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The Relationship between Death Anxiety, Spiritual Well-Being, and Successful Aging among Community Dwelling Older Adults

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Abstract

Background: death anxiety is a prevalent problem among older adults, as they exposed to bio-psychosocial changes. It is associated with adverse health consequences, including the decrease in physical functions, psychological stress, and weakening of religious beliefs. Adherence to spirituality can be a crucial factor in dealing with the notion of death anxiety and contributing to successful aging among older adults. **Aim of the study**: determine the relationship between death anxiety, spiritual well-being, and successful aging among community dwelling older adults. **Design**: A descriptive correlational research design was used to carry out this study. **Setting**: This study was conducted at three elderly clubs at Damanhour city, El-Behaira Governorate, Egypt. Subjects: 137 community dwelling older adults. **Tools**: four tools were used; tool I: A Socio-Demographic and Presence of Chronic Disease Structured Interview Schedule, tool II: The Arabic Scale of Death Anxiety (ASDA), tool III: Spiritual Well-being scale (SWBS), tool IV: Successful Aging Scale (SAS). **Results:** More than half of the studied older adults experienced either moderate or severe death anxiety. A positive significant relation spirituality and successful ageing ($r=0.610$, $p<0.001$). Also, A negative correlation between death anxiety and spirituality ($r=-0.679$, $p<0.001$) and successful ageing ($r=-0.746$, $p<0.001$). **Conclusion:** there was significant positive relationship between spirituality and successful ageing which were statistically significant negative predictors of death anxiety in older adults. **Recommendations:** Providing psycho-educational program about successful aging and spiritual mental health promotion among older adults starting from early life stages through media, and religious classes in schools, clubs, and health care settings.

Keywords: Death Anxiety, Spiritual Well-Being, Successful Aging, Community dwelling & Older adults.

Introduction

Aging is a crucial psychosocial developmental stage of life; it has many psychological needs that should be considered. Death anxiety is one of the most common worries among the older adults, as they face the certainty of death; also it is critical that they maintain a sense of integrity rather than despair (Missler et al., 2012; Nakagi& Tada, 2014). It is also one of the most important aspects of mental health and can be affected by an individual's sense of worth, purpose, and meaning in life (Jong et al., 2019).

Likewise, death anxiety exists in everyone's life and affects everyone differently. It is not culturally inherited or taught, nor does it stem from a concern for "genes," but it is always present in life. Death anxiety is defined as people's thoughts, feelings, and attitudes toward the final life event that occur under more normal life circumstance (Jong et al., 2019). It has an effect on behaviour and life-or-death decisions (Dadfar& Lester, 2014). As a result, reducing death anxiety in older adults may play an

important role in improving their mental health and quality of life (Zhang et al., 2019).

Moreover, many variables have been suggested to influence death anxiety among older adults, for example; bio-psychosocial changes that may have a negative impact on them. Biological or functional ageing is the natural occurrence of irreversible changes in tissues and organs that affect health status and may lead to multiple pathological comorbidities. In addition to other socio-demographic status such as educational status, income, and financial problems, which cause the older adults to become more dependent on others, increasing thoughts about death (Roldan et al., 2019; Sebeaet al., 2021). As well as, many psychosocial changes which can affect negatively the psychological health of the elderly and increase the level of death anxiety as feeling of despair, low self-esteem, stress, worthlessness isolation, loneliness, depression and multiple losses (loss of work, health**,** social support, social network, prestige, autonomy, death of loved one) (Sreelekha & Sia, 2022).

At the same time, death anxiety is defined as a particular concern for the older adults and is linked to their levels of life satisfaction (Zahedi-Bidgol et al., 2020). Findings in this context show that older adults with high life satisfaction have more positive attitudes toward death and lower levels of death anxiety (Jose et al., 2018; Tel et al., 2020).

Death anxiety can cause the older adults to spend their time dwelling on death, drifting further away from being in the moment; as a result, they may find life meaningless, or they may exhibit a passive attitude toward life (Oztürk et al., 2011). In addition to influencing the satisfaction obtained from life, these factors can prevent them from being evaluated as aging successfully. These findings are supported by Halil et al., (2021); they found a negative significant relationship between death anxiety and successful ageing.

