



JURNAL  
TERAPI DZIKIR DAN KECEMASAN KEMATIAN

DIUNDUH OLEH:  
DYLAN DANNY ARISTA  
1371041033

FAKULTAS PSIKOLOGI  
UNIVERSITAS NEGERI MAKASSAR  
MAKASSAR  
2018

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## Relationship Between Religious Spiritual Well-Being and Death Anxiety in Iranian Elders

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### ABSTRACT

The present study aimed to examine the relationship between religious spiritual well-being and death anxiety among Iranian elders. Subjects were 146 volunteer elders. They were selected by a convenient sampling. Instruments were Multidimensional Inventory of Religious Spiritual Well-Being (MI RSWB 48) the Arabic Scale of Death Anxiety (ASDA) factors. On the MI RSWB 48 and the ASDA, there were no significant association between religious spiritual well-being and death anxiety total scores. There were significant association between Hope Transcendent (HT), and Experiences of Sense and Meaning (SM) subscales of MI RSWB 48. Limitations of the present study were using of self-report scales, selectin of an old-age sample, a Muslim reliogion and an Iranian culture. Present results can be considered in the religious spiritual oriented interventions for reducing of death anxiety for elders in Muslim countries.

**Keywords:** Religiosity, spirituality, well-being, death anxiety, elders, Muslim, Islam, Iran

### INTRODUCTION

Religious attitudes are a preventive agent to reduce of problems related to death and dying issues. Religion is one of the spiritual intelligence domains that can reduce death anxiety in elders [1]. Findings have shown that faith and believe to life after death is related to less fear of death. Persons, who were more religious, reported more less fear of death. In fact religious attitudes make persons overcome to their fear, feel more comfortable in their life and more cope with fact of death fear [2-6].

The relationship between death anxiety and religious belief seems to be too complex to provide a simple pattern of findings. Many studies on death anxiety have focused on examining gender differences, religious and spiritual influences, and aging [7]. Bahrami, Dadfar, Lester, and Abdel-Khalek (2014) found death anxiety, death depression and death obsession in Iranian older. Women repored higher death distress than men but there was no significant difference[8].

Kastebbaum (2000) reviewed studies on fear of death in general population and showed that in cross sectional studies elders had no higher fear of death than youths, high level of religious beliefs and participation in religious activities were not associated with low level of fear of death[9]. Duff and Hong (1995) revealed that persons with motivation of internal religious had lower death anxiety, and stronger belief to afterlife live was associated with lower death anxiety[10].

Chaggaris and Lester (1989) reported that scores on the four fear subscales of the CLFDS were not related to belief in God, an afterlife, or the subject would go to heaven, to church attendance, or whether the subject considered himself to be a religious person. Fear of one's own of death was related to a fear of hell[11].

There was no evidence for a strong association between fears of death and religious belief. Alvarado, Templer, Bresler, and Thomas-Dobson (1992, 1995) found that religious variables related to death depression and death anxiety[12]. In study of Campbell (2013; cited in Bahrami, Dadfar, Lester, & Abdel-Khalek, 2014), one of reason for fearing death was a non-existent or a terrible afterlife. Religious individuals may fear death more because they are afraid of the afterlife and the judgment that will be made about the way they lived their life[8]. Azaiza, Ron, Shoham, and Tinsky-Roimi (2011) reported that religiosity was not related to death and dying anxiety[13]. Beshai and Lester (2013) found that scores on a scale to measure the belief in a Day of Judgment were associated with scores on a traditional religiosity scale, but not with fears of death and dying[14].

On the The Reasons for Death Fear Scale (RDFS), Aflakseir (2014) reported that there was positive relationship between religiosity with reasons for death fear (Fear of Pain and Punishment, and Religious Transgression and Failures) in Iranian college students[15]. Ziapour, Dusti, and Abbasi Asfajir (2014) showed that there was no significant correlation between religious orientation and death anxiety in Iranian health personnel[16]. Aimed of the study was to examine the relationship between religious spiritual well-being and death anxiety among Iranian elders.

## MATERIALS AND METHODS

The present research was a cross sectional descriptive study. Subjects were 146 volunteer Iranian elders. They were selected by a convenient sampling. The Multidimensional Inventory of Religious Spiritual Well-Being (MI RSWB 48) and the Arabic Scale of Death Anxiety (ASDA) were used.

Multidimensional Inventory of Religious Spiritual Well-Being (MI RSWB 48) was made by Unterrainer, Huber, Ladenhauf, Wallner, and Liebmann (2010)[17]; and consists in total of 48 items and six subscales: General religiosity (GR), Forgiveness (FO), Hope immanent (HI), Connectedness (CO), Hope Transcendent (HT), and Experiences of Sense and Meaning (SM). Three subscales of FO, HI, and SM were included in perception of "Immanent"; and subscales of GR, CO, and HT were placed in perception of "Transcendent". Items of the MI-RSWB-48 are evaluated by a six-point Likert scale which is rated from "I totally disagree" (1) to "I totally agree" (6), and 16 items out of 48 items are reversely scored. Six subscales of MI-RSWB-48 are measured with eight items each. In the present study, Farsi version of the MI-RSWB-48 was made by Mahmood Alilu, Zarean, Beyrami, Hashemi, ElhamiAsl, and Aayat Mehr (2011)[18], was used. The Arabic Scale of Death Anxiety (ASDA) was developed by Abdel-Khalek (2004)[19]; and validated in the Arabic countries of Egypt, Kuwait, and Syria. It has 20 items, and each item is answered on a 5-point intensity scale anchored by 1 (no) and 5 (very much). In the present study, Farsi version of the ASDA was made by Dadfar, Abdel-Khalek, Lester, and Atef Vahid (submitted) [20] was used. Good validity with other scales and reliability with Alpha and test-retest reliabilities have been reported of two scales[17-18]

## RESULTS

The mean ages were 68.58 (SD=7.10), male 68.81 (SD=7.44), and female 68.28 (SD=6.76), respectively. 585 were male, and 42% female. The mean score of the MI RSWB 48 was 20.34 (SD=30.70); and mean score of the ASDA 51.09 (SD=20.19).

Correlation between total scores of religious spiritual well-being and death anxiety was non-significant and negative in Iranian elders ( $r = -0.009$ ,  $p > 0.05$ ). There were significant association between subscales of Hope Transcendent (HT) ( $r = .337$ ,  $p < 0.01$ ) and Experiences of Sense and Meaning (SM) ( $r = .183$ ,  $p < 0.05$ ) (see Table 1).

**Table 1. The Pearson correlations (*r*) between the MI RSWB 48 and the ASDA in Iranian elders (N=146)**

Scale/subscales	<i>r</i> with ASDA
<b>Scale</b>	- 0.009
Multidimensional Inventory of Religious Spiritual Well-Being (MI RSWB 48)	
<b>Subscales of MI RSWB 48</b>	
General religiosity (GR)	-.074
Forgiveness (FO)	.004
Hope immanent (HI)	-.017
Connectedness (CO)	-.092
Hope Transcendent (HT)	.337**
Experiences of Sense and Meaning (SM)	-.183*
Immanent Perception (IP)	-.048
Transcendent Perception (TP)	.093

\*\**correlation is significant at the 0.01 level*\**correlation is significant at the 0.05 level*

## DISCUSSION

The present study showed that total scores of religious spiritual well-being and death anxiety were non-significant and negative in Iranian elders; and there was a significant association between only subscales of Hope Transcendent (HT) and Experiences of Sense and Meaning (SM). On the ASDA, Lester, and Abdel-Khalek (2008) found that religiosity in a Muslim context and death anxiety were not associated [21]. Abdel-Khalek and Lester (2009) reported that there were not significantly correlated between death anxiety and intrinsic religious motivation, or religiosity and strength of religious belief [22]. Ghufuran, and Ansari (2008) showed impact of widowhood on religiosity and death anxiety among 60 to 75 years Indian elders [23]. There was a relationship between intrinsic religious motivation and death anxiety [24]. Wittkowski (2015) found that attitudes toward dying and death are correlated with disengagement and adaptive coping in German elders [25]. Moetamedi, Pajouhinia, and Fatehi Ardestani (2015) reported that there was a negative significant relationship between spiritual wellbeing and resiliency with death anxiety among Iranian elderly. Spiritual wellbeing was a valuable factor in prediction of death anxiety. Spiritual wellbeing and resiliency can be considered as vital factors in death anxiety [26].

