Factors Associated with Death Anxiety among Community Dwelling Older Adults

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Abstract

Death anxiety is a concept used to indicate concern about death awareness. High level of death anxiety has negative consequences on elderly people and may lead to maladaptation, dissatisfaction with life, feeling of despair or loss and lead to low self-esteem. ***Objective:*** *Identify the factors associated with death anxiety among community dwelling older adults.* ***Setting:*** *The study was conducted at two of the post offices affiliated to the Ministry of communications and information technology in Alexandria, namely Moharram Bek and Sidi Bishr post offices.* ***Subjects:*** *130 male and female older adults aged 60 years and more, living in the community, identified with death anxiety, able to communicate and willing to participate in the study.* ***Tools:*** *Five tools were used namely, The Arabic Scale of Death Anxiety (ASDA), Older Adults' Socio-Demographic and health well-being Structured Interview Schedule, Multidimensional Scale of Perceived Social Support (MSPSS), Religious Commitment Inventory-10 (RCI-10), and the Satisfaction with Life scale.* ***Results:*** *The main findings of the current study revealed that death anxiety is prevalent among older adults with different levels either low, moderate, or high level. A strong negative relation between death anxiety and perceived physical and psychological wellbeing, Religious commitment, Perceived Social Support, and Satisfaction with life.* ***Conclusion:*** *It can be concluded that; age, education, presence of chronic diseases, perceived physical and psychological wellbeing, religious commitment, satisfaction with life and social support affected the occurrence of death anxiety among older adults.* ***Recommendations:*** *Counseling older adults about their anxiety related to death in order to help them cope with the situation. Emphasizing the importance of social support to decrease death anxiety.*

Keywords: Death Anxiety; Community Dwelling; Older Adults.

Introduction

Death anxiety is defined as a “vague uneasy feeling of discomfort or dread generated by perceptions of a real or imagined threat to one's existence” (North American Nursing Diagnosis, 2007). Death anxiety is present in every person’s life and affects each one in different ways. As it is not culturally inherited nor taught, or comes from the concern of "genes", but it is always included in life. It is also one of the most significant elements of mental health and can be affected by individual's value, purpose and meaning in life. It is reported to be a negative and apprehensive feeling that one has when thinking about death and dying. Death anxiety includes thoughts, feeling, and attitudes about the final event of living that an individual experience under more normal conditions of life (Jong, Halberstadt, Bluemke, Kavanagh & Jackson, 2019).

What actually affects the presence of death anxiety in elders is still debatable, many variables have been proposed to influence death anxiety among elders, as bio-psychosocial changes which may affect

them negatively. Biological or functional ageing with a natural occurrence of irreversible changes in the tissues and organs affecting heath status and may lead to multiple pathological comorbidities beside other socio-demographic status such as educational status, income and financial problems which lead the older adult to be more dependent on others that in turn increase thoughts about death (Velasco Roldan, Coyle, Ward & Mutchler, 2019). Many psychological factors have negative effect on older adults such as; life dissatisfaction, feeling of despair, low self-esteem, individuals negative perspectives about the purpose in life, loss of ego integrity, loss sense of fulfillment, stress, uselessness, worthlessness, self-doubt, isolation, loneliness and depression (Lim, Ko, Kim & Lee, 2017).

Moreover, the social changes play an important role in experiencing high level of death anxiety such as loss of social support, loss of social network, loss of prestige, locus of control, loss of autonomy, recent losses such as death of loved one, grief, culture inability to adapt, resilience and living alone which make the older adult preoccupied about who will be responsible to perform death rituals. Moreover, spirituality is a vital aspect of life affecting feeling of older adults toward death this includes spiritual well-being, religious affiliations, spiritual belief-in-life after death and readiness to death (El-Gilany, Elkhawaga & Sarraf, 2018; Ottu, Essien & Lawal, 2017; Sheykhangafshe & Shabahang, 2019).

Accepting death and approaching it in peace is an essential element for successful aging, so that investigating the factors affecting death anxiety and identifying those elders who are at risk for high level of this anxiety that will help the health care providers especially the gerontological nurse to find out measures to decrease and/or cope with death anxiety. All these measures affect positively the older adults' quality of life, end of life decision making, life satisfaction, and enhancing their preparation and acceptance of death (Lau & Cheng, 2011).

Aim of the Study

This study aimed to identify the factors associated with death anxiety among community dwelling older adults.

Research Question

What are the factors associated with death anxiety among community dwelling older adults?

Materials and Method

Materials

Design: A descriptive research design was used to conduct this study.

Settings: The study was conducted at two of the post offices affiliated to the Ministry of communications and information technology in Alexandria, namely Moharram Bek and Sidi Bishr post offices**.** The working hours in these post offices are from 8 am to 2pm daily, where elders go to receive their pension.

Subjects: A convenience sample was used in this study to select 130 male and female older adults, aged 60 years and more, living in the community, having death anxiety, able to communicate and willing to participate in the study.

Tools: Five tools were used for data collection:

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

It was developed by Abdel-Khalek 2004 in order to assess death anxiety level of older adults. It consists of 20 statements and each statement is answered on a 5-point Likert scale anchored by 1 (no), and 5 (Very much). The total score of the scale ranges from 20 to 100 and the higher the score is the higher the degree of death anxiety. It's reliability is r= 0.90 (Abdel-Khalek, 2004). The total score was converted into a percent score and classified as follows: no death

anxiety (less than 25%), low level of death anxiety (25% to less than 50%), moderate level (50% to less than 75%), and high level (equal and more than 75%).