Successful ageing is essential for the older adults' quality of life, their families and communities. It is defined by three main components (Holmes, 2006; Strawbridge et al., 2002). The first component is the absence of any disease in the older adults, which also includes having low risk factors for disease acquisition. The second component involves high cognitive and physical abilities. This component, which is viewed as the ability to participate in any activity, reflects the fact that what the older adults do is more important than what they can do. The framework's final component is active participation in life (Rowe & Kahn, 1997). According to Hilgaard-Bülow and Söderqvist (2014), successful ageing should be prioritized over the processes that influence life satisfaction and how individuals protect their sense of autonomy. In the same line, life satisfaction can be evaluated as an important criterion of successful ageing within psychosocial models (Chan et al., 2019; Estebsari et al., 2020; Hye-Kyung & Ji-Hye, 2020).

Moreover, other factors such as religiosity and spirituality influence death anxiety (Dadfar & Lester, 2017). Spirituality refers to how people seek and express meaning and purpose in life, as well as how they feel connected to the moment, to themselves, to others, to nature, and to the significant or sacred (Puchalski et al., 2009). Similarly, Koenig (2012) emphasized that religiosity and spirituality can provide older adults with social support, connectedness, and a sense of belonging. Whereas, George et al., (2013) found that religiosity and spirituality provide supportive communities, reduce feelings of loneliness and social isolation, and provide a sense of meaning in the lives of many older adults. As a result, spirituality can be an important factor in dealing with the concept of death and dying among older adults (Soriano & Calong, 2020).

Fisher (2010) defined spiritual well-being as a fundamental dimension of people's overall health and well-being, as well as an indicator of spiritual quality of life, permeating and integrating all other dimensions of health (physical, psychological, and social). A previous study combined reviews of the concept of spirituality and included such as existential reality (experiences, meaning and purpose in life, hope), connectedness/relationship (with self, others, nature, and higher being), transcendence (level of awareness, going beyond the limits of material existence), power/ force/ energy (creative energy, motivation, a striving for inspiration) (Chiu et al., 2004).

Furthermore, spirituality can provide elderly with mental peace and lead to greater stability in the face of physical and mental illnesses. Previous researches have also suggested that spirituality, as a force that provides ineffable peace, strength, joy, and improved psychological well-being to the older adults (Movagheri & Nikbakht, 2013; Tiwari et al., 2016). Spiritual experience aids people in coping with the process of aging and plays an important role in their adapting with personal distress and suffering (Sharma et al., 2019)

In addition, several studies have highlighted the positive relationship between spirituality and successful ageing (Pruchno et al., 2010; Hilton et al., 2012). As a result, it is an appropriate way to

improving general health and life satisfaction. Therefore, investigating and understanding the relation between death anxiety, spiritual well-being, and successful aging, can help in enhancing mental health among older adults. Also, nurses can use spiritual well-being interventions to assist the older adults in living an ideal and successful life (Moeini et al., 2016).

The aim of the present study is to:

1. Assess level of death anxiety, spiritual well-being, and successful aging among community dwelling older adults.
2. Determine the relationship between death anxiety, spiritual well-being, and successful aging among community dwelling older adults.

The research questions:

- What are the levels of death anxiety, spiritual well-being, and successful aging among community dwelling older adults?
- Is there a relationship between death anxiety, spiritual well-being, and successful aging among community dwelling older adults?

Subjects and Methods

Research design

A descriptive correlational design was followed in this study.

Setting

This study was conducted at three elderly clubs at Damanhour city, El-Behaira Governorate, Egypt. These clubs are affiliated to the Ministry of Social Solidarity, Egypt namely Ahbab Allah, Alfady, and Alrabie Clubs. These clubs opens seven days per week from 9 am to 12 pm. The total attendance rate of older adults in these clubs amounted to 213; 93 older adults in Alfady Club, 70 in Ahbab Allah Club and 50 older adults in Alrabie Club.

Subjects:

A convenience sample of 137 community dwelling older adults who fulfilling the following inclusion criteria:

1- Aged 60 years and above.
2- Able to communicate effectively.
3- Agree to participate in the study
4- Did not have malignancies or psychiatric diseases.

The epidemiology information statistic program (Epi info 7.0) was used to estimate the sample size of this study based on using 5% acceptable error, 95% confidence coefficient, 50% expected frequency and population size of 213, which revealed a minimum sample size of 137 older adults. It will be distributed on the 3 clubs through proportional allocation:

1- Alfady club = 93×137/213 = 60 older adults

2- Ahbab Allah club =70×137/213= 45 older adults

3-Alrabie club = 50×137/213= 32 older adults

Tools

Four tools were used for data collection:

Tool I: A Socio-Demographic and presence of Chronic Disease Structured Interview Schedule

This tool was developed by the researchers based on the review of relevant literature. It includes two parts:

Part 1: Socio-demographic characteristics of older adults such as age, sex, level of education, marital status, occupation before retirement, monthly income, living arrangement and religion

Part 2: Presence of Chronic Disease.

Tool II: The Arabic Scale of Death Anxiety (ASDA)

It was developed by Abdel-Khalek (2004) to measure the death anxiety level of older adults. It consists of 20 items. The responses to statements are rated on a five-point likert scale that ranges from 1 to 5 where (1) indicates "no" and (5) indicates "very much". Total score is obtained by summing up all items. The total score ranges from 20 to100, with higher scores indicating higher the degree of death anxiety. Respondents with a total score less than 25 are considered as no death anxiety, scores from 25 to less than 50 as low level of death anxiety, scores from 50 to less than 75 as moderate level, and scores from 75-100 as high level of death anxiety. The scale is valid, previously applied on Egyptian older adult and demonstrated high test- retest reliability (r = 0.90) and Cronbach's alpha for the entire instrument was 0.93(Abdel-Khalek, 2004).

Tool III: Spiritual Well-being Scale (SWBS)

This scale was developed by Ellison (1983). It was widely used and well validated scale (Ellison & Smith, 1991). It is designed to assess religious and existential well-being. It was translated into Arabic language by Musa & Pevalin (2012) and proved to be valid. The scale comprises 20 statements. It is consists of two subscales of 10 items each. The Religious Well-Being (RWB) subscale assesses the degree to which individuals report that they experience a satisfying relationship with God. Items of the Existential Well-Being (EWB) subscale relate to a sense of life satisfaction and purpose. Negatively worded items are reverse scored. Even numbered items assess existential well-being and odd numbered items assess religious well-being.

The responses are rated on a 6-point Likert scale ranging from (1) indicating "strongly disagree" to (6) indicating "strongly agree". Total score is obtained by summing up all items. The total score ranges from 20 to120, with higher scores indicating higher perception of spiritual well-being. Respondents whose total scores ranges from 20-29 are considered as having low level of spiritual wellbeing, scores ranging from 30-59 indicate moderate level, scores from 60-89 denote high level, and scores from 90-120 reflect very high level of spiritual well- being.

Spiritual Well-being Scale was tested for internal consistency and reliability by the authors. Cronbach's alpha for the entire instrument was 0.84 (Ellison & Smith, 1991).

Tool IV: Successful Aging Scale (SAS)

The Successful Aging Scale was developed by Reker (2009). It was used to assess the level of elderly successful aging. It is 14 items scale and has 3 subcomponents are as follows; healthy life style, adaptive coping and engagement with Life. The responses to statements are rated on a 7-point likert scale that ranges from 1 to 7 where (1) indicates "strongly disagree" and (7) indicates "strongly agree". Total score is obtained by summing up all items. The total score ranges from 14 to 98, with higher scores indicating higher the level of successful aging. Respondents with a scores from14 to 42 indicates having low level of successful aging, scores from 43 to 70 as moderate, and scores from 71-98 as high level of successful ageing

The scale has been tested for internal consistency and reliability by the authors. The Cronbach's alpha reliability coefficients of the total and sub components of the original scale ranged from .72 to .84 (Reker, 2009).

Method:

I. Administrative steps:

- An Official letter from the Faculty of Nursing, Damanhour University was directed to the director of the Ministry of Social Solidarity in El –Behira governorate to obtain permission to conduct the study in the selected setting.
- An Official letter from the Faculty of Nursing was directed to the directors of the three elderly clubs in Damanhour city to obtain their approval to carry out the study, after being informed about the purpose of the study, the date and time of data collection

II. Preparation of the study tools:

- A Socio-Demographic Data and medical history Structured Interview Schedule (tool I) was developed by the researchers based on review of related literature.
- The Arabic version of tool II (Death Anxiety Scale) and tool III (Spiritual Well-being Scale) were used in this study.
- Tool IV (The successful aging scale) was translated into Arabic language then submitted to a jury composed of 5 experts in the field of Psychiatric (3 experts) and Gerontology nursing (2 experts) to test translation and content validity of the scale. Tool proved to be valid.
- Tools II, III and IV were tested for their reliability using Cronbach' Coefficient Alpha test. Tools proved to be reliable, tool II (α= 0.885), tool III (α= 0.806), and tool IV (α= 0.871).

III. Pilot study:

Before embarking on the actual study, a pilot study was carried out on 14 older adults who were excluded from the actual study to ascertain the clarity and applicability of the study tools and identify obstacles that may be faced during data collection. The pilot study revealed that tools were clear, understood and applicable.

IV. Data collection Process:

- The study subjects who fulfilled the inclusion criteria were interviewed individually in the garden of the clubs in order to collect the necessary data.

- The researcher used to attend elderly clubs from 9 am to 1 pm until reached the total sample size required from each club (Alfady club = 60 older adults, Ahbab Allah club = 45 older adults and Alrabie club = 32 older adults).
- The time required to collect the necessary data ranged from 30 to 45minutes based on the attention span and cooperation of the older adults. The number of older adults interviewed during each visit ranged from 4 to 6.
- The overall data collection process took about three months (from the beginning of October 2021 to the end of December 2021); three days per week.

Ethical consideration

- Permission was obtained from ethical committee in the Faculty of Nursing Damanhour University in October 2021.
- Permission was obtained from the directors of the selected settings to collect the data.
- Written informed consent was obtained from each older adult after explaining to them the importance and aims of the study.
- Confidentiality was assured for the collected data.
- Participants' privacy was respected.
- The client's right to refuse or withdraw from the study at any time was emphasized and respected.

Statistical Analysis

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation, median. Significance of the obtained results was judged at the 5% level.

1. Mann Whitney test: For abnormally distributed quantitative variables, to compare between two studied groups.
2. Kruskal Wallis test: For abnormally distributed quantitative variables, to compare between more than two studied groups.
3. Spearman coefficient: To correlate between two distributed abnormally quantitative variables.

Results

Table (1) shows the socio-demographic characteristics and presence of chronic diseases of the studied older adults. The age of older adults ranged from 60 to 86 years with a mean age of 74.56±8.35 years and 43.79 % of them were young old (between 60 and 75 years). 58.39%, 51.82 %, 89.78%, 58.39% of older adults were male, married, Muslims and employee respectively. Basic education was reported by 25.55% of elders. Only 20.44% of them are still working. 62.04% of elders had enough income. Elders who live with their spouses constituted 51.82%. Most of the studied older adults (84.67%) had chronic diseases.

Figure (1) portrays the distribution of the studied older adults according to their death anxiety level. 44.52% of the studied older adults reported mild level of death anxiety, 22.63% of them have moderate level and high level reported by 32.85%.

Figure (2) demonstrates the distribution of the studied older adults according to their spiritual wellbeing. Moderate spiritual wellbeing was reported by 28.47% of the studied elders, high level reported by 35.03% and very high by 36.50%.

Figure (3) illustrates the distribution of the studied older adults according to the level of successful ageing. The figure shows that 44.52% had high level of successful ageing, 29.2% of them had moderate level, and the rest (26.28%) had low level.

Table (2) illustrates correlation between death anxiety and spiritual wellbeing and successful ageing. It appears from the table that there was a statistically significant positive correlation between spiritual wellbeing and successful ageing ($p<0.001$). While spiritual well-being and successful ageing had a statistically significant negative correlation with death anxiety ($p<0.001$ and $p<0.001$).

Table (3) shows the relation between socio demographic data of the studied older adults and their death anxiety, spirituality and successful ageing. The table shows that, age ($p<0.001$), sex ($p<0.016$), occupation before retirement ($p=0.002$) and current work ($p=0.031$) of the studied older adults are significantly affected their death anxiety. The table also illustrates that age ($p<0.001$), living condition ($p<0.001$) and presence of chronic diseases ($p=0.015$) of the studied older adults are significantly affected their spiritual well-being. In the same line, a statistically significant relation was noted between age ($p<0.034$), sex ($p<0.004$), occupation before retirement ($p<0.001$), current

work (p=0.014), living condition (p=0.003) and presence of chronic diseases (p=0.015) of the studied older adults and their successful ageing.

Table (1): Distribution of the studied older adults according to their socio-demographic characteristics and presence of chronic diseases

Elders' characteristics	No= 137	%
Age in years:		
60-	60	43.79
75-	50	36.50
85≤ 86	27	19.71
Mean ±SD	74.56±8.35	
Sex:		
Male	80	58.39
female	57	41.61
Marital status:		
Married	71	51.82
Widow	53	41.73
Divorced	9	6.56
Single	4	2.91
Level of education:		
Illiterate	32	23.36
Read and write	29	21.17
Basic education	35	25.55
Secondary	22	16.06
University education	19	13.86
Occupation before retirement:		
Employee	80	58.39
Housewife	33	24.10
Private work	13	9.49
Worker	11	8.02
Current work:		
No	109	79.56
Yes	28	20.44
Living arrangement:		
Living with spouses	71	51.82
Living alone	56	40.88
Living with children	10	7.3
Income:		
Enough	85	62.04
Not enough	52	37.96
Religion		
Muslim	123	89.78
Christian	14	10.22
Presences of chronic disease		
Yes	116	84.67
No	21	15.33

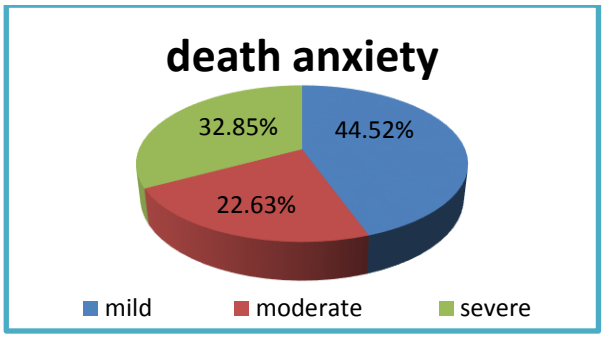

Figure (1): Distribution of the studied older adults according to their death anxiety level.

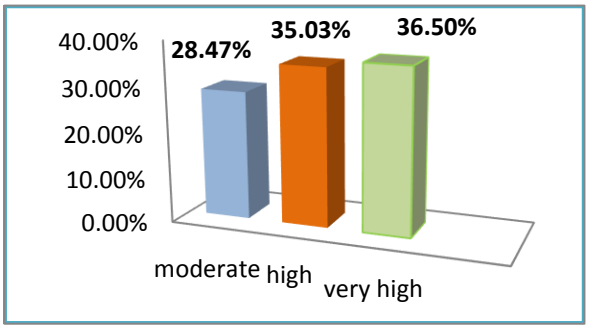

Figure (2): Distribution of the studied older adults according to their spirituality wellbeing.

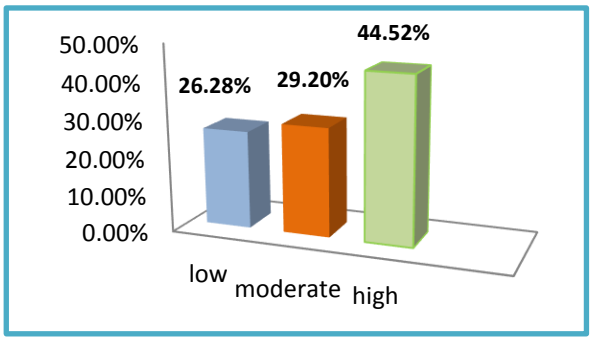

Figure (3): Distribution of the studied older adults according to the level of successful ageing

Table (2): Correlation between Death anxiety, Spirituality and Successful ageing of the studied older adults (n = 137)

	Death anxiety		Spirituality	
	r	P	r	p
Spirituality	-0.679*	<0.001*	-	-
Successful ageing	-0.746**	<0.001*	0.610*	<0.001*

r: Spearman coefficient
*: Statistically significant at p ≤ 0.05

Table (3): Relation between Socio- demographic data and presence of chronic diseases of the studied older adults and their death anxiety, spirituality and successful ageing

(n = 137)

	N	Death anxiety		Spirituality		Successful ageing	
		Mean ± SD.	Median	Mean ± SD.	Median	Mean ± SD.	Median
Age in years							
60 – less than 75	**60**	66.17 ± 20.85	70.0	68.32 ± 23.60	63.0	59.50 ± 19.05	64.50
75 – less than 85	**50**	55.04 ± 22.87	47.0	86.19 ± 12.74	88.0	68.0 ± 22.48	73.0
85 and more	**27**	45.52 ± 15.26	45.0	90.18 ± 22.36	98.50	66.44 ± 20.55	74.0
H (p)		**17.338*(<0.001*)**		**25.599*(<0.001*)**		**6.784*(0.034*)**	
Sex							
Male	**80**	52.82 ± 20.52	46.0	77.29 ± 23.42	79.0	70.28 ± 18.65	72.0
Female	**57**	61.75 ± 22.43	61.50	83.37 ± 23.69	88.0	59.48 ± 21.34	65.0
U (p)		**1727.50* (0.016*)**		**1938.00 (0.135)**		**1613.50* (0.004*)**	
Marital status							
Married	**71**	56.77 ± 21.87	53.0	80.35 ± 22.84	87.0	66.09 ± 21.96	70.0
Widow	**53**	57.94 ± 22.45	58.0	79.47 ± 26.10	86.0	64.20 ± 19.85	70.0
Divorced	**9**	63.67 ± 24.71	74.0	75.11 ± 18.72	77.0	56.0 ± 21.89	41.0
Single	**4**	69.0 ± 13.24	66.0	85.50 ± 17.25	66.0	49.75 ± 20.02	49.50
H (p)		**1.565(0.667)**		**0.615(0.893)**		**4.293(0.232)**	
Educational level							
Illiterate	**32**	52.26 ± 21.90	46.0	79.06 ± 24.56	83.50	61.27 ± 19.53	67.50
Read and write	**29**	56.13 ± 22.23	56.50	82.97 ± 21.90	87.0	62.09 ± 21.32	65.0
Basic education	**35**	55.34 ± 21.04	53.0	81.34 ± 23.77	87.0	64.09 ± 22.04	70.0
Secondary education	**22**	62.43 ± 21.29	62.0	69.82 ± 25.94	62.0	64.05 ± 20.13	72.0
University and higher	**19**	62.36 ± 24.07	62.0	85.05 ± 20.30	46.0	68.10 ± 21.31	72.0
H (p)		**4.129 (0.389)**		**5.025 (0.285)**		**2.504 (0.644)**	
Occupation before retirement							
House wife	**33**	45.91 ± 17.59	45.0	85.82 ± 18.91	89.0	77.12 ± 14.20	78.0
Employee	**80**	63.49 ± 21.89	65.0	78.51 ± 25.69	83.0	57.20 ± 20.54	56.50
Private work	**13**	56.85 ± 22.74	55.0	77.08 ± 21.74	86.0	70.92 ± 24.37	72.0
Worker	**11**	56.18 ± 21.75	57.0	74.55 ± 22.38	57.0	65.55 ± 15.41	66.0
H (p)		**14.566 *(0.002*)**		**3.054 (0.383)**		**22.259*(<0.001*)**	
Work Now							
Yes	**28**	56.01 ± 22.91	48.0	81.96 ± 19.28	84.0	66.12 ± 20.42	70.0
No	**109**	65.93 ± 16.23	67.50	79.27 ± 24.68	87.0	55.61 ± 20.91	57.0
U (p)		**1122.0* (0.031*)**		**1415.500 (0.555)**		**1063.50*(0.014*)**	
Income							
Enough	**85**	55.27 ± 20.86	46.0	77.54 ± 24.55	83.0	64.31 ± 19.98	68.0
Not enough	**52**	59.73 ± 22.66	60.0	83.54 ± 21.79	88.50	63.76 ± 21.53	69.0
U (p)		**1969.0 (0.285)**		**1892.50 (0.159)**		**2186.50 (0.917)**	
Religion							
Muslim	**123**	56.93 ± 21.70	57.0	80.08 ± 24.52	87.0	64.49 ± 21.16	70.0
Christian	**14**	67.79 ± 23.25	78.0	78.38 ± 18.43	80.0	59.43 ± 18.37	64.50
U (p)		**616.0 (0.081)**		**1149.00 (0.680)**		**1149.00 (0.680)**	
Live with							
Alone	**56**	61.89 ± 21.58	64.0	90.0 ± 22.56	99.0	58.44 ± 19.94	65.0
With spouse	**71**	53.46 ± 21.98	45.50	72.14 ± 21.52	77.0	69.0 ± 20.22	68.50
Children	**10**	56.30 ± 22.47	57.0	77.30 ± 24.81	76.50	70.09 ± 20.57	74.0
H (p)		**4.869 (0.088)**		**20.296*(<0.001*)**		**11.446*(0.003*)**	
Presence of chronic diseases							
Yes	**116**	65.76 ± 20.95	69.0	64.43 ± 27.37	50.50	50.52 ± 23.06	40.0
No	**21**	56.64 ± 22.01	55.50	81.57 ± 22.65	87.0	66.41 ± 19.60	70.0
U (p)		**933.50 (0.089)**		**519.50* (0.015*)**		**519.50* (0.015*)**	

U: Mann Whitney test H: H for **Kruskal Wallis test** *: Statistically significant at $p \leq 0.05$

Discussion

Death is an inevitable aspect of life; Death anxiety has been associated with adverse health consequences, including the decrease in physical functions, psychological stress, impaired ego integrity, weakening of religious beliefs, life dissatisfaction, and poor resilience (Semenova & Stadtlander (2016). Spirituality can reduce fear of death, allow elderly to overcome hardships, and improve their satisfaction with their life (Vasigh et al., 2018). Furthermore, individuals who integrate all aspects of their life, achieve their psychological tasks and completed their mission in life can exhibit acceptance of the death idea and low death anxiety (Boyraz et al., 2015). So, the aim of the present study was to determine the relationship between death anxiety, spiritual well-being, and successful aging among community dwelling older adults.

In the present study, results revealed that a significant inverse association between death anxiety and spiritual wellbeing was found (table2). This may be due to about three quarters of the studied older adults had either high or very high spiritual wellbeing (figure 2) and high Spirituality prepares older adults for accepting and confronting their death. Similarly, other studies reported a significant negative association between spiritual experiences and death anxiety (Khezri et al., 2015; Dadfar& Lester 2017; Taghiabadi et al., 2017; Solaimanizadeh et al., 2019; ZahediBidgol, et al., 2020; Feng et al., 2021; Rababa et al., 2021) . In contrary, another study done in Iran by Hedayatizadeh-Omranet al., 2018) demonstrated that there was no relation between death anxiety and spirituality (P>0.05), but there was relation between death anxiety and dimensions of spirituality.

Moreover, successful ageing was statistically significant independent negative predictor of death anxiety in the present study (table2). As people who fulfill everything that has meaning and value for themselves exhibit acceptance of death and less death anxiety (Kımter & Köftegül, 2017). In addition, having a positive meaning and purpose in life will not only add years to one's life, but also add life to one's years and those who have realized their central life goals are less likely to experience death anxiety than those who have not completed their life tasks are (Wong, 2000). This finding is in congruent with Halil, et al., (2021) and Moon & Nam (2008) who discovered that a negative low-level significant relationship existed between successful aging and death anxiety.

Also, spiritual wellbeing is a positive predictor for successful ageing in the present study (table2). This may be justified by the fact that the spiritual concerns of older adults may act as potential resources for well-being in later life, helping to shape a meaningful and fulfilling existence. Spiritual resources may also help an older adult to successfully adjust to some of the changes associated with growing older such as physical decline and social losses as the death of a spouse or age peers (Sadler & Biggs, 2006). likewise, positive spirituality can decrease some of the feelings of helplessness and loss of control that people experience with illness, as well as reduce stress and bring about increased feelings of purpose in life (Malone &Dadswell, 2018).

As well, Spirituality can also help the individual achieve new circumstances and life satisfaction by reducing the gap between their reality and ideal which help achieving successful ageing (Moeini et al., 2016). This result agrees with the findings of other studies done in the United Kingdom by Gutiérrez et al., 2018) and in Spain by Gallardo-Peralta & Sánchez-Moreno (2019) who found that spirituality is a positively correlated with successful ageing. The current study finding is in contrast with a study conducted in USA by Maki (2005) who found that spirituality was not related to successful aging.

The present study revealed that all of the studied older adults experienced different levels of death anxiety (figure 1). About half of the studied older adults

experienced low level of death anxiety. This can be rationalized by cultural and religious view of death (no one will live forever; the death is inevitable). The present study is in agreement with other studies done in USA by Almostad (2018), in India by Sharma et al., (2019), and in Egypt, Alex by Sebea, et al., (2021) which stated that most of older adults had low level of death anxiety. Other studies done in Pakistan by Saini et al., (2016) and in Iran by Taghiabadi et al., (2017) contradict the result of the present study where it was observed that death anxiety is relatively high among the elderly. This may be related to spiritual, environmental and cultural differences.

In the present study the main factors which have significant relation with death anxiety were age, sex, occupation, and current work (table 3). The mean score of death anxiety was high among young older adults than middle or old-old. This may be justified by that young older adults are usually exposed to multiple changes either physically, psychologically or socially such as loss of health, work, income, social network, prestige and power which put stress on elderly, exacerbate thinking of death while death anxiety alleviation with age may be because older adults consider death as the termination of their problems, disabilities, pain, and impaired self-esteem; therefore, they feel less anxious over it. These results are in agreement with other studies done in India by Singh (2013), in USA by Assari & Moghani Lankarani (2016), in Korea by Kwon & Kim (2016) and in Egypt, Alex by Sebea et al., (2021) who revealed that there was a significant relation between age and death anxiety. The result of the present study contradicts those reported by Kim (2019) and Hassan et al., (2019) who demonstrated that age was not associated with death anxiety.

Additionally, the present findings stated that elderly women had higher mean score of death anxiety than men, this might be due to that women exposed to widowhood more than men which make them to feel that the death is near them especially after death of their spouse. These findings are in accordance with previous studies which demonstrated that death anxiety level is higher in women than men (Kim et al., 2010; Singh, 2013; Taghipour, et al., 2017; Ghasemi, et al., 2020). Conversely, other studies found that there was no significant difference in death anxiety between men and women (Assari&Lankarani, 2016; Kim, 2019; Sebea et al., 2021). Also, another study conducted in Jordan by Rababa et al., (2021) revealed that elderly men had higher mean score of death anxiety than women with significant difference in death anxiety between men and women.

Furthermore, in the present study a significant relation was found between occupation before retirement, current work and death anxiety, older adults who was employee had higher mean score of death anxiety (table 3). Also, older adults who are still working have low level of death anxiety than those who do not. This may be attributed that they are preoccupied with thework, have a lot of social relations and did not have time to think about death. This is in harmony with those found by other studies (Menzies & Menzies, 2020; Sebea et al., 2021).

Concerning spirituality, about three quarters of the studied older adults had either high or very high level of spiritual wellbeing (figure 2). This may be justified by the religious, cultural and social characteristics of Egyptian people. These findings are in line with other studies, where they stated that the mean score of spirituality was high among older adults (Hedayatizadeh-Omran et al., 2018; Sharma et al., 2019; Soriano & Calong, 2020).

Regarding the independent predictors of spirituality, the present study findings revealed that the age, living condition and having no comorbidities (table 3) are correlated with spirituality. As some elderly see aging itself as a spiritual journey, whereas

others turn to spiritual development as a way to find more richness, meaning, inner strength, or comfort in their lives as they reflect on the past and think about what's still to come. Older adults who had not have chronic diseases, had more spirituality due to having chronic diseases is accompanied with more suffering, functional disability and loss of tolerance which affect faith and spirituality. These results agree with Dorji et al., (2017) in Bhutan who found that chronic diseases lead to decrease spirituality. Also, Lima, et al., (2020) stated that age, living condition and having no chronic diseases were associated with spirituality.

In relation to successful ageing, about three quarters of the studied older adults had either moderate or high level of successful ageing (figure 3). This is attributed that more than half of them were married, literate, employee, as about one quarter of them are still working after retirement (table 1) which may means they achieve their life goals and mission. The finding of the present study is consistent with other studies (Abd El-Mottelb et al., 2018; Gallardo-Peralta & Sánchez-Moreno (2019). Contrary, a study conducted in USA by Arias-Merinoet al., 2012) revealed that a small number (12.6%) of older adults were successful aging.

Also, successful ageing are significantly affected by the age, sex, occupation before retirement, current work, living condition, presence of chronic diseasein the current study(table 3). This may be due to that successful ageing refers to a paradigm that examines the ageing process in terms of optimal physical, cognitive, psychological and social functioning which agree with the result of the present study that high mean score of successful ageing was present among middle old (the stage of adaption with changes and stressors of ageing), living with family(families remain a key source of physical and emotional support for the elderly.), previously worked as employee, still working (had social network) and did not have comorbidities(as they were independent in their physical and social activities). This study finding is supported by the finding of several other studies (Arias-Merino, et al., 2012; Gopinath et al.,2018; Abd El-Mottelb et al.,2018; Gallardo-Peralta & Sánchez-Moreno, 2019).

Conclusion

It can be concluded from the present study that there was significant positive relationship between spirituality and successful ageing which were statistically significant negative predictors of death anxiety in older adults. More than half of the studied older adults had either moderate or severe death anxiety. Spirituality was high or very high among nearly three quarters of them. In addition, about one half of them reported high level of successful ageing. Also, age, sex, occupation before retirement and current work appeared to have a significant relation with death anxiety in older adults.

Recommendations

Based on the findings of this study, the following recommendations are suggested:

- Providing psycho-educational program about successful aging and spiritual mental health promotion among older adults starting from early life stages through media, and religious classes in schools, clubs, and health care settings.
- Counseling older adults suffering from death anxiety by nursing staff in order to manage and cope with their problems and decrease death anxiety level.
- Encourage older adults to participate in psycho-geriatric programs like meditation, relaxation techniques, spiritual and religious programs which can enhance their feeling of spirituality, successful ageing and minimize death anxiety.
- Workshops for nurses to be more competent in dealing with and mange death anxiety among older adults.

- Incorporate spiritual mental health promotion into under graduates and post graduates psychiatric and geriatric nursing curriculum.
- Further studies will be needed to investigate other factors affecting death anxiety and successful aging among older adults.

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