Cross cultural aspects of religious spiritual well-being have shown in many studies [27-31]. Religion was the predominant predictor in the understanding of death acceptance or attitude, but the influence of racial socialization and world view were also significant contributors. World view and religion were dominant predictors in the understanding of death anxiety and racial socialization was a significant contributor [32]. In Muslim religion, the Great Allah has mentioned about death, its realization and impossibility of escape from death in many Surah and verses of the Holy Quran. Imani Far, Bostani, Dodman, and Raeisi (2011) compared views of Holy Quran and psychology about confront with death. They found that both of views emphasize in the willingness for immanent and the fear of death and agree with emotional reactions of individuals in the face with death and its acceptance depend on their behavior, personality, and coping mechanisms to deal with the past problems during the time of life. The most important difference between two views was the belief or non-belief in life after death that causes different operational definitions of quality of death, therapy targets and way of encounter with death [33]. Ali Akbari Dehkordi, Oraki, and Barghi Irani (2011) reported that there was a negative correlation between the internal religious orientation and death anxiety and a positive and significant correlation between the external religious orientation and death anxiety [34]. Mansurnejad and Kajbaf (2012) showed that main effects of religious orientation on death anxiety were significant. The individuals with intrinsic religious orientation significantly reported lower levels of death anxiety than individuals with extrinsic religious orientation. Internal religious orientation seems to decrease death anxiety and is an important factor in mental health [35].

Kastenbaum (2007) reported that there are difficulties in interpreting death anxiety scales: It cannot interpret death anxiety out of context of religious, cultural, and personal beliefs. It has been shown through results of various studies that a strong sense of religion in a person's life can be related to a lower sense of anxiety towards the death. Although there has been no association discovered between religiosity and death anxiety, it has also been shown that death anxiety tends to be lower in individuals who regularly attend religious meetings or gatherings [36]. Some of studies have reported that religious attitudes toward death can be considered as a threat to mental health [37]. Ellis, Wahab, and Ratnasingan (2013) found that religiosity is positively correlated with increase of death fear and

meaning and more religious persons showed more fear from the death in the US, Turkey, and Malaysia[38]. Démuthová (2013) showed that religiosity was not connected with the levels of fear of death. It seems that age is more important factor than religiosity[39]. The thought of death causes a different degree of anxiety for different individuals, depending on many factors for example religion [6, 40-43].

The present study has some limitations. Self-report scales were used; and subjects were from an old-age, Muslim religion, and an Iranian culture. Religious spiritual well-being was not a factor in prediction of death anxiety. Therefore, religious spiritual well-being cannot be considered as vital factor in death anxiety. So, the results should be interpreted on the basis of cultural considerations and native viewpoints. Present results can be considered in the religious spiritual oriented interventions for reducing of death anxiety for elders in Muslim countries.

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## The Role of Gender in Influencing Public Speaking Anxiety

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### Abstract

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This study investigates the role of gender in influencing public speaking anxiety. Questionnaire survey was administered to the samples of the study. Technique of correlation and descriptive analysis will be further applied to the data collected to determine the relationship between gender and public speaking anxiety. This study could serve as a guide to identify the effects of gender differences on public speaking anxiety and provide necessary advice on how to design a way of coping with or overcoming public speaking anxiety.

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**Keywords:** across culture, communication, English Language competence, gender, postgraduate students, speaking anxiety

### 1. Introduction

Anxiety is a state of uncomfortable emotion where danger is perceived, and the victim has a powerless feeling with the expression of tension in anticipation of danger. In the classification of anxiety, Scovel (1978) refer to 'trait anxiety' as a rapid permanent behavior or feeling to be anxious and this is considered to be part of personality. Spielberger (1983) refers to the second classification as 'state anxiety' which is explained to be apprehension encountered by the victim at a specific time period as a stimulus to a situation which is definite.

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Ellis (1994) refers to the third classification as 'situation-specific anxiety' which is associated with apprehension that stands out for particular phenomenon and situations.

Gardner and MacIntyre (1994) explain the idea behind apprehension experienced as often related to a particular situation where the second language in which the speaker is not fully competent is to be used in public speaking.

For some years now researches have been directed towards public speaking anxiety. Public speaking anxiety is usually associated with fear among different categories of people in any society (Gibson, Gruner, Hanna, Smythe & Hayes, 1980). In addition, "public speaking anxiety represents a cluster of evaluative feelings about speech making" (Daly, Vangelisti, Neel, & Cavanaugh, 1989, p. 40) in which case speakers who are very anxious do not experience positive feelings related to the context of public speaking. For several years back, researchers in communication have tried to examine the explanation encompassing the psychological and physiological parts of public speaking anxiety in order to proffer considerable remedy that may lessen the adverse influence of anxiety for public speakers.

Speaking before a group or public has been a long standing issue in the communication and language arena. Students tried to avoid speaking in public because of embarrassment, shaky voices, rapid heartbeat, feel discomfort, inferiority complex and low self-respect (Behnke et al., 1978; Clements & Turpin, 1996). According to Krannich (2004) delivering speech, presentations in class and before public have been an important dilemma faced by students. Some researchers regard it as something peculiar to audience and public speaking context (Beatty et al., 1978), if possible shielding public communication (McCroskey & Beatty, 1984); its consequence may vary across several processes or phases of speech preparation, delivery, and completion (Behnke & Sawyer, 2001).

Public speaking anxiety is a dilemma faced by the populace, but students in particular. McCroskey (1977) reported that invariably twenty percent of students are faced with public speaking anxiety. To elucidate further, he documented that an individual level of fear of anxiety is correlated with either real or proposed communication with another individual or persons.

Other likely factor affecting the public speaking anxiety on oral presentation, group discussion or proposal defense is gender differences. Gender differences will be one area of focus in this study as there is likelihood that it is not clearly true that gender differences constitute to the level of public speaking anxiety.

## **2. Method**

A basic approach to carrying out research is the formulation of research design in accordance with the objective of the study. Several scholars have underscored the importance of research design to the success of any scientific research study.

For example, Kumar (2011), and Salkind, (2009), have laid emphasis on taking time to select who will participate in the research project and the procedure for selecting them. Also a study design that is well laid out serves to guide future researchers and make it possible to replicate and verify the process and outcome of the study. A study design is an overview of the study the process and the elements involved which includes the population of interest to the study, the sample size, sampling procedure, the data collection procedure and the instrument selected for the exercise. As stated above, the study adopts the quantitative approach with survey as the research method. The choice is informed by the fact that quantitative approach provides the researcher the opportunity to measure social phenomenon, like speaking anxiety, from a detached position and with minimal bias. Generalization of the outcome is also possible through careful and systematic selection of a representative sample through sampling procedure. Sampling is considered absolutely central to ensuring that the research project has external validity. By this, the findings of the study can be applied more widely beyond the particular project. This is possible because you have taken every precaution to make sure that the people you have surveyed, or the material you have selected to analyse, are representative of the group of people or the material you are primarily interested in. Given the objective of this study which is to determine the causes of speaking anxiety in relation to English language competence, gender and age of the respondents, the quantitative approach is considered the best approach.

## 2.1 Gender And Its Influencing In Public Speaking Anxiety

The significance role of gender in the control of speaking anxiety has remained the most controversial as far as previous studies that have beamed their research light in this direction is concerned. Intraraprasert (2000) pinpoint that there is a linear relationship between gender and speaking anxiety. To elucidate more, Behnke and Sawyer (2001) documented that female displayed higher anxiety based on Gender- based study. In contrast, Matsuda and Gobel (2004); and Wang (2010) found out that gender does not have a significant effect on the overall anxiety, while Levitt (1980) in his study stated that male students felt a higher level of anxiety when they perceive their spoken anxiety than that of others, whereas such relationship was not observed among the females. Mejias et al. (1991) discovered in their own study that females are more prone to speaking anxiety than males.

In the same pursuit, Ayu Rita & Nadhia Dalila (2008) in their study on anxiety and speaking English as a second language among male and female Business studies students in Universiti Industri, Selangor; an attempt to identify the potential sources and causes of anxiety as related to the students' affective needs and their needs in higher institutions of learning posed a research question that asked if gender differences have an impact towards the level of anxiety of students in UNISEL, and was answered with a qualitative research approach, through open-ended interview and content analysis of newspaper, magazine and journal reports. The results showed that female students experienced more anxiety than male students while speaking in class. Female students were more anxious than male students when expected to speak in English language which is a foreign language to them; both genders experienced nervousness and panic when asked to speak publicly without being pre-informed and both never felt sure of themselves when asked to speak in class. Female students exercise lower self-confidence because of their interest in the friends who might be judging them, and male students are found to be experiencing less anxiety when it comes to volunteering answers in class. On the overall findings, it was concluded that female students are more anxious when compared to their male counter parts.

The effect of gender in the experience of speaking anxiety has been seen to be gender differences in the anxiety experience, taking subjects from ten different Arab culturally subjective; stressing the fact that the cultural background of the speaker determines the dispositional characters in the control of speaking anxiety.