Tool II: Older Adults' Socio-Demographic Profile, Clinical Data, and Perceived Physical and Psychological Status Structured Interview Schedule

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

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

Part 2: Clinical data of older adults: as current medical problems and treatment regimen.

Part 3: Perceived Physical wellbeing as: older adults' perception of their health such as feeling of dependency, easy fatigability, and level of energy (exhaustion). The responses options for each question were yes (1), and no (2). The total score was calculated then converted to mean percent score and classified as: poor level of physical well-being (less than 25%), fair level (25% to less than 50%), good level (50% to less than 75%), and high level (equal and more than 75%).

Part 4: Perceived psychological wellbeing such as level of despair, low self-esteem and boring. The response options for each item were yes (1), and no (2). The total score was calculated then converted to mean percent score and classified as: poor level of psychological well-being (less than 25%), fair level (25% to less than 50%), good level (50% to less than 75%), and high level (equal and more than 75%).

Tool III: Multidimensional Scale of Perceived Social Support (MSPSS)

It is a 12-item scale designed to measure perceived social support from three sources: family, friends, and a significant other (4 items for each subscale). This scale was developed by (Zimet, Dahlem, Zimet and Farley (1988), and it was translated into Arabic language and tested for its validity and reliability by (Merhi & Kazarian, 2012), the reliability was r= 0.88. The response options for each item ranges from 1 (Very Strongly Disagree) to 7 (Very Strongly Agree). The total score of the scale ranges from 12-84. The higher the score is the higher perceived social support. Perceived social support score was calculated then converted to mean percent score and classified as: low level of perceived social support (less than 50%), moderate level (50% to less than 75%), and high level (equal and more than 75%).

Tool IV: Religious Commitment Inventory-10 (RCI-10)

It was developed by Worthington et al. (2003). It is a brief 10-item screening assessment of the level of one's religious commitment using a 5-point Likert rating scale from 1 ('Not at all true of me') to 5 ('Totally true of me'). RCI-10 examines intrapersonal religious commitment (6 items) and interpersonal commitment (4 items). The total score ranges from 10- 50. A full-scale score of ≥38 considers a person to be highly religious. This scale was translated into Arabic language and tested for its validity and reliability by El-Gilany et al. (2018) and the reliability was r= 0.71.

Tool V: The Satisfaction with Life scale (SWLS)

It was developed by Diener, Emmons, Larsen and Griffin (1985). This scale is used to measure global satisfaction with one's life as a whole. This scale has been revised by (Pavot, 1993) and proved to be valid and reliable, r= 0.68. SWLS consists of 5-items; each item is rated on a seven-point Likert scale ranging from 1(strongly disagree) to 7(strongly agree). The possible range of scores is 5-35, with a score of 20 representing a neutral point on the scale. Scores between 5-9 indicate that the respondent is extremely dissatisfied with life, whereas scores between 10 - 14 indicate

the respondent is Dissatisfied, 15 - 19 is Slightly dissatisfied, 21 - 25 is Slightly satisfied, 26 - 30 is Satisfied, and 31-35 indicate the respondent is extremely satisfied.

Method

- Approval of the Ethical Committee of the Faculty of Nursing, Alexandria University was obtained.
- An Official letter was issued from the Faculty of Nursing. Alexandria University and forwarded to the directors of the selected post offices 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.
- Survey of Moharram Bek and Sidi Bishr post offices affiliated to Ministry of communications and information technology in Alexandria was carried out by the researcher to estimate the attendance rate of older adults during the pension's days.
- Tool I The Arabic Scale of Death Anxiety (ASDA) was used for the selection of study subjects.
- Tool II was developed by the researcher based on review of relevant literature to collect the socio-demographic data, clinical data, perceived physical status and perceived psychological status of the study subjects.
- The Arabic versions of Tool III (Multidimensional Scale of Perceived Social Support (MSPSS)) and Tool IV (Religious Commitment Inventory (RCI-10)) were used in the present study.
- Tool V (The Satisfaction with Life Scale (SWLS)) was translated into Arabic language by the researcher and tested for content validity by five experts in the related field of the study and the required modifications were carried out accordingly.
- Tool I, III, IV, and V were tested for their reliability using Cronbach' Coefficient Alpha test. Reliability of Tool I was (r= 0.958), Tool III (r= 0.978), Tool IV (r= 0.961) and Tool V (r= 0.964).
- A pilot study was carried out on 15 older adults selected from Moharram Bek Post Office in order to assess the applicability, clarity and feasibility of the study tools. Necessary modifications were done accordingly. These older adults were not included in the study subjects.
- The study subjects who fulfilled the inclusion criteria were interviewed individually in the waiting area of the post office while waiting to receive their pension in order to collect the necessary data.
- The researcher used to attend Moharram Bek and Sidi Bishr Post Offices from 9 am to 2 pm during the first ninth days monthly based on higher attendance days. Fifty percent of the study subjects was taken from the Moharram Bek post office and the rest from Sidi Bishr office.
- The data collection started from the first of July 2020 to mid-October 2020 (starting by Moharram bek post office during July and August and followed by Sidi Bishr post office during September and October).
- The time required to collect the necessary data ranged from 30 to 45 minutes based on the attention span and cooperation of the older adults. The number of older adults interviewed during each visit ranged from 3 to 5.
- Due to spread of Covid 19 the researcher used to follow the preventive measures such as wearing a mask, keep social distance, and

frequently rubbing the hand with alcohol as well as encouraging older adults to follow these measures.

