians at our institution than amongst the general population intuitively makes sense. Our centre is a tertiary referral centre dealing exclusively with cancer patients, in whom higher levels of mortality are expected compared to more general patient populations. Are health care workers in our specialist cancer institution less anxious about the phenomenon of death due to their patient milieu? Is a higher exposure to the mortality of others a contributory factor to reduction in death anxiety overall? To compare our results with scores in health professionals from tertiary centres not specialising in cancer medicine alone would be interesting and may suggest differences in death anxiety between different specialities with different exposure to dying patients.

Is the significantly low death anxiety score an artefact? A low death anxiety score may just as well signal high death anxiety based on the idea that anxiety about death is universal [2]. After all, it is in human nature to defend oneself against anxiety and by doing so, those with low death anxiety scores are inevitably exposing the true extent of their underlying fear.

It is also important to note that the only Australian data available to compare TDAS scores comes from a study published about 30 years ago. It is reasonable to infer that our findings merely reflect changes to the level of death anxiety in the general Australian population over this time. The Australian population is now significantly larger and more diverse than it was 30 years ago and personal beliefs and societal norms have also likely evolved over this period Does the Templer Death Anxiety Scale in itself lack the sensitivity to appropriately measure anxiety related to the specific death experiences of health care professionals? More complex, multidimensional assessment tools such as the revised Collett-Lester Fear of Death Scale (rCLFODS) may be able to provide more nuanced information on the phenomenology of fear and anxiety related to death [14].

Finally, the question of how a quantum of self reported death anxiety impacts on patient care remains a valid and concerning prospect. What impact does clinicians' fear of death have on our care of the dying patient? And consequently, how might we improve the care of our patients through specialised training and support for clinicians in the process of caring for the dying patient? Further research on these questions may lead to both theoretical and practical answers that benefit not only the population of cancer patients at our institution, but may also have broad reaching consequences for the care of dying patients across all tertiary healthcare institutions.

Conclusion

Death anxiety as measured by TDAS was significantly lower in a sample population of medical and nursing staff at a specialist cancer hospital in Australia compared to available data from a previous sample of general Australian population from 30 years ago. Female health care workers reported significantly lower levels of death anxiety compared to females in the general Australian population in the previous data set. Doctors reported significantly lower death anxiety compared to the general Australian population in the previous data set.

It is unclear if death anxiety is lower amongst cancer clinicians compared to a more general sample of healthcare providers with less exposure to managing patients with high morbidity and mortality outcomes.

We propose the use of both TDAS and alternate measures of fear of death to perform a more nuanced study of the death anxiety characteristics of a general population of healthcare providers and to assess its impact on provision of healthcare to patients at the end of their lives.

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