Original Article

Self-esteem, locus of control and religiosity in predicting death anxiety among students in a Nigerian tertiary institution

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Abstract

Background: Anxiety usually accompanies the thought of death, and certain variables have been repeatedly linked to it. However, the link has not been thoroughly investigated in Nigeria. Self-esteem, religiosity and locus of control (LOC), which have been linked to death anxiety in Western countries, were investigated among students in a higher institution in Ibadan, Oyo State, Nigeria.

Methods: In this cross-sectional survey, convenience sampling was used in selecting participants from the tertiary institution. A questionnaire consisting of Templer Death Anxiety Scale, Rosenberg Self-Esteem Scale, Revised Intrinsic/Extrinsic Religious Orientation Scale and Multi-dimensional LOC Scales was used to obtain the data on death anxiety, self-esteem, religious orientation and LOC, respectively.

Results: A total of 317 students (mean age 23.8 ± 3.25 years; 131 male) participated in the study. The findings showed that only 'powerful others' LOC ($P < 0.01$) made a unique and statistically significant contribution to death anxiety among the students.

Conclusions: While effort on intervention by health professionals can be directed at the external LOC to lessen death anxiety, other variables require further probe.

Keywords: Death anxiety, locus of control, religiosity, self-esteem, students

INTRODUCTION

Death is a natural and unavoidable phenomenon in human life that is associated with uncertainties and therefore dread.[1] Hence, a psychological discourse on the subject of death is not complete without a discussion on the anxiety or fear that people have about it. The concept of death anxiety is a broad one and different researchers often use the terms 'death anxiety' or 'fear of death' to mean the different aspects of this construct.[2] Many researchers have, therefore, construed death anxiety as a multidimensional construct.[3-5] Lester[3] developed the Collett-Lester Fear of Death Scale, with the understanding that there are four aspects of fear of death: fear of death of self, fear of dying of self, it of others and fear of dying of others. Hoelter[2] described death anxiety as anxiety about many other aspects of death, which are fear of how one will die, fear of how

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significant others will be affected by one's death and fear of what will happen after one dies, that is not just to the body but whether there is an afterlife.

Several attempts have been made to narrow down the definition of death anxiety. However, there does not seem to be a universally agreed one. The general and prevalent thought is that of the anxiety individuals experience in anticipation of the state in which they do not exist.[5] Although the definition of death anxiety has remained quite ambiguous for over 100 years, researchers have not been deterred from examining the causes and correlates of death anxiety. Consequently, death anxiety research has generated thousands of published articles in the past few decades.[6] Although research has revealed scores of factors related to death anxiety, some variables seem to be somewhat consistently associated with death anxiety. Some of the variables, such as religiosity, locus of control (LOC), self-esteem, age and gender,[7,8] are explored in this study.

Self-esteem, which is defined as a favourable or unfavourable attitude towards oneself,[9] has been found to have a negative relationship with death anxiety.[7,10,11] The relationship between death anxiety and self-esteem appears to be a complex one because self-esteem shows a relationship with other variables such as the meaning of life,[11] mortality salience[12] and external LOC,[13] which may mediate its association with death anxiety.

Another death anxiety-related variable is the LOC, which is conceptualised as the extent to which an individual perceives successes and failures in life on being within their control (internally) as opposed to forces beyond them (externally controlled).[14] Research has shown that holding a belief that one's life is under one's control is a useful predictor of mental well-being in terminal situations.[15] Furthermore, internal control belief is often found to be more positive than externality belief and is linked with low levels of death anxiety.[16,17]

The relationship between death anxiety and religiosity is complex because religion is a multi-dimensional construct. Some studies reported religion to have a negative relationship with death anxiety,[18,19] and others did not report a significant association.[18,20,21] However, the dimension of religion termed orientation has been fairly consistently associated with death anxiety. This is the dimension which measures the commitment of an individual to his or her religion and it is broadly divided into extrinsic and intrinsic. While intrinsic religious orientation describes people of a greater commitment to religion because the embraced creed is internalised and followed

fully, a worshipper with an extrinsic orientation embraces the religious creed lightly or selectively shapes it to fit in more with primary needs.[22] A meta-analysis[23] several studies that examined the relationship between religiosity and death anxiety found that extrinsic religiousness positively correlated with fear of death. Generally, people who possess intrinsic religious motivation have significantly lower levels of various types of death anxiety than people with extrinsic religious motivation, who may have a positive relationship with death anxiety.[23-36]