Ethical considerations:

An informed written consent was obtained from each study subject included in this study after explanation of the study purpose. Study subjects' anonymity and privacy was maintained as well as confidentiality of the collected data. Each subject was informed to have the right to withdraw at any time from the study without any penalty.

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. Quantitative data were described using range (minimum and maximum), mean, and standard deviation. Reliability of the tools was determined by Cronbach's Alpha coefficient test. F-test (ANOVA) was used to compare between more than two variables for normally distributed quantitative variables. Pearson correlation coefficient was used to correlate between two normally distributed quantitative variables and measure the strength of a linear association between two variables. Student t-test was used to compare between two variables, for normally distributed quantitative variables. Significance of the obtained results was judged at the 5% level.

Results

Figure (1) demonstrates the distribution of the studied older adults according to their death anxiety level. Low level of death anxiety was reported by 42.3% of the studied older adults, moderate level by 21.5%, and high level by 36.2%.

Table (1) illustrates the socio-demographic characteristics and clinical data of the studied older adults. The elders' age ranged from 60 to 85 years with a mean age of 77.93±10.33 years. More than half (53.8%) were males, 68.5% Muslims, and 29.2% have university education. As for the marital status, nearly the same percent were either widows 41.5% or married 40.0%. Employee was leading the list of the pre-retirement occupations (60.7%), and only 30.8% of the subjects are still working. The monthly income was reported to be enough by 52.3%. Elders who live alone was reported by 50.8%, while the rest 49.2% live with their families. The majority of the studied older adults (83.1%) reported having chronic diseases.

Figure (2) demonstrates the distribution of the studied older adults according to their perceived physical wellbeing. The figure shows that, 50.7% had either good (9.2%) or high level (41.5%) of physical wellbeing, while for the rest it was either fair or poor with the same percent (24.6%).

Figure (3) illustrates the distribution of the studied older adults according to their perceived psychological wellbeing. More than half (51.1%) had either high (43.8%) or good (7.7%) level of psychological wellbeing, and the rest showed either poor 24.6%, or fair level 23.8%.

Figure (4) demonstrates the distribution of the studied older adults according to their perceived Social Support. The figure shows that 49.2% have low level of Perceived Social Support, 33.1% high level, and the rest 17.7% moderate level.

Figure (5) presents the distribution of the studied older adults according to their religious commitment. More than half (54.6%) have low religious commitment while 45.4% have high commitment.

Figure (6) illustrates the distribution of the studied older adults according to their satisfaction with life. Nearly one half (46.9%) are satisfied with their life, 31.5% are neutral, and the rest 21.6% are dissatisfied.

Table (2) shows the relation between the socio-demographic data and death anxiety of the studied elders. The table shows that, age (p<0.001), marital status (p=0.011), living condition (p<0.001), educational level (p<0.001), occupational before retirement (p<0.001), current work (p=0.023), and monthly income (p<0.001) of the studied older adults are significantly affected their death anxiety while sex (p=0.994), and religion (0.305) did not affect death anxiety level.

Table (3) shows that the perceived physical and psychological wellbeing of the studied older adults are significantly affected their death anxiety level (p<0.001 and p<0.001). The table also illustrates that Perceived Social Support, Religious commitment, and Satisfaction with life are significantly affected death anxiety level of the studied older adults (p<0.001) respectively for each.

Table (4) illustrates the presence of a significant negative relation between perceived physical wellbeing, perceived psychological wellbeing, and Perceived social support of the studied elders and their death anxiety level ((p=<0.001, r= -0.978), (p=<0.001, r= -0.793), and (p=<0.001, r= -0.857)) respectively. This denotes that when the perceived Physical wellbeing, Psychological wellbeing, and social support of the studied elders increase their death anxiety level will decrease. In the same line, a statistically significant negative relation was noted between religious commitment, and satisfaction with life of the studied elders and their death anxiety level, i.e., if the religious commitment, and satisfaction with life increase the death anxiety level will decrease (p=<0.001, r= -0.874), and (p=<0.001 r= -0.854) respectively.

Discussion

Death being a natural process of life, low level of death anxiety is necessary throughout life in order to involve the person in positive activities, it is also considered as a motivating force which makes older adults live a full life and accept death as a normal part of life (Hoelterhoff & Chung, 2020). Death anxiety encompasses a broad spectrum of emotions ranging from a few passing moments of fear to a complete state of panic. In the present study all the studied older adults experienced death anxiety with different levels either low, moderate, or high (figure 1). Most of the studied older adults experienced low level of death anxiety. This is in accordance with the studies conducted in other countries which reflect that older adults had low level of death anxiety (Moreno, Solana, Aleixandre Rico & Lozano, 2008; Almostadi, 2018). The present study also revealed that 21.5% of the studied older adults showed moderate death anxiety level, while high level was reported by 36.2% (figure1). Higher figures were reported from two studies in India in (2016) and (2020) where the prevalence of moderate and high death anxiety among older adults was 60% and 40%, respectively (John, Binoy, Reddy, Passyavula & Reddy, 2016; Pinar & DemİRel, 2020).While, studies in Israel 2010, and Turkey 2019 revealed that the majority of older adults suffered from high level of death anxiety (Azaiza, Ron, Shohamb & Giginia, 2010; Bakan, Arli & Yıldız, 2019).