In stating the significant role played by culture in public speaking encounter, Toth, (2011) stated that cultural differences encompasses gender, socio economic status, and ethnicity, with an illustrating example of a certain culture where the voices of their women are not valued. Meaning that female student from such cultural background will not be comfortable while engaging in public speaking, most pathetically when she has been told that her views about issues are naturally subliminal, and of no worth or value, thus contribute to her experience of speaking anxiety.

Yiamsawat, (2004) in their study to investigate the effect of countries consisting of Kuwait, Saudi Arabia, Emirates, Oman, Egypt, Syria, Lebanon, Jordan, Palestine, and Iraq reported that females had a higher mean anxiety score more than their male counterparts across the ten countries, with a well-felt difference in 7 out of the 10 sampling population. In this respect, the cause of the gender difference was traced to the effect of gender roles and sex-typing in their socialization process; showing that while female college students in Kuwait, Saudi Arabia, Emirates, Oman, Egypt, Syria, and Lebanon have their anxiety significantly higher than the male counterparts, females in Palestine, Jordan and Iraq showed no significant gender difference, and thus concluded that the prediction of the study that gender influences the experience of public speaking anxiety is aligning and consistent with many of the other previous studies.

From a perception of health disorderliness, however in relationship with anxiety, Neuman, (2007). in a study to investigate if gender differences is linked to anxiety and its association across culture, reported that women are found to be of higher anxiety levels than men, with a consistent and uniform results across respondents studied from Australia, South Korea, Japan, England, and the United States, thus stating that socio-demographic variables do not interact in the relationship between gender and anxiety, and concluded that even across a variety of culture, women are found to be of higher anxiety than men; a relationship that is unconnected with age, education level, and marital status.

Mohammadi, (2013) in a work centered on investigating the effect of gender in foreign language anxiety among the Iranians related that among the affective variables that are related to language learning, especially the experience of anxiety in foreign language learning, gender, either being experimented in a matched-gender and mixed gender classrooms as the study suggested, and the study of its relationship with speaking anxiety. That study conducted among 96 respondents, all of whom were Iranians found out that mixed-gender classrooms are considered anxiety-provoking because of the presence of the opposite gender. It was discovered to be significantly responsible for the amount of the language anxiety experience among the Iranian learners.

In the same vein, Kumar, (2011) studied the relationship between gender and the foreign language classroom anxiety among the Iranian students, and having acknowledged the multiple nature of the foreign language anxiety, insinuated a prediction that gender plays a significant role in the classroom experience of foreign language learning, and subsequently reported that Iranian female are of higher anxiety than their male counterparts, therefore concluded that gender played a significant role in the experience of classroom anxiety, though contradicting Meihua and Jackson (2008) which reported that foreign language anxiety is positively related with both male and female students. Tianjian (2010) using a sample of first –year non-English majors at Guizhou College of finance and Economics in China as participants, found that speaking anxiety does not have any significant influence with gender but rather depend on the level of groups. These conflicting findings as regards the influence of gender in the experience of speaking anxiety necessitate this study's interest in that direction, most especially with respect to postgraduate English language students, whose level of English language exposure is expected to be gender balanced.

### **3. Descriptive Statistics**

The descriptive provides the summary of statistics such as the minimum and maximum values, mean, standard deviation, skewness and kurtosis in relation to each of the variable. This information is provided in the result's table 4.6 below.

3. 1 Result of Descriptive Statistics

	Skewness	Kurtosis
	Std. Error	Std. Error
Gender	0.23	0.46
Age	0.23	0.46
Total English Lang. Competence	0.23	0.46
Total Speaking An	0.33	0.46

Valid (listwise)

From the above table, gender consists of male (1) and female (2). Since gender is a discrete variable their means, standard deviation etc may not be all that important (Silvina Montrul, 2012). Age group range from “below 25 years” represented by 1 as the minimum and from 45-54 years as the maximum represented by 4. Their mean and standard deviation are respectively 2.05 and 0.73. The standard deviation indicates the amount by which measurement in a set varies from the average for the set. The respective skewness is positive implying that scores cluster to the left hand side of the graph at low values and the kurtosis for age indicates positive sign implying that the distribution demonstrate to be peaked, clustered at the center and have long thin tails. The associated standard error determines how accurate the measurement is in an estimate. Low standard error is preferable to high one.

The items for English language competence are 10 in number. The scores for each variable range from 1 to 5 representing “strongly disagree” to “strongly agree” The total scores for each respondents on all the 10 items added together are represented under the variable named as “Total English language competence (TELC)”. This variable, Total English language has the minimum and maximum scores equal to 19.0 and 38.0 respectively among the whole respondents. Also, the mean or average scores for all the respondents are calculated and divided by the number of respondents to get the average or mean scores for the whole students. The standard deviation indicates the amount by which measurement in a set varies from the average for the set. Thus the mean scores for the whole students on the 10 items of English language competence and the standard deviation are 28.60 and 4.62 respectively.

The value of skewness provides an indication of the symmetry of the distribution of scores on the graph while kurtosis gives information about the "peakness" of the distribution of scores on the chart or graph. According to Silvina Montrul, (2012), positive skewness values shows that scores clusters at the low values, to the left hand side of the graph while the negative value of skewness indicate that scores cluster at the high end of right hand side of the graph. With regards to kurtosis, positive kurtosis indicate that the distribution of scores is peaked, (cluster at center) with thin long tails. Negative value of kurtosis indicates a distribution that is flat.

From the result table, the value of skewness turned out to be negative (-0.55) indicating that the scores are clustered at the high end, to the right of the graph. The value of kurtosis for total English language competence indicates positive sign implying that the distribution demonstrate to be peaked, clustered at the center and have long thin tails. It is observed that the value of standard error was 0.23 and 0.46 for the skewness and kurtosis respectively.

The items for speaking anxiety are 15 in number. The scores for each variable range from 1 to 5 representing "strongly disagree" to "strongly agree" The total scores for each respondents on all the 15 items added together are represented under the variable named as "Total Speaking Anxiety (TSA)". This variable, Total Speaking Anxiety has the minimum and maximum scores equal to 27.0 and 63.0 respectively among the whole respondents. Also, the mean or average scores for all the respondents are calculated and divided by the number of respondents to get the average or mean scores for the whole students. The standard deviation indicates the amount by which measurement in a set varies from the average for the set. Thus the mean scores for the whole students on the 15 items of "Total Speaking Anxiety" and the standard deviation are 55.47 and 10.58 respectively. The value of skewness for "Total Speaking Anxiety" turned out to be negative (-1.77). According to Silvina Montrul, (2012), this indicates that the scores are clustered to the right of the graph, at the high end. The kurtosis for "Total Speaking Anxiety" also indicates positive sign implying that the distribution of scores for the variable "Total Speaking Anxiety" demonstrate to be peaked, and the scores are clustered at the center showing thin long tails. The value of standard error was 0.33 and 0.46 for the skewness and kurtosis respectively.

**4. Correlation between Gender and Public Speaking Anxiety**

In order to investigate the effects of gender differences among the students on the public speaking anxiety, this study undertakes correlation between the variables. The table 4.7 below presents the results of such relationship between the gender and public speaking anxiety.

4.1 Correlation Result between Gender and Speaking Anxiety

Dependent Variable	Independent variable
Total Speaking Anxiety	Gender
Pearson Correlation	0.131
Sig. (2-tailed)	0.176
No of Respondents	108

From the table above, the value of Pearson correlation is positive which implies that the total speaking anxiety as dependent variable move in the same direction with gender (dependent variable). The value of Pearson correlation is also shown to be 0.13 implying that there is small correlation between the two variables. In addition, the results indicate that  $r = 0.13$ ,  $n=108$ ,  $p > 0.05$ . Since,  $p=0.18$  in the result is greater than 0.05% it means that gender has no significant impact on the total speaking anxiety. In order word, there is no correlation between the two variables. Therefore, the hypothesis that gender differences have significant effect on public speaking anxiety is rejected.

**5. Discussion**

This study addresses the research questions relating to the role played by English gender in influencing the occurrence of public speaking anxiety among the postgraduate students attending the intensive English language program at the University Utara Malaysia. In order to pursue this, a total number of 108 students (for the combined three semesters) who attended the program were examined through the questionnaire. Correlation is undertaken to verify the research question of “What are the effects of gender differences among the students on the public speaking anxiety?”