This study aimed to investigate the influence of variables such as age, gender, self-esteem, religiosity and LOC on death anxiety among students in a tertiary institution. Besides, basic demographics have been understudied because the female gender[19,31,33-36] and younger age have been known to have a relationship with death anxiety. Based on the findings from the literature, the following hypotheses were generated to drive the study: (i) lower self-esteem will significantly predict higher death anxiety; (ii) religious orientation (intrinsic and extrinsic) will jointly and independently predict death anxiety; (iii) LOC (internal, chance and powerful others) will jointly and independently predict death anxiety; (iv) female students will have higher death anxiety than their male counterparts; and (v) decreasing age among the students will lead to increased death anxiety.

MATERIAL AND METHODS

This study adopted a cross-sectional research design. The dependent variable was death anxiety, while the independent variables were self-esteem, religiosity and LOC. This study was conducted at the Polytechnic, Ibadan, Oyo State, Nigeria. The polytechnic is an institution of higher learning which provides education in technical skills acquisition. The tertiary institution is located at the centre of the city. Admission is offered to over 19,000 students. The Faculty of Business and Communication Studies was chosen among the five faculties in the school of higher learning. Students of the institution were selected randomly across all the eight departments in the faculty.

The instrument was a questionnaire which consisted of five sections.

Self-designed structured questions were used to obtain the demographic information of respondents, such as age, gender, ethnicity, religion, course of study and level of study.

The Templer Death Anxiety Scale[5] was applied to measure death anxiety. It is a self-administered 15-item scale, where

participants rate themselves on a true-or-false scale. The instrument is scored by allocating one point to every item which is answered as true and then summing up all the items. High scores on this scale indicate high death anxiety, while low scores indicate low death anxiety.

Rosenberg Self-Esteem Scale is a 10-item scale developed by Rosenberg, which was used to measure self-esteem.[9] It is a one-dimensional scale which measures global self-worth by measuring both positive and negative feelings about the self. Some examples of the items include 'on the whole, I am satisfied with myself' and 'at times I think I am no good at all'. All items are answered on a 4-point Likert scale of strongly agree, agree, disagree and strongly disagree. The items scores are summed up and kept as a continuous scale. Higher scores indicate higher self-esteem.

The 14-item Revised Intrinsic/Extrinsic Religious Orientation Scale was used to measure religious orientation.[37] There are three subscales, namely intrinsic, extrinsic personal and extrinsic social, which are all answered on a 5-point Likert scale. There are eight items for the intrinsic religiousness and three questions each for the extrinsic personal/social religiousness. The subscale scores are summed up to determine the external or internal religiosity. Scores range between 8 and 40 for the intrinsic scale and between 3 and 15 for each of the extrinsic scales. Higher scores indicate higher levels of a specific religious orientation.

LOC was measured using the Multidimensional Locus of Control Scale,[37] which has three subscales, namely internality, powerful others and chance luck or fate. The Internality (I) subscale measures the extent to which people believe they have control over their own lives; the Powerful Others (P) subscale measures the extent to which people believes that powerful others control their outcomes; while the Chance Luck or Fate (C) measures people's beliefs about chance control. The three subscales each contain eight items and are measured with a seven-point Likert format, ranging from −3 (strongly disagree) to +3 (strongly agree). Higher scores indicate higher levels of a specific control.

Approval for the study was obtained from the school authorities. The participants for the study were recruited by approaching potential students and describing the nature of the study. The questionnaire was administered without coercion and incentive to the students who indicated interest. Confidentiality was assured and anonymity was maintained. The filling of the questionnaire was completed with little or no difficulty in about 10 min. The participants

were encouraged to ask questions or raise concerns they had while filling the questionnaire.

Statistical analysis

Descriptive analysis, such as frequency and means, was employed in this study to describe variables, while inferential statistics were used to test the hypotheses. Hypotheses were tested using t-test for independent sample and multiple regression analysis. A $P < 0.05$ was considered statistically significant. Statistical analysis was carried out using Statistical Pakcage fro Social Sciences (SPSS) Version 13.

RESULTS

A total of 317 students participated in this study. One hundred and thirty-one (41.3%) were male. The mean age was 23.8 = ±3.25 years. A total of 237 (74.8%) respondents were Christians, 79 (24.9%) were Muslims, while 1 (0.3%) was from other religions. With respect to tribe, the majority ($n = 288$, 91.5%) were Yoruba; Igbo made up 14 (4.4%), followed by Hausa, with 1 (0.3%), while 12 (3.8%) were from other tribes.

Hypothesis (i) was tested using independent sample t-test; the results are presented in Table 1. The results indicated that students with low self-esteem did not report significantly higher death anxiety than students with high self-esteem. The results did not confirm the stated hypothesis; it was, therefore, rejected.

Table 1: Socio-demographic characteristics of respondents (*n*=317)

Variables	No. (%)
Gender	
Male	131 (41.3)
Female	186 (58.7)
Level*	
ND 1	6 (1.9)
ND 2	11 (3.5)
HND 1	175 (55.4)
HND 2	124 (39.2)
Religion	
Christianity	237 (74.8)
Islam	79 (24.9)
Others†	1 (0.3)
Ethnicity*	
Yoruba	288 (91.5)
Ibo	14 (4.4)
Hausa	1 (0.3)
Others‡	12 (3.8)

*Missing data; †Others include traditional African religion; ‡Others include Urhobo, Bini
SD=Standard deviation; ND=National diploma; HND=Higher national diploma

The hypothesis (ii) was tested using multiple regressions, and the results are presented in Table 2. Intrinsic religious

orientation and extrinsic religious orientation did not jointly predict death anxiety among the students ($R = 0.074$; $R^2 = 0.006$; F [2, 314] = 8.76; $P > 0.05$). Therefore, the results did not confirm the stated hypothesis; therefore, the hypothesis was rejected.

Table 2: Influence of age, gender and self-esteem on death anxiety among students

Dependent variable	Independent variable	No.	Mean	SD	P
Death anxiety	Age				
	Younger age	148	24.8	2.8	>0.05
	Older age	169	24.5	2.8	
	Gender				
	Male	131	24.3	2.8	>0.05
	Female	186	24.9	2.8	
	Self-esteem				
	Low	150	24.9	2.8	>0.05
	High	167	24.5	2.7	

SD=Standard deviation

The hypothesis (iii) was also tested using multiple regressions; the results presented in Table 2 showed that internal, powerful others and chance jointly predicted death anxiety among the students ($R = 0.196$; $R^2 = 0.038$; F [3, 314] = 4.150; $P < 0.01$). This calculation showed that a small percentage of common variation in death anxiety, 3.8%, was explained by the three predictor variables. Therefore, the strength of the prediction of death anxiety by the three predictor variables was very weak, especially because 96.2% of the variance did not depend on the three predictor variables. However, the analysis of the independent predictions indicated that 'powerful others' LOC ($\beta = 0.204$; $t = 3.361$; $P < 0.01$) was the only variable that made a unique, and statistically significant, contribution to death anxiety among the students. The stated hypothesis was supported by the results obtained. Therefore, the hypothesis was accepted.

The hypothesis (iv) was tested with t-test for the independent samples. The results are presented in Table 1. The results revealed that gender did not significantly influence death anxiety (t [315] = −1.76, $P > 0.05$). There was no significant difference between male and female students based on death anxiety. The results did not confirm the stated hypothesis. Therefore, the hypothesis was rejected.

Their mean age was 23.8±3.3. The hypothesis (v) was tested using independent sample t-test. The analysis revealed that there was no significant effect of age of students on death anxiety (Table 3).

DISCUSSION

The participants' mean score on the Templar Death Anxiety Scale showed that the students exhibited some anxiety about death. This is understandable because death is not only universal but the anxiety that goes with it also cuts across cultures. A previous measurement in Nigeria identified the concept in a student sample with another reliable instrument.[28] The thought of death or dying is uncomfortable and to a certain extent, frightening, for some, if not most people in modern society. Even though there might have been advancement in medicine that makes the death process comfortable, the fear of death continues to exist up to date. Thus, death anxiety is not only cross-cultural but also trans-generational across all age group.

All the hypotheses were rejected except one subset of hypothesis 3, in which internal LOC, powerful others and chance jointly predicted death anxiety among the students. Further, the analysis of the independent predictions indicated that 'powerful others' LOC was the only variable that made a unique and statistically significant contribution to death anxiety among the students. A previous study revealed that a high external LOC belief is linked to a high level of death anxiety,[17] and persons who are high on externality expressed more nervousness and apprehensions about death-related incidents.[38] The external control factor represents the student's belief that his/her events in life are determined by outside influences, which may be chance or powerful others.[14] The powerful others' subcategory represents 'others' in a position of control (such as a leader, a medical provider or a deity) that students perceive as beyond him/her.[14] In extending this idea to death event, it is opined that students who hold such 'powerful others' belief regarding death outcome as not within their control, invariably have unease and anxiety about this. In this study, there was no relationship between chance external LOC and death anxiety. It is not clear why

Table 3: Influence of religious orientation and locus of control on death anxiety

Independent variable	Characteristics	R	R²	F	P-value	β	t	P-value
	Intrinsic					−0.062	−1.10	0.27
Religious orientation		0.074	0.006	0.876	0.42			
	Extrinsic					0.040	0.72	0.47
	Internal					−0.040	−0.64	0.53
Locus of control	Powerful others	0.196	0.038	4.150	0.01	0.204	3.36	0.00
	Chance					−0.001	−0.02	0.99

chance LOC, which is also a subset of internality, was not significantly related to death anxiety. This is because internal LOC is a continuum of perceived control and most individuals do not view their outcome as exclusively being dictated by either purely chance or powerful others alone, but a mixture of both. Further investigation into this opacity is recommended.

The non-significant relationship between death anxiety and other independent variables is in disagreement with the findings from the Western culture. However, this may not come as a complete surprise because few studies elsewhere have found death anxiety to bear no correlation with extrinsic religiosity,[26,39] female gender[32,40] and younger age.[41] The failure of an association in this current study, particularly for religiosity, could mean that a difference exists in the definition between the Western culture and the African one. For example, the extrinsic socio-religious orientation has been earlier reported to be less relevant in the Nigerian population.[42] In other words, religious belief may be differently viewed and the instrument applied may not have adequately measured religiosity. Further research is needed in exploring the relationship between religiosity and death anxiety in Nigerian culture. Such research could lead to a better theoretical understanding of the nature of the relationship between the two.

This study was limited by some factors that may limit the generalisability of the results. These include a small-sized participant, one predominant ethnic group, the convenience sampling technique and the cross-sectional design. Future research should be done on larger populations for a more diverse sample, using a robust sampling technique. Further, the use of self-reports and non-culturally adapted tools might have limited the responses.

In conclusion, there exists death anxiety among students in the Nigerian tertiary institution sampled. The belief termed powerful others was a determinant of death anxiety among them, while their age, gender, self-esteem and religious orientation did not predict death anxiety. There is a need for future research to use locally designed instruments.

Further, though death anxiety is universal,[43] the report has shown cultural variation with Indian samples having lower death anxiety compared to Western samples.[44] The lower external LOC among Indians compared to their non-Indian counterparts may explain this.[45] The consequence of this is that fewer clinical challenges are expected from students in the East compared to the West with regard to death anxiety. This hypothesis is worth testing in a multi-national study.

It is suggested that, for wider generalisation of the findings of this study, further research in this area should be carried out on a much larger scale. A longitudinal study is recommended to determine the progression of the severity of death anxiety over time. Finally, the results have reminded researchers of the importance of the role of developing indigenous religion measuring instruments.

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Conflicts of interest
There are no conflicts of interest.

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