In relation to factors associated with death anxiety, the present study shows a significant relation between age, marital status, sex, occupation, education, income, and death anxiety (table 2). These results are in accordance with other studies (Mahboubi, Ghahramani, Shamohammadi & Parazdeh, 2014; Taghiabadi, Kavosi, Mirhafez, Keshvari & Mehrabi, 2017). High mean score percent was documented more among young older adults than middle or old-old. This may be related to the fact that young older adults are usually exposed to many stressors in this stage of life due to loss of work, loss of income, loss of social network, loss of prestige, decline in health and power. All these losses exacerbate thinking of death while, middle age older adults begin to accept such losses and adapt with life, moreover old-old people may view death as

a fact of life. This is in accordance with the finding of a study carried out in Pakistan 2002, where the researchers found that participants less than 70 years (young old) had higher rates of death anxiety, and is the lowest in old-old group (Suhail & Akram, 2002). In contrast, other studies demonstrated that age was not linked to fear of death, as old-old participants are not more likely to fear death than young-old participants (Mattoo & Garg, 2014; Kastenbaum, 2018). Also, other studies from Iran 2017 and Egypt 2018 revealed that age did not affect death anxiety level (Khoshi, Sharif Nia & Torkmandi, 2017; Hassan, Hassan & Gaafar, 2019).

Gender is frequently linked to death anxiety. In contrast, the present study finding shows that sex did not significantly affect the level of death anxiety (table 2). This is unexpected, because women are more emotional compared to men, more ready to admit and talk about troubling feelings and expressing their concerns and desires. While men usually suppress their feeling. The same was reported from other studies (Russac, Gatliff, Reece & Spottswood, 2007; Assari & Moghani Lankarani, 2016). The result of the present study is consistent with the a study conducted in United States 2016 by (Assari & Moghani Lankarani, 2016), in Iran 2017 (Khoshi et al., 2017). Also, review of 49 studies about death anxiety also found that gender did not seem to predict death anxiety in elderly people (Sharma, Asthana, Gambhir & Ranjan, 2019). On the other hand, a study conducted in Pakistan 2002 (Suhail & Akram, 2002), Iran 2020 (Ghasemi, Atarodi & Hosseini, 2020), reported that females experienced significantly higher death anxiety levels than males.

In the present study a significant relation was found between education level and death anxiety, older adults with higher education degree had higher score of death anxiety (table 2). This may be attributed that, elders with higher education usually have access to technological advances which allow them to gain updated knowledge about different aspects of life including death which may increase their worries about death and in turn increase their death anxiety. This is in harmony with a study conducted in Spain 2008 (Moreno et al., 2008), and in Iran 2017 (Khoshi et al., 2017). On the other hand Azaiza et al. (2010), indicated that there is a negative correlation between education level and death anxiety where, illiterate and poorly-literate people experience death anxiety more than educated individuals. A study in America 2017, showed that individuals with higher education do not think about death and wish to live longer than those with lower education (Khoshi et al., 2017). A study conducted in Turkey 2018 revealed that people with high educational level may be busy in work and daily life so they are less likely to think about death and their death anxiety may decrease. Also higher educational status have more access to information resources in connection with death that consequently reduces their death anxiety (Şahan et al., 2018). Contrary a study conducted in Spain 2008 and Iran 2014 revealed no relationship between the level of education and death anxiety among older adults (Moreno et al., 2008; Nouhi, Karimi & Iranmanesh, 2014).

In the present study a high significant relation was observed between current work and death anxiety (table 2), where older adults who are still working have low level of death anxiety than those who do not. This may be because they are preoccupied with their job, have social relation, prestige and are enjoying life. The present study result is in consistent with those of other studies (Aan de Stegge, Tak, Rosmalen & Oude Voshaar, 2018; Menzies & Menzies, 2020).

Older adult reporting having inadequate income had higher level of death anxiety than those with adequate income (table 2). This may be because low-income people are likely to be more anxious and insecure about their future particularly in relation to their

family commitment and needed medical treatment. This is similar to the finding of another study conducted in America 2013 by Zaleskiewicz, Gasiorowska and Kesebir (2013) which reported that adequate income can be a potent buffer against death anxiety. Other studies conducted in Iran 2017, Turkey 2018 and 2020 reported that when the level of income increases, death anxiety decreases (Taghipour et al., 2017; Şahan et al., 2018; Kavaklı, Ak, Uğuz & Türkmen, 2020).

Perception of physical and psychological well-being in the present study significantly affected death anxiety level (table 3, 4). This is because when one feels healthy and independent; his self-reliance usually increases, and he will control his physical abilities. Moreover, he may engage himself in positive activities which may protect him from death anxiety. While low levels of perceived physical well-being led to more worries about death. This study finding supports those of several other studies conducted in Iran 2016, and Saudi Arabia 2018 (Soleimani, Lehto, Negarandeh, Bahrami & Nia, 2016; Almostadi, 2018). In contrast, a study conducted in China 2018 revealed that, perceived physical problems were unrelated to death anxiety among the Chinese elderly people (Chen, Ren, Yang & Zhou, 2018).

For psychological wellbeing, nearly half of studied older adults have high level of perceived psychological wellbeing (figure 3), and those who perceived a higher level of psychological well-being, experienced lower level of death anxiety (table 3,4). This is because an older adult with positive psychological well-being; usually looks forward to establishing positive social relationships, enjoys life, pursues happiness, and usually keeps away from negative thoughts that may disturb his mood and accepts death as a fact, hence experiences less death anxiety. Also, emotional support provided for older adults by others can facilitate their coping with their fears about death. These findings are in accordance with a study conducted in California 2019 (Weiner-Light et al., 2019). Conversely a study conducted in United States 2018 revealed that high level of perceived psychological wellbeing is associated with high level of death anxiety (Fortner, Neimeyer & Rybarczyk, 2018).

Death anxiety influences the older adult's satisfaction with life. The study showed that almost half of the study subjects reported being satisfied with their life (figure 6), and those who had a higher level of satisfaction with life, have lower level of death anxiety (table 3, 4). These findings are in accordance with studies from USA 2013, and Iran 2017 which reported reduction of death anxiety among older adults, is possible through use of spiritual experiences and increasing life satisfaction (Lyke, 2013; Taghiabadi et al., 2017). Furthermore, Sigrist (2015), showed that, as the death anxiety levels increases, the meaning in life levels decreases. conversely to the present study a study findings Meima and Chmoun (2010) revealed that the purpose in life did not influence death anxiety. Also another study in Florida by Ardelt (2008) stated that the purpose in life is unrelated to acceptance of death.

Perceived social support (PSS) is more important than received social support (Poudel, Gurung & Khanal, 2020). The study revealed that; almost half of the studied elders have low level of perceived social support (figure 4), this may be because two thirds of the studied older adults were single, divorced or widowed which may decrease older adults' perception of support, increase their sense of loneliness, and social isolation; consequently, it threatens their bio-psychological health and increases their stress and anxiety. This result is in line with findings of other study conducted in Iran 2020 which found that married older adults showed less degree of death anxiety compared to single or widowed older adults (Zahedi Bidgol, Tagharrobi, Sooki & Sharifi, 2020). The present study showed a negative relation

between Perceived Social Support and death anxiety (table 3, 4) where older adults with a higher level of perceived social support, showed lower level of death anxiety. This can be justified by the fact that elders who perceive high level of social support; see life as still long and worth living with family, children and friends leading to a sense of immortality and encourage them to fulfill their goals regardless of thinking about death and dying. This is in harmony with a study conducted in Canada 2016, which revealed that low levels of death anxiety were associated with meaningful family support (Tong et al., 2016). Other study conducted in Turkey 2019 concluded that perceived social support had a significant positive effect on hopelessness and death anxiety of older adults (Uslu-Sahan, Terzioglu & Koc, 2019). In contrast a study conducted in Iran 2017 concluded that perceived high social support is associated with high level of death anxiety (Nejad, Saatchi & Paydar, 2017).

Religion, being an integral part of any culture, is seen as having the potential to influence individual's attitudes and beliefs about death (Rababa, Hayajneh & Bani-Iss, 2021). The present study revealed that the more religious the person is, the less the anxiety of death (table 3, 4). This may be because the religious values and behaviors protect older adults from fears and anxiety of death. The present study finding is in accordance with the finding of other studies conducted in Saudi Arabia 2018, and Iran 2018 (Almostadi, 2018; Soleimani, Pahlevan Sharif, Yaghoobzadeh, Yeoh & Panarello, 2018). The present results revealed that the type of religion did not affect death anxiety levels (table 2).This is in line with the finding of a study conducted in Malaysia by Chuin (2012).

Conclusion

From the findings of the present study, it can be concluded that; death anxiety is prevalent among older adults and is affected by age, education, presence of chronic diseases, perceived physical and psychological wellbeing, and Religious commitment. The study also focuses light on the importance of perceived positive social support and improve life satisfaction to decrease death anxiety among older adults.

Recommendations

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

- Teaching people of different age groups (not only older adults) about the reality of death, as this will increase their knowledge and decrease death anxiety later in life when reaching old age. This can be achieved through religious people (Sheikh and Priests) in religious settings (Mosques and Churches) as well as through media, and religious classes in schools, clubs, and health care settings.
- Teaching older adults about the importance of maintaining good health, avoid risk behaviors, preparation for retirement, and coping with stressors. This will help to increase their satisfaction with life and decrease death anxiety. It can be achieved through educational classes for elders during routine medical checkup in different health care setting and clubs.
- Social support is important for elders in order to encourage them to peruse their roles, decrease their loneliness, increase their sense of belonging and usefulness and being wanted. This in turn decreases their death anxiety. This can be achieved through encouraging older adults to maintain relation with friends and relatives to attend clubs and share in different organizations and participate in volunteer work.
- Counseling older adults suffering from death anxiety by the gerontological nurse in order to manage and cope with their problems and decrease death anxiety level.

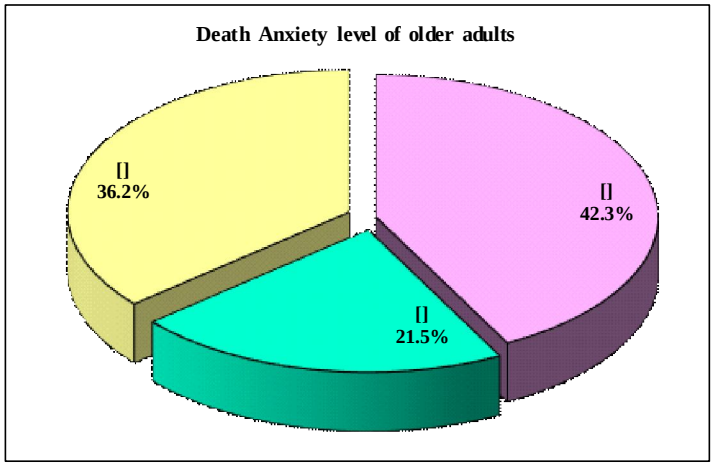

Figure (1): Perceived health status of institutionalized elders

Table (1): Distribution of the studied elders according to their socio-demographic characteristics

Elders' characteristics		No=130	Percent (%)
Age (years)	60 -	50	38.4
	75 -	40	30.8
	≥85	40	30.8
	Mean ± SD	77.93±10.33	
Sex	Male	70	53.8
	Female	60	46.2
Religion	Muslim	89	68.5
	Christian	41	31.5
Marital status	Widow	54	41.5
	Married	52	40.0
	Single	17	13.1
	Divorced	7	5.4
Education level	Illiterate	24	18.5
	Read and write	26	20.0
	Basic education	29	22.3
	Secondary education	13	10.0
	university education	38	29.2
Occupation before retirement[#]	Employee	79	60.7
	Housewife	32	24.6
	Private business	23	17.7
	Skilled worker	20	15.4
Current work	No	90	69.2
	Yes	40	30.8
Monthly income	Enough	68	52.3
	Not enough	62	47.7
Living condition	Alone	66	50.8
	With others	64	49.2
Presence of chronic illnesses	Yes	108	83.1
	No	22	16.9

[#] *More than one answer was allowed*

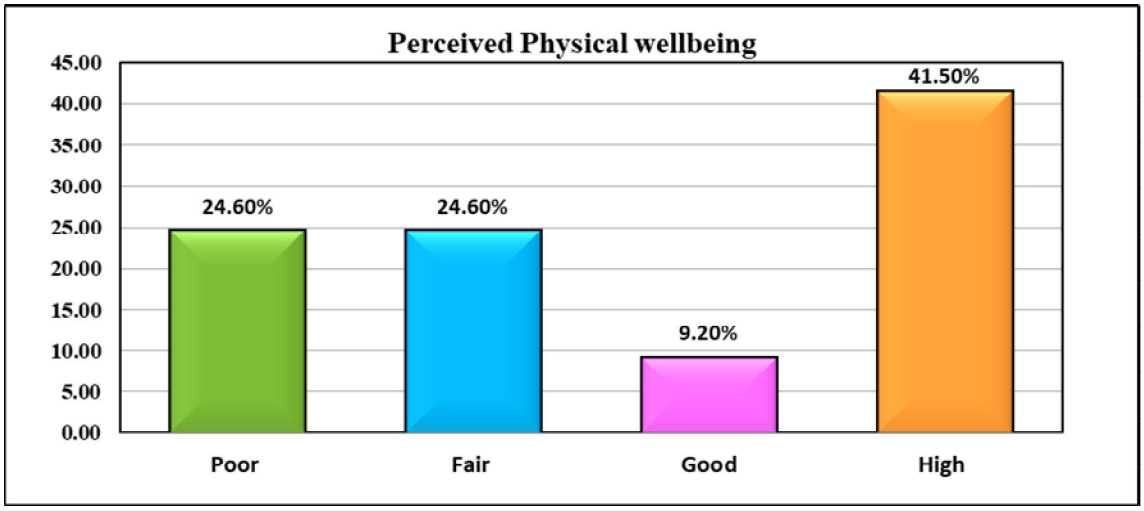

Figure (2): Distribution of the studied older adults according to their Perceived Physical wellbeing

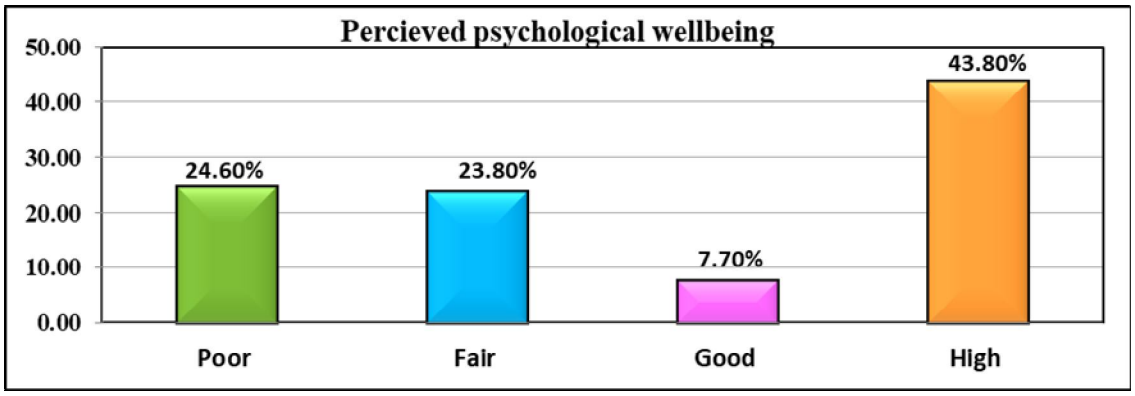

Figure (3): Distribution of the studied older adults according to their Perceived psychological wellbeing

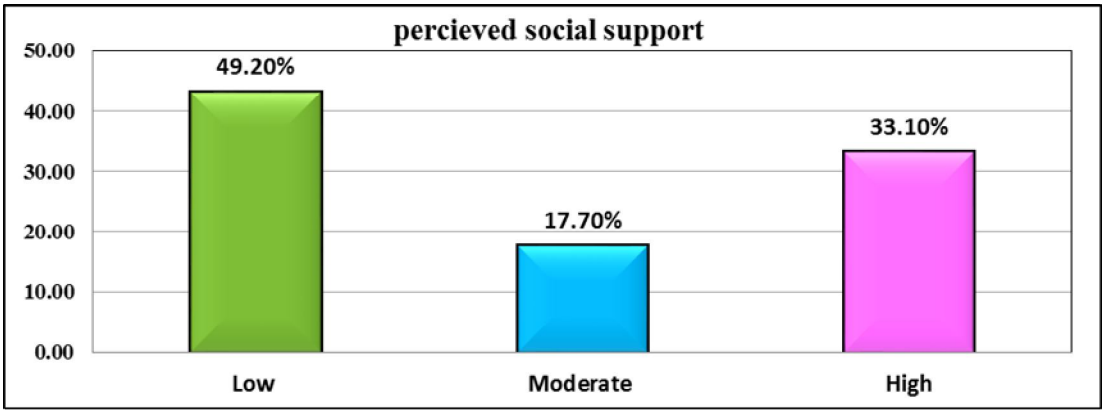

Figure (4): Distribution of the studied older adults according to their Perceived Social Support

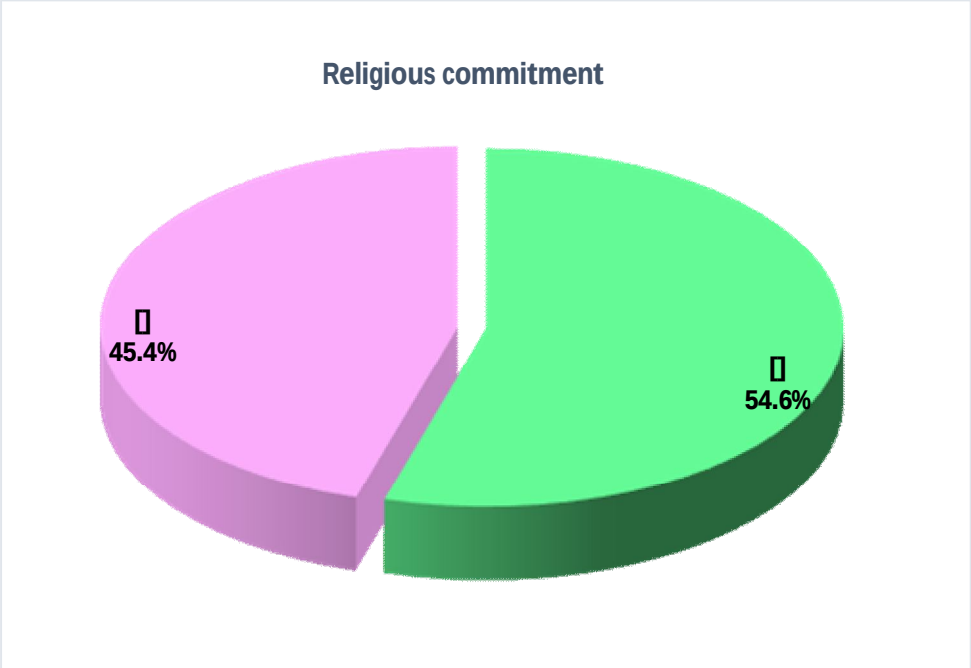

Figure (5): Distribution of the studied older adults according to their religious commitment

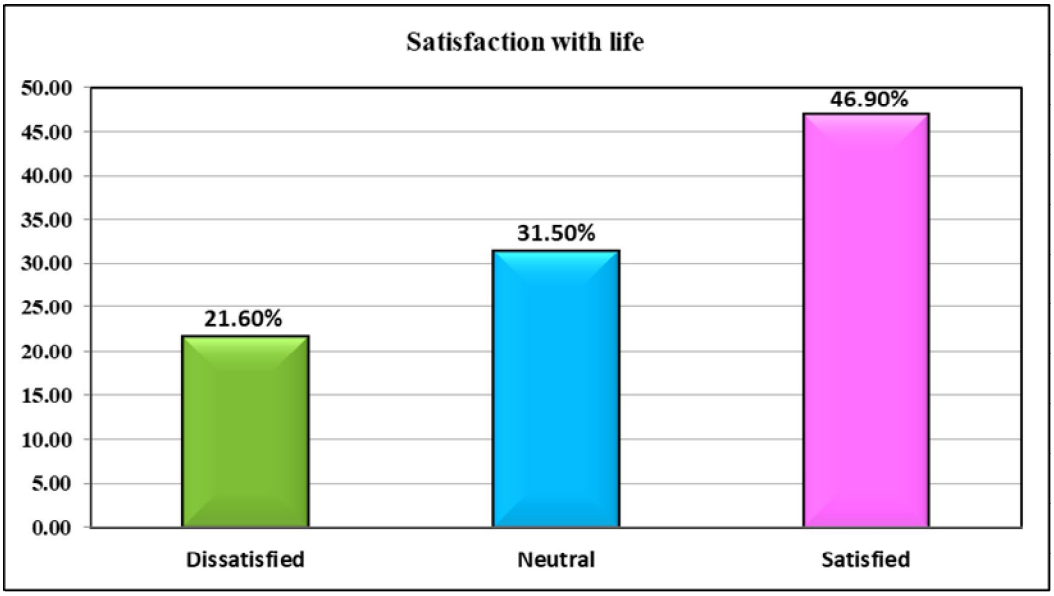

Figure (6): Distribution of the studied older adults according to satisfaction with their life

Table (2): Relation between the socio-demographic data of the studied older adults and their death anxiety level

Demographic data	Death Anxiety Mean ± SD. (M± SD%)	Test of Sig.	p
Age (years)			
60 -	82.24 ± 8.66	F=169.617*	<0.001*
75 -	57.10 ± 15.26		
85+	43.00 ± 4.14		
Sex			
Male	62.44 ± 17.45	t=0.007	0.994
Female	62.42 ± 21.89		
Marital status			
Single	67.29 ± 19.32	F=3.843*	0.011*
Married	56.12 ± 17.43		
Widow	67.65 ± 19.57		
Divorced	57.29 ± 23.76		
Living condition#			
Alone	69.97 ± 18.68	F=12.693*	<0.001*
With partner	56.12 ± 17.43		
With family	48.33 ± 16.24		
Education level			
Illiterate	54.38 ± 19.33	F=19.005*	<0.001*
Read and write	51.46 ± 16.15		
Basic education	53.38 ± 16.17		
Secondary education	70.15 ± 19.88		
University education	79.29 ± 9.69		
Occupation before retirement#			
Employee	74.84 ± 15.44	F=18.330*	<0.001*
Housewife	55.06 ± 19.95		
Private business	50.39 ± 11.77		
Skilled worker	53.95 ± 17.84		
Current work			
Yes	56.63 ± 18.27	t=2.295*	0.023*
No	65.01 ± 19.64		
Monthly income			
Enough	54.56 ± 16.66	t=5.288*	<0.001*
Not enough	71.06 ± 18.93		
Religion			
Muslim	63.63 ± 19.60	t=1.030	0.305
Christian	59.83 ± 19.40		

*t: Student t-test. F: F for ANOVA test *: Statistically significant at p ≤ 0.05*
p: p value for association between different categories. M±SD%: percent score of mean and stander deviation

Table (3): Relation between perceived physical and psychological wellbeing, perceived social support, religious commitment, and satisfaction with life of the studied older adults and their death anxiety level

	Death Anxiety (ASDA) Mean ± SD.	Test of sig.	p
Physical wellbeing			
Poor	84.80 ± 5.07	F=764.77*	<0.001*
Fair	66.84 ± 7.30		
Good	43.75 ± 5.11		
High	28.10 ± 4.90		
Psychological wellbeing			
Poor	84.80 ± 5.07	F=95.186*	<0.001*
Fair	51.94 ± 24.33		
Good	62.25 ± 3.48		
High	34.19 ± 9.37		
Perceived Social Support			
Low	79.86 ± 10.19	F=229.884*	<0.001*
Moderate	48.57 ± 11.88		
High	43.91 ± 4.94		
Religious commitment			
low religious commitment	78.07 ± 11.68	t=22.479*	<0.001*
high religious commitment	43.61 ± 5.02		
Satisfaction with life			
Dissatisfied	77.25 ± 10.74	F=305.719*	<0.001*
Neutral	80.29 ± 9.85		
Satisfied	43.62 ± 4.97		

t: Student t-test. *F: F for ANOVA test* **: Statistically significant at p ≤ 0.05*

Table (4): Correlation matrix between Physical wellbeing, Psychological wellbeing, Perceived Social Support (MSPSS), Religious commitment, satisfaction with life, and death anxiety

		Physical wellbeing	Psychological wellbeing	Death Anxiety	Perceived Social Support	Religious commitment	Satisfaction with life
Physical wellbeing	**r**		0.823*	-0.978*	0.869*	0.850*	0.858*
	p		<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Psychological wellbeing	**r**			-0.793*	0.654*	0.644*	0.630*
	p			<0.001*	<0.001*	<0.001*	<0.001*
Death Anxiety	**r**				-0.874*	-0.857*	-0.854*
	p				<0.001*	<0.001*	<0.001*
Perceived Social Support	**r**					0.947*	0.914*
	p					<0.001*	<0.001*
Religious commitment	**r**						0.918*
	p						<0.001*
Satisfaction with life	**r**						
	p						

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

Level of correlation, the absolute value of r: 0.00-0.19: "very weak", 0.20-0.39: "weak", 0.40-0.59: "moderate", 0.60-0.79: "strong", 0.80-1.0: "very strong".

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