Findings reveal that though gender has positive relationship with the public speaking anxiety among the study, however, no significant impact of gender on public speaking anxiety is found. This implies that being male or female has not constituted to student having anxiety in speaking. This results support that of Matsuda and Gobel (2004) who found that gender does not have a significant effect on the overall anxiety. The likely reason for the non-significant effect of gender on speaking anxiety may be associated to the uneven distribution of the number of female and male represented in the sample. For example, the number of female sample was just 40 compare to male sample of 68 in the current study. Previous studies which have obtained similar results as that of the current study include Matsuda and Gobel (2004); and Wang (2010). These studies found that there was no significant difference in the speaking anxiety with respect to gender. However, the result of the current study contradict those obtained by Abdel-Khalek and Alansari (2004); Behnke and Sawyer (2009); Fakhri (2012); Intraraprasert (2000); McCroskey, Gudykunst, and Nishida (1985); Mejias et al. (1991); and Tasee (2009). These latter studies obtained significant relationship between the two variables.

## **6. Conclusion**

It can be concluded that there are significant factors responsible for the causes of anxiety among the postgraduate students who attended intensive English language program at University Utara, Malaysia.

Significant number of respondents has indicated that they experience speaking anxiety for a wide range of reasons which made them to be more fearful, confused, trembling, feel very tense, feel very rigid, make their heart beat fast, make them nervous, make them make mistakes and make them perform poorer when delivering speech, attending interview or during class room presentation. Furthermore, students have identified that they found great difficulty in speaking English language even though some of them understand it. Some have expressed that they understood but could not speak English language so they had anxiety while others have signified that their speaking ability was very poor that it made them to entertain anxiety for fear of making mistake. Evidently, the current results suggested that student with weak skills and who lacks competences in English language are more liable to entertain anxiety as compare to those who have good skills and competence in English language.

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## **The Effect of Insight Based Death Meditation on Death Anxiety and Quality of Life**

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### **Abstract**

This study aims to confirm the effect of Insight Based Death Meditation (IBDM) from Vipassanā and Zen Buddhist traditions on death anxiety and quality of life (QOL). For the study, a quasi-experimental research design including pretest and posttest with a control (n=30) and experimental group (n=30) was utilized. Data was collected from Korean adults between 20-59 years of age. A two-tailed t-test was used for the score differences of death anxiety and QOL between the experimental and the control groups. The score difference before and after IBDM intervention was statistically significant in the experimental group ( $t=2.93$ ,  $p=.005$ ). The IBDM significantly improved level of death anxiety in the experimental group ( $t=2.93$ ,  $p=.005$ ). Among six subcategories of QOL, economic state ( $p=.001$ ), self-esteem ( $p=.01$ ), physical state ( $p=.01$ ), neighbor state ( $p=.001$ ), and family relationship ( $p=.001$ ) showed the significant results. Therefore, IBDM is an effective method of decreasing the level of death anxiety and increasing QOL among Korean adults.

*Keywords:* Insight Based Death Meditation, death anxiety, quality of life

### **Introduction**

Human life is limited—everyone knows that they will die someday. Human beings often feel fear or anxiety about death. In many societies, talking about or preparing for death is not acceptable. In South Korea, it is a cultural norm to refrain from talking about death with others (Oh, 2007). Thus, the resources for understanding and facing one's own death are insufficient; in other words, proper preparations for death are still lacking. Furthermore, misconceptions regarding death often result in tragic and inappropriate decisions or conclusions, such as committing suicide. In South Korea, 47.8% of deaths are attributed to cancer and neurological or cardiovascular-related diseases. The death rate in the elderly has decreased, but that of adults has increased, largely due to suicide. The suicide rate in South Korea is 28.4 per 100,000 people, which is the highest among the countries of the Organization for Economic Cooperation and Development (Statistics Korea, 2010). South Koreans are confronting problems regarding appropriate approaches towards death to decrease death anxiety and even the suicide rate. Therefore, it is essential to provide Korean adults informative interventions in order to understand and prepare for death or death anxiety during their lives.

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## **Literature Review**

Today, many Western societies have widely adopted “death education” programs that are designed to change public awareness of death and suicide (Yoon, 2009). In South Korea, many programs have provided similar education to prepare for death. However, they have achieved limited success due to the enduring taboo regarding death. Thus, a widely accepted death education program has not yet been fully developed (Cho & Kim, 2005; Kang et al., 2010; Yoon, 2009).

Many articles on the subject of death have predominantly focused on the significant feelings of terminally ill patients and their families (Carlson, Ursuliak, Goodey, Ange, & Specca, 2001; Downey, Engelberg, Standish, Kozak & Lafferty, 2009; Nidich et al., 2009; Williams et al., 2005). The personal perceptions of death among volunteers and nurses while they were taking care of the critically ill patients have been tested (Cho & Kim, 2005; Yoon, 2009). However, studies of death perception among adults in the general population are rare (Kang et al., 2010).

Some studies have suggested meditation as a way to approach and treat problems related to death (Fronsdal, 2014). Meditation has been practiced for over 5,000 years (Chiesa, 2010). It has been used as a key for understanding and explaining human existence and the purpose of life and death. The history of meditation has been addressed in ancient Indian scriptures, and has since been adopted and delivered from culture to culture through religious activities (Puff, 2013). Meditation has been commonly described in the ritual activities of Buddhism. The two major schools of Buddhism, Theravāda and Mahāyāna, both focus on maintaining human dignity and the quality of death (Korean Seon School, 2009; Sogyal Rinpoche, 1999). Particularly relevant to this paper is the Theravāda tradition of Vipassanā meditation, also known as insight meditation or mindfulness practice (Fronsdal, 2014).

In insight meditation, death is dying is considered a normal human experience. It is not met with sadness, and is not even seen as a form of suffering. Rather, according to Buddhist teachings, through death, people can find another chance to rebirth. Thus, instead of being the end of life, death is seen as a starting point to another life. In other words, death is a meaningful way to prepare for the next life. In insight meditation, considering death or dying is inevitable. It can be an effective and efficient method for human beings to prepare for death (Fronsdal, 2014).

The effect of meditation on health problems has been studied in the academic field. End-of-life studies have also identified meditation as a proper way to address personal emotional problems such as anxiety or depression; thus, many have considered it as a part of health treatments (Downey et al., 2009; Lafferty, Downey, McCarty, Standish, & Patrick, 2006; Williams et al., 2005). In a meta-analysis of 39 studies, Hofmann, Sawyer, Witt, & Oh (2010) found a significant alleviation in anxiety through mindfulness-based meditation, suggesting its use as a clinically effective treatment to improve anxiety issues. In addition, other studies have reported that meditation was an effective method to treat anxiety and improve well-being (Bertisch, Wee, Phillips, & McCarthy, 2009; Carlson et al., 2001; Greeson, 2009). Therefore, this study attempted to verify the effect of Insight Based Death Meditation (IBDM) on death anxiety among Korean adults.

## **Methods**

### **Study Design & Participants**

This study was conducted through the academic funding from Seoul Women's College of Nursing in Seoul, South Korea between 2010 and 2011. The Institutional Review Board (IRB) for this study was achieved in 2010 from Dankook University, South Korea. Participants were recruited via electronic mail and printed announcements at a meditation center where the study took place. Adults between the ages of 20-59 years old were invited to participate in the study. After receiving an orientation of the study and agreeing to participate, each person was randomly assigned to either the experimental or control group. This study was quasi-experimental, with a nonequivalent control group and pre-posttest design. It was conducted at a meditation center in Seoul, South Korea from July 2010 to January 2011.

For this study, two hypotheses were developed. (1) The experimental group that received IBDM intervention would have lower scores in death anxiety than the control group, which did not receive that intervention. (2) The experimental group that received IBDM intervention would have higher scores in QOL than the control group, which did not receive that intervention.

### **Intervention**

The experimental group received the Insight Based Death Meditation (IBDM) intervention based on the insight methods of Buddhism, a detailed curriculum of which can be seen in Table 1. To determine the time frame of the intervention, this study referred to the data of other previous research. According to these studies (Carlson et al., 2001; Downey et al., 2009; Nidich et al., 2009; Williams et al., 2005), interventions were usually conducted between 30 minutes and one hour per day for 6-8 weeks. The data (Carlson et al., 2001; Downey et al., 2009; Nidich et al., 2009; Williams et al., 2005) also showed that there was a significant correlation between the amount of time spent in the intervention and the degree of its effects. On the contrary, in order to successfully understand the fundamental principles of meditation, some meditation experts recommend the higher amount of 48 hours for the lesser period of six days for a meditation program.

Thus, the intervention for this study selected 48 hours for the meditation program. The intervention participants were required to stay in the meditation center for 5 nights and 6 days. Each day, the intervention group participated in diverse meditation programs for 8 hours based on the IBDM curriculum. However, participants were not allowed to communicate with family members or friends during the meditation program except for urgent personal situations. Each meal time, the intervention group was provided healthy food, including varied vegetable and soybean with participant consent. Bedding items for sleep were also provided as were needed. The instructor of the program stayed with the participants at the meditation center and helped them successfully follow each program every day. They spontaneously participated in the intervention. They were informed that they could discontinue the program at any time without penalty. Adversely, the participants in the control group only received the study orientation and completed the instruments at the meditation center without any intervention. After the orientation for the study, they returned home. A week later, they came back to the center and completed the same instruments for the posttest.

### **Instruments**

In order to measure the effect of death meditation, two instruments were used: Death Anxiety (DA) and Quality of Life (QOL). The DA scale was developed by Thorson and Powell in 1988. For this study, the Korean version was utilized. This tool consists of 25 questions with a range of 1 (very unlikely) to 2 (very likely) scores, with possible total scores between 25 and 50. A high

score indicates a high level of death anxiety. According to the original study, Cronbach's alpha was .82 (Thorson & Powell, 1988). For the present study, Cronbach's alpha was .83.

The Quality of Life (QOL) tool was developed using a Korean population by Dr. Ro in 1988. It has six subdomains: emotional state, economic life, self-worth, physical condition and function, neighbor relationship, and family relationship. The total items of this instrument are 47. It is composed of Likert-type 5-point criterion ranging from 1 to 5, with 1 as "very unsatisfied" to 5 as "very satisfied." The total score of this tool ranges from 47 to 235, with a high score indicating that participants perceive a higher level of quality of life based on the six subdomains. Cronbach's alpha was .94 in Ro's study (1988), and it was .93 in this study.

### **Sample Size**

According to Munro's comments in 2005, at least 27 subjects per group for a quasi-experimental design were recommended as an effective sample size. Thus the experimental and the control group each had 30 participants for this study at a moderate effect size=.5.

## **Results**

The data was analyzed using SPSS (Windows v.21). The demographic characteristics and the homogeneity between the experimental and the control groups were examined through  $\chi^2$ -test and t-test. The effect verification of sub-domains in QOL was also analyzed by t-test. Cronbach's alpha was calculated and the significance level was set at  $p < .05$ .

### **Demographic Characteristics & Baseline of Dependent Variable**

The characteristics of the experimental and control groups are described in Table 2. The group was predominantly women over 40 years old with a college education.

### **Effect of Meditation on Death Anxiety**

The first hypothesis for this study was that the experimental group receiving the IBDM intervention would have lower scores in death anxiety compared to the control group. In this study, the pretest of death anxiety among the experimental group was  $.34 \pm .20$  and that of the posttest was  $.17 \pm .13$ . The score difference between pre- and posttest in the experimental group was significant ( $t=5.06$ ,  $p=.001$ ). In addition, the score difference of death anxiety between the experiential and control groups were also significant ( $t=2.93$ ,  $p=.005$ ). Therefore, the results indicate that IBDM significantly decreased the level of death anxiety among Korean adults (Table 3).

### **Meditation Intervention and QOL**

The second hypothesis was that the experimental group receiving the IBDM intervention would have higher scores in quality of life compared to the control group. The QOL scores of the participants in the experimental group significantly improved from  $3.19 \pm 0.49$  to  $3.63 \pm 0.49$  after the IBDM ( $t=4.65$ ,  $p=.001$ ). These results are summarized in Table 4.

The results regarding QOL also demonstrate that the difference of QOL between the experimental and control groups was significant ( $t=4.33$ ,  $p=.001$ ). Therefore, IBDM increased the level of quality of life among Korean adults.

This study also showed significant results in economic state ( $p=.001$ ), self-esteem ( $p=.01$ ), physical state ( $p=.01$ ), neighbor state ( $p=.001$ ), and family relationship ( $p=.001$ ) among

the six subcategories of QOL. Therefore, the results of the subcategories of QOL indicated the IBDM made significant improvements of economic state, self-esteem, physical state, neighbor relationship, and family relationship in Korean adults (Table 5).

These results suggest that IBDM may be a promising method to solve tragic societal issues related to death, and that it may be a successful intervention to enhance the quality of death and to review the quality of life in human beings.

### **Discussion**

This study supports the idea that IBDM can improve death anxiety and quality of life among Korean adults. By decreasing death anxiety and increasing quality of life for Korean adults, there may be a positive benefit for preparing for death. Designing culturally specific classes that focus on preparing healthy adults for death may provide benefits in decreasing their anxiety about death. Death education may provide a positive effect for patients and their families with life-limiting conditions. Furthermore, exploring the Buddhist meaning of life, suffering, and death may enhance quality of life in palliative care (see Masel, Schur, & Watzke, 2012).

### **Limitations & Recommendations**

This study randomly sampled a small group of healthy Korean adults who were already interested in meditation and were recruited from one center. Additional studies further refining the methodology are recommended. The extensive time commitment required for the educational intervention may not be practical for working adults. Additional studies focused on describing the optimal length of education could potentially lead to the refinement of an effective program that requires less instructional time.

### **Conclusion**

The IBDM education is a program designed and developed to reduce anxiety related to death and to enhance the quality of life in individuals. Even though this study was performed in a limited small group, the results were significant.

**Table 1:** Curriculum of IBDM program

<b>Step</b>	<b>Day</b>	<b>Session (hrs)</b>	<b>Content: Understanding</b>
Introduction	1	AM (3)	Meditation/meditation on breathing, feeling, & mind
		PM (3)	Meditation on mutual relationships between breathing, feeling, and mind
		EVE (2)	Understanding and meditation on mutual effects of breathing, feeling, & mind
Acceptance	2	AM (3)	Meditation on rough breathing, pains in body, & rough mind
		PM (3)	Meditation combined with confession, kindness, compassion, & patience
		EVE (2)	Meditation on rough breathing, pains, and mind combined with confession, kindness, etc.
	3	AM (3)	Dharma/Meditation on breathing, feeling, and mind combined with Dharma
		PM (3)	Meditation on the cause & disappearance of pains combined with Dharma
		EVE (2)	Reciprocity of all beings/Meditation on breathing, feeling, & mind for all beings
Experience	4	AM (3)	Life and death/Meditation on birth & death of beings
		PM (3)	Process of death/Meditation on looking back on life at moment of death & completing life
		EVE (2)	True end of death-meditation/Meditation on completing life
	5	AM (3)	Understanding of flow of consciousness/Meditation on dying
		PM (3)	Meditation on watching dying/Meditation on responses of consciousness after death
		EVE (2)	Understanding of birth & death of beings/Meditation on new resolution for life
Rebirth & Sharing	6	AM (3)	Cycle of consciousness/Meditation on breathing, feeling, & mind
		PM (3)	Completing meditation combined with confession, kindness, peace of mind, & Dharma
		EVE (2)	Sharing thoughts about death-meditation & new resolutions
Total	6 days	48 hours	Methods: lecture, practice, coaching

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Note: AM=Ante meridiem; PM=Post meridiem, EVE=Evening

**Table 2:** Differences of demographic characteristics and baseline between two groups

Variables	Characteristics	Exp.(n=30)	Con.(n=30)	$\chi^2$	p
Sex (n, %)	Male	5 (16.7)	4 (13.3)	.13	.717
	Female	25 (83.3)	26 (86.7)		
Age (n, %)	20-29	8 (26.7)	7 (23.3)	2.30	.513
	30-39	5 (16.7)	10 (33.3)		
	40-49	11 (36.6)	8 (26.7)		
	50-59	6 (20.0)	5 (16.7)		
Education (n, %)	High school or higher	9 (30.0)	8 (26.7)	.08	.775
	College/university or higher	21 (70.0)	22 (73.3)		
Annual Household Income (n, %)	<\$30,000	3 (11.1)	3 (10.0)	.03	.986
	\$30,000-\$80,000	13 (48.2)	15 (50.0)		
	>\$80,000	11 (40.7)	12 (40.0)		
Church or temple attendance (n, %)	Mostly every week	5 (20.0)	4 (15.4)	.73	.695
	Sometimes	14 (56.0)	13 (50.0)		
	No religion	6 (24.0)	9 (34.6)		
Death anxiety (M±SD)	Baseline	.34 ± .20	.25 ± .16	1.77	.082
QOL(M±SD)	Baseline	3.19 ± .48	3.26 ± .45	.56	.579

Note: Exp.=Experimental group; Con=Control group; QOL=Quality of life

**Table 3:** Difference of death anxiety between the experimental and control group

Group	Pre (M±SD)	Post (M±SD)	T	P	Diff (post-pre)	t	p
Exp.	.34±.20	.17±.13	5.06	.001***	-.17±.18	2.93	.005**
Con.	.25±.16	.20±.16	2.97	.06	-.05±.10		

Note: Exp.=Experimental group; Con.=Control group; \*\*  $p \leq .01$  (2-tailed); \*\*\*  $p \leq .001$  (2-tailed)

**Table 4:** Difference of QOL between two groups

Group	Pre (M±SD)	Post (M±SD)	T	P	Diff (post-pre)	t	p
Exp.	3.19± .49	3.63± .49	4.65	.001***	.43± .51	4.33	.001***
Con.	3.27± .45	3.24± .40	.59	.561	-.03± .29		

Note: Exp.=Experimental group; Con.=Control group; \*\* p≤.01 (2-tailed); \*\*\* p≤.001(2-tailed)

**Table 5:** Difference of six subcategories of QOL between two groups

Variable	Group	Pre (M±SD)	Post (M±SD)	T	P	Diff (post-pre)	t	p
1. Emotional state	Exp.	3.04± .72	3.09±1.00	.20	.846	.04±1.14	.70	.486
	Con.	3.00± .90	2.84± .88	.85	.403	-.15± .98		
2. Economic state	Exp.	3.18± .71	3.70± .56	4.46	.0001	.51± .63	3.75	.001***
	Con.	3.16± .69	3.18± .62	.23	.820	.02± .36		
3. Self-esteem	Exp.	3.31± .98	3.99± .71	3.97	.0004	.68± .93	3.19	.01**
	Con.	3.48± .76	3.52± .64	.46	.648	.05± .54		
4. Physical state/function	Exp.	3.14± .58	3.57± .57	3.83	.0006	.44± .62	2.70	.01**
	Con.	3.12± .42	3.20± .34	1.24	.223	.08± .36		
5. Neighbors relationship	Exp.	3.23± .77	3.83± .62	4.05	.0003	.60± .81	3.75	.001**
	Con.	3.48± .59	3.43± .52	.56	.583	-.05± .49		
6. Family relationship	Exp.	3.33± .84	3.78± .66	3.65	.001	.45± .68	4.15	.001**
	Con.	3.68± .67	3.48± .80	2.06	.048	-.19± .52		

Note: Exp.=Experimental group; Con.=Control group; \*\* p≤.01 (2-tailed); \*\*\* p≤.001(2-tailed)

### Funding

This study was conducted via the academic funding from Seoul Women's College of Nursing, Seoul, South Korea between 2010 and 2011.

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# The Influence of God Consciousness and Religiosity in Coping with Anxiety at Workplace among Malaysian Muslim Professionals

Husni Mohd Radzi, Lilie Zahara Ramly, Sapora Sipon, and Khatijah Othman

**Abstract**—Anxiety is form of psychological condition that can cause serious harm to human mind and overall well being. Today's stressful and highly demanding work setting has intensified the pressure and expectations felt by the professionals in Malaysia. The intensity of stress may affect general safety, health and even lifestyles or relationships of a normally working persons. There are some people who turn to God and religion as alternative to heal or cope with their psychological discomfort. Thus, this study was conducted to discuss the level of anxiety and other psychological discomforts experienced by group of Muslim working people in several sectors and examined how God consciousness and religiosity could influence as a mechanism to control their anxiety. The data was collected through random sampling of 38 working citizens of Malaysia from several working sectors. This study utilised two main instruments to measure the outcome: first, 'Depression, Anxiety and Stress scale' or 'DASS' to gauge the level of anxiety and 'Brief Religious Coping' (BRCOPE) to investigate religious coping performed by respondents in dealing with their anxiety.

**Index Terms**—Anxiety, stress, religious act, God consciousness.

## I. INTRODUCTION

Anxiety and fear are basic human emotions that can be seen as normal internal or external reactions in dealing with stressor that were deemed crucial for survival of the species [1]. Anxiety can be explained as the feeling of lack of control related to future of things that are uncertain, which may lead to negative results [2]. According to Diagnostic and Statistical Manual of Mental Illness (DSM IV), anxiety is a feeling that is illogical but the person who experienced it felt unable to control their worries [3]. When the feelings of illogical fear become so overwhelmed, it may escalate which leads to anxiety disorder [4].

In Islamic point of view, anxiety is considered as spiritual disease which develops from unhealthy spiritual beliefs deep-rooted in the human heart [5]. Al-Ghazali, a prominent Islamic figure in spiritual field has characterized anxiety as

Manuscript received July 15, 2013; revised October 5, 2013. This work was supported in part by the Ministry of Higher Education of Malaysia under Grant LRGS USIM/LRGS (UUM)/FKP/ULUM/34/50112. The Influence of God Consciousness and Religiosity in coping with Anxiety at Workplace among Malaysian Muslim Professionals.

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'fear towards certain things which leads to restlessness and frustrated feelings' [6]. Fear towards inevitable environmental factors such as old age, poverty, losing status quo and job can sometimes lead a person to experience breakdown and lose their self-esteem. The pressure of dealing with life issues such as divorce, death of loved ones, health and financial problems can be very stressful that it eventually leads to anxiety [7]. It is common that many people cope with their anxiety by consumption of alcohol and other substances or recreational drugs which quickly lead them into severe problem which may have long term effects, such as addiction. The problem may then affect their functioning and relationship with family, friends and at the workplace.

The Islamic faith believes that anxiety is developed within a person's spiritual and psychological outlooks, which includes the weakness in asserting control through one's heart and mind, faith or believe system attached with the influence of worldly or narcissistic desires [8], [9]. Being in this state has opened the door to Satan's domination over the human spirits as a result of diminishing religious beliefs and insufficient submissions to Allah SWT [10]. Therefore in the Islamic point of view, a person who succumbed to worldly temptations or narcissistic desires indicates lacking in self control and poor attachment to the spiritual aspects or religious practices and faith.

## II. ANXIETY EFFECT AND TREATMENT

### A. The Effects of Anxiety

In dealing with the demands of life, anxiety may interferes with daily functioning of an individual by reducing focus in thinking, causing inability to sleep and eat, unstable emotions and fatigue [2]. Psychologically anxious person would feel constant worries, feeling upset and fearful without any real reason to the extent of staring blankly, crying or losing their self-esteem [5]. Person afflicted with anxiety and other related mental health problem may exhibit decreased perception of their own self-worth [11]. This can lead to another serious psychological disturbance which is depression [12]. Depression is serious psychological disturbances that have caused millions of suicides cases every year [13].

### B. Treatment of Anxiety

In collective Western perspectives, anxiety is commonly treatable through psychotherapy, pharmacology and sometimes, a combination of both [14]. Drugs such as

Buspiron, Benzodiazepine and Imipramine to name a few, are meant to calm the patient by acting as antidepressant agent. These drugs however may cause side effects such as constipation and unstable mind [15]-[17]. 'Cognitive Behavioural Therapy' (CBT) is the most commonly used therapy to help patients suffering from anxiety [18] The effectiveness of CBT however has been debated till today because it does produce positive results but patient are not entirely healed [19], [20]. According to Malik Badri [21], patients who undergo western psychotherapy treatment would feel less painful but the depression, anxiety and guilt would remain.

### C. Treatment in Islam

Muslim scholars and moralists such as Miskawayh (1030 AD), Al-Tusi (1274 AD) and Al-Ghazali (1111 AD) had long acknowledged that health is about maintaining balance between the human body and the human soul. If the soul is weak, it needed treatment and attention just like the physical body and thus therapy and counselling type of treatment are required [22]. Al-Razi (925 AD) in his book 'El-Mansuri' and "Al-Tibb Al-Ruhani" suggested that a physician or medical practitioner must be knowledgeable in matters pertaining to mental and body health in achieving total well being and complete health for the patient during treatment [23]. Ibnu Sina in his book 'As-Syifa' had strongly emphasized about the importance of cleanliness and the purification of the soul which is the key to happiness. By working towards purification of one's soul, all mental diseases will go away [24].

The Islamic teaching believed that healing can only begin by devoting strong faith in Allah S.W.T. Having strong faith or 'tawakkal' in Allah may have tremendous power that can prevent any psychological disease from invading human mind and soul. When a person has submitted his or her self to Allah, the person would gain Allah's blessing and peace of mind and soul can be achieved [25]. 'Solat' or prayer is also an effective known way to treat anxiety. By performing 'solat' it will purify the heart and calming the soul. It also teaches discipline and patience [26]. 'Solat' also is believed to be able to generate the feeling of compassion, spirituality and God consciousness [27]. 'Solat' also can cure anxiety because it promotes endurance, contentment and perseverance that will be useful when the person facing difficulty in life [28].

Beside solat, 'zikir' (chanting the name of Allah) is thought to help clean and protect human heart from the devil. Through zikir, human mind is directed towards remembrance of Allah and towards all positive elements in life; hence anxiety is reduced [29]. Combining 'solat' and 'zikir' will activate the mind and open human hearts reaching for peacefulness. It also strengthens a person's relationship with Allah SWT that in return will release all the fear and anxiety from the person's mind [30].

### III. RELIGIOUS COPING

Religious ritual such as prayers, meditation and reading sacred text are reported to lower anxiety and depression and reduction in the consequences of stressful life event [31]. The

use of spirituality and religiosity practice in the form of adaptive manner can be helpful to individual who have series of psychological distress [32]. Thus, person who utilizes any religious act such as praying or reading sacred text to address the anxiety is known as religious coping [33].

Krauss [34] posited that Islam is a religion that denotes a comprehensive religious way of life. Ad-Din in Islam implies the sanctification of all daily living into worshipful acts that unify life consistent with 'tawahidic' principles (oneness of Allah) of the divine unity. Al-Quran 4: 125.

وَمَنْ أَحْسَنُ دِينًا مِّمَّنْ أَسْلَمَ وَجْهَهُ لِلَّهِ وَهُوَ مُحْسِنٌ وَاتَّبَعَ مِلَّةَ إِبْرَاهِيمَ حَنِيفًا  
وَاتَّخَذَ اللَّهُ إِبْرَاهِيمَ خَلِيلًا

Who is better in religion than he who surrendereth his purpose to Allah while doing good (to men) and followeth the tradition of Abraham, the upright? Allah (Himself) chose Abraham for friend. (125).

The Islamic teaching and practice or Ad-Din should be able to make Muslim maintain this dynamic and moving forward. An ideal Muslim is progressing in their quest of self-purification, self-perspective through worship, ongoing acquisition of knowledge and performing selfless act. Therefore, this study was designed to distinguish the level of anxiety that can be altered or influenced by a person's understanding and application of Islamic teaching and worldview.

### IV. METHODS

#### A. Sample

The study was done on two known working sectors, private organization and government offices within Klang Valley. The sampling procedure used was convenient random sampling where a total of 38 participants answered the survey distributed. The questionnaires were collected and analyzed using descriptive and inferential measure. Criterion for enrolment was being a working professional Muslim.

#### B. Instruments

The participants had to respond to two set of inventories. The first survey used was 'Brief religious Coping' (BRCOPE) by Pargament [35]. The BRCOPE objective was to gauge the religious coping used by respondents in managing anxiety.

The second instrument used was 'Depression Anxiety and Stress Scale' (DASS) by Lovibond & Lovibond [36] meant to measure the severity of depression, anxiety and stress that respondents have experienced in the past weeks. For this study, only anxiety will be given attention to. The BRCOPE emphasizes on sample's coping behavior during anxious situations. The response showed will indicate the type of coping behaviors that are frequently used or most effectively used in managing anxiety. Using BRCOPE alone is not sufficient in measuring the severity of the anxiety level. Thus, DASS is used to determine the level of anxiety experienced with the coping behavior used by the study sample.

### V. RESULTS

A total of 38 respondents have participated in the study.

Male respondents were 17 (44.7%), while female participants were 21 (55.3%). The respondents were further distinguished by their working sectors being from the government sector comprises of 20 respondents (52.6%), private sectors with 11 participants (28.6%), 3 respondents from NGO (10.5%), and the rest were 4 respondents who were either self-employed or on free-lance terms (10.5%).

The mean score for BRCOPE indicated male respondents  $t(3.03) p < 0.001$ , applied more religious coping than female  $t(2.89) p < 0.001$ . This finding was different from several previous researches where female participants were reported to have higher religious coping score [4]. However, this coincided with the mean score for anxiety for male respondents  $t(0.764) p < 0.001$  which is slightly higher than mean score for anxiety from female respondents  $t(0.700)$ . This result is different with previous studies where female were reported to have higher anxiety levels compare to male and higher religious coping applications [4], [5], [37].

Mean score for anxiety from working sector showed that government officers had higher score  $t(0.821) p < 0.001$  while private sector had lower anxiety mean score of  $t(0.506) p < 0.001$ . This result, again coincided with mean RCOPE mean score which were also higher  $t(3.07) p < 0.001$  while private sector had lower mean score of  $t(2.74) p < 0.001$ . It is however a relieving information where all of the respondents' anxiety level falls in normal category only.

Pearson correlation indicates that there exists negative relationship between religious coping and anxiety level. The correlation point at  $r = -0.154 (p < 0.001)$  is considered low compared to the mean score obtained by both Muslim professionals  $t(0.821)$ , government sector) and  $t(0.506)$ , private sectors) in both genders (male 0.764, female 0.700). This indicated that the higher the religious coping used by respondents, the lower the anxiety level they are experiencing.

## VI. LIMITATIONS

The study however has several limitations. The first one is the sample size of the study need to be widened to a bigger number. Working sectors should also be broaden not only from the two main sectors discussed earlier but other sectors such as NGO, self employed and academic or services. The findings obtained from the study also may only represent the two sectors and gender in Klang Valley. The results in this study may be different if the study includes all the different regions in Malaysia.

The study also gathered its data using one method only which is survey method. Future researcher may need to combine with interview and observation as to gain more in depth and thorough understanding about the concept and application of god consciousness and religious coping among Muslim people in Malaysia and maybe other Muslim countries as well.

## VII. DISCUSSION AND SUGGESTIONS

Government officer were reported to have higher anxiety

because their fear of being taken action by immediate superior. They applied religious coping also as a result of complying with the code of conduct of the ministry [38]. The security of job, post and ranking were crucial in government's officer's thought. The ideas of being transferred, demoted or fired were barely acceptable and it can affect a person's dignity throughout their service (The 12 Pillars, Institute of Malaysian National Governance (INTAN) [39].

The private sector had being aware and learned to adapt to the uncertainties and challenges. Thus, they will use their skills to survive the corporate world. They have low religious coping practice because they behaviour in and outside work setting were not bound under formal code of practice as the government officers. Changing and quitting from job is another way of climbing the corporate ladder in private sector. In government, seniority is more important in determining one's fate.

Thus, from this study alone it can be said that there exists negative relationship between anxiety levels with religious coping. The result indicated that the higher the religious coping the lower the anxiety level experienced. This showed that religious coping have major influence on respondents' anxiety level. New finding suggested that male respondents were having higher anxiety levels compared to female. The higher anxiety levels experienced by government officer compared to the non-government professionals also indicated the uniqueness of the research's result. Therefore, future studies need to investigate this area to explain and elaborate on this factor further more.

### *Attaining God Consciousness as Religious Coping*

In Islam, god consciousness is known as 'taqwa' from the Arabic word of 'Waq yaqi, ittaqa yattaqi' which mean to shield and to protect one self. 'Taqwa' is a process where it involves consistency, commitment and responsibility to be fulfilled by a Muslim [40]. Stress and anxiety are viewed by god fearing people as test and opportunity to improve and become better Muslims. 'Taqwa' promotes constance god consciousness and fearing in every Muslim's mind. As a result, Muslim will be careful in guarding their mind, thought, behaviour and tongue from committing the forbidden (haram) and disliked (makruh) behaviour that can weaken and pollute the heart. By having a strong faith and fear of Allah, Muslim will be blessed and protected by God from disease of the heart such as anxiety, stress and depression.

'Taqwa' plays a large role in Islamic morals and ethics because it is truly what makes people ethically aware of their actions in relation to God. 'Taqwa' gives people a reason to do the right thing. The awareness of God's power makes people want to please him, making 'taqwa' a moral and ethical base for their actions. Because of this construct, 'taqwa' is one of the "ideal ethical values" of the religion of Islam [41]. Thus, 'taqwa' is an effective religious coping strategy for Muslim to manage stress and anxiety.

## ACKNOWLEDGMENT

This study is done by LRGS Grant of USIM/LRGS

(UUM)/FKP/ULUM/34/50112.

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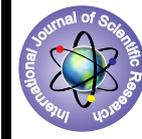


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## Death Anxiety Among Institutionalised and Non-Institutionalised Elderly Widows and Widower



### Psychology

**KEYWORDS :** Death anxiety, Institutionalised elderly, Non-institutionalised elderly, Widow and Widowers.

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### ABSTRACT

*Death is very near in old age, hence a logical belief would be that death anxiety is more among the aged in comparison to the youngsters. However, studies contradict this notion. The age of 60 or 65 years in most developed countries is said to be the beginning of old age. The study aims to find differences in death anxiety among institutionalised and non institutionalised elderly widows and widowers. The sample consisted of 60 institutionalised and 60 non-institutionalised elderly who were further divided into 30 widows and 30 widowers from both the sectors. Death Anxiety scale developed by Templer consisting of 15 items was administered to the sample. The data collected was statistically analyzed using two way ANOVA. Results indicated that there was no difference in death anxiety among institutionalized and non institutionalised elderly. No significant difference in death anxiety was found among elderly widows and widowers.*

### INTRODUCTION:

**Old age** consists of ages nearing or surpassing the **average life span of human beings**, and thus the end of the **human life cycle**. Old age has been referred as late adulthood which begins in the 60's and lasts until death. Death anxiety is defined as "the thoughts, fears, and emotions about that final event of living that one experience under more normal conditions of life" (Belsky, 1999).

The various factors psychologists have studied in attempting to measure death anxiety include: age, environment, religious faith and ego integrity, or a personal sense of fulfilment and/or self-worth. A complicating aspect of studying death anxiety is that actually "measuring" anxiety as it relates to these variables has been difficult. The studies used in examining death anxiety do not experimentally manipulate the variables, thus limiting conclusions to correlations (Forner & Neimeyer, 1999).

Death anxiety is common in our society these days. Lots of people are afraid to die, and there can be endless reasons for this fear. Death anxiety has received considerable attention among the various death attitudes. This is partly because man has a tendency of fearing everything which is not known to him, and death is an unknown entity. Death is very near in old age, hence a logical belief would be that death anxiety is more among the aged in comparison to the youngsters. However, studies contradict this notion. Death involves the loss of loved ones, of control, of achievements and aspirations, and so on. The feeling of helplessness over not being able to control one's death gives rise to free-floating anxiety about the unforeseen.

Erikson's psychosocial theory states that in later stages of life "ego integrity" is attained. Erikson proposed that when person reaches late adulthood he/she engages in life review, if elderly find meaning and purpose in life ego integrity is attained and hence should have lower death anxiety (Belsky, 1999)

### OBJECTIVES:

1. To identify the difference in Death anxiety among institutionalised and non- institutionalised elderly.
2. To analyse gender differences in death anxiety.

### HYPOTHESES:

1. There is no significant difference in Death anxiety among institutionalised and non- institutionalised elderly.
2. There is no significant difference in Death anxiety among elderly widows and widowers.

### REVIEW OF LITERATURE:

Ghufran and Ansari (2008) conducted study on 120 subjects, 60 men (30 where widowers and 30 elderly with spouses alive) and 60 women (30 were widows and 30 elderly with spouses alive) with age range from 60 to 75 years n incidental basis from

Varanasi city. Efforts were made to control education and socio-economic status. They were administered Bhushan's religiosity scale and Thakur death anxiety scale. In order to find out the significance of difference between various comparison groups t test was used. Results revealed significantly greater religiosity for subjects with spouses dead than for the subjects with their spouses alive. No significant difference between the widows and widowers in their religiosity was obtained. A significant difference between mean death anxiety scores of the subjects with spouses dead and the subjects with spouses alive was obtained. Subjects having their spouse's dead scored higher on death anxiety scale than subjects who have their spouses alive. However widows had higher death anxiety than widowers.

Joseph and Leelamma (2009) conducted a study General Well-Being and Death anxiety among Institutionalized and Non-Institutionalized Aged. The aim of the study was to compare the general well-being and death anxiety among institutionalized and non- institutionalized aged. 200 aged people were selected for the study. 100 elderly populations drawn from four old age homes around Ernakulum District in Kerala and 100 elderly living with family members at home were drawn from the same community. PGI- General Well-being measure and Death Anxiety scale was administered. Z- Test was used for interpreting the data. The results indicate that Non-institutionalized aged reported better General Well-being compared to Institutionalized aged. There was no difference in Death anxiety among Institutionalised and non institutionalised elderly.

Mimrot (2011) conducted a comparative study on Death Anxiety of Old Persons living in the Family and in the Institution. The sample for the study consisted of 200 old persons. These 200 old persons belong to both the sexes to various families and institutions, of Aurangabad city. Random sampling technique was used for the selection of respondents. Dhar Death Anxiety scale consisting of 10 items was used for the study. Data collected was analysed using t test and ANOVA. Results indicated that Old age people living in institutions experience less death anxiety than old people living in the family and no gender differences were found among elderly regarding death anxiety.

### METHOD:

#### Design:

The study adopts a 2\*2 factorial design because there are two independent variables and one independent variable domicile has two levels institutionalisation and non-institutionalisation, the other independent variable spouse status has two levels widows and widowers. Thus influence of these two independent variables on dependent variable death anxiety is seen in the present study.

#### Sample:

The sample for the present study consisted of 120 elderly from Mangalore and Udupi district of Karnataka. Convenient sampling method was used.

**Table 1**  
**Composition of sample**

Groups	Institution	Non institution	Total
Widows	30	30	60
Widowers	30	30	60
Total	60	60	120

**Definition of terms:**

**Elderly:**

**Conceptual definition:**

Men and women of age 60 years and above are referred as elderly.

**Operational definition:**

Men and women of age 60 years and above are referred as elderly.

**Domicile:**

**Conceptual definition:**

A place of residence

**Operational definition:**

A dwelling place where elderly live which in the present study is classified into two types institutionalised and non institutionalised.

**Institutionalisation:**

**Conceptual definition:**

Institutionalisation refers to multi residence housing facility for elderly people who cannot take care of themselves anymore and need a little extra help.

**Operational definition:**

Institutionalisation refers to elderly residing in old age homes.

**Non institutionalisation:**

**Conceptual definition:**

Non institutionalisation means not committed to an institution.

**Operational definition:**

Non institutionalisation refers to elderly residing in their own homes alone or with their spouses and children.

**Widower:**

**Conceptual definition:**

A man whose spouse or significant other has died.

**Operational definition:**

An elderly man whose spouse is dead.

**Widow:**

**Conceptual definition:**

A woman whose spouse or significant other has died.

**Operational definition:**

An elderly woman whose spouse is dead.

**Death anxiety:**

**Conceptual definition:**

Death anxiety is defined as the thoughts, fears, and emotions about that final event of living that one experience under more normal conditions of life.

**Operational definition:**

Death anxiety is defined as the thoughts, fears, and emotions about that final event of living that one experience under more normal conditions of life as measured by Templer's death anxiety scale.

**Test:**

**Death Anxiety scale (Templer, 1970)**

The scale consists of 15 items and subjects have to encircle either true or false response as applied to them.

Scoring: Items 1, 4, 8, 9, 10, 11, 12, 13 and 14 gets a score of 1 for true response and 0 for false response. Scores are reversed for items 2, 3, 5, 6, 7 and 15.

Reliability and Validity: The test has a test retest reliability of 0.83 and a co-efficient alpha of 0.76. The test is cross culturally valid.

Procedure: To collect data from institutionalised elderly, permission was taken from various old age homes and elderly were personally approached and for the sample of non institutionalised elderly residing in their homes were approached. Death anxiety scale was administered to the elderly as per the instructions in the manual and were thanked for their co-operation.

**RESULTS AND DISCUSSION:**

**"Table 2 about here"**

**Table 2**

ANOVA for Death Anxiety among institutionalised and non-institutionalised elderly widows and widowers.

Source of Variation	Sum of squares	df	Mean sum of square	F
Domicile	9.07	1	9.07	0.927 NS
Widows*Widowers	18.40	1	18.4	1.881 NS
Interactioneffect	0.07	1	0.07	0.008 NS
Error	1135.36	116	9.778	
Total	2261.00	120		

NS: Not Significant

An inspection of the above table reveals that the F ratio of 0.927 is not significant for Domicile; hence the null hypothesis that there is no significant difference in Death Anxiety among Institutionalised and Non institutionalised elderly is accepted. F ratio of 1.881 is also not significant for Widows\*Widowers, hence the null hypothesis that there is no significant difference in death anxiety among widows and widowers is also accepted. The F ratio of 0.008 for interaction is also not significant, hence does not reveal a significant difference.

The results of the present study is similar to the study conducted by Joseph and Leelamma which revealed that there is no difference in Death anxiety among institutionalised and non institutionalised elderly.

The results of this study is contradictory to the study conducted by Mimrot indicating that elderly living in institutions experience less death anxiety than old people living in the family. The result of this study is also contradicting the study conducted by Ghufuran and Ansari which indicated that widows have higher death anxiety compared to widowers.

**FINDINGS:**

1. Institutionalised and non institutionalised elderly do not differ on Death anxiety.
2. Elderly Widows and Widowers do not differ in death anxiety.

**SCOPE FOR FURTHER STUDY:**

1. Research on Death Anxiety in relation to other variables like health disorders, psychological problems, marital status and religious aspects can be done.
2. Comparative research on Death anxiety among elderly and middle aged, with youngsters can be undertaken.

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## Death Anxiety, Depression, and Coping in Family Caregivers

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Along with the increase in elderly patients with chronic and disabling conditions, the number of family caregivers continues to rise. Caregiving has been associated with negative physical and psychological impact on the caregivers' health, as well as, with higher prevalence rates of depression, anxiety, and a higher risk of mortality. The purpose of this study was to examine if death anxiety would be a significant predictor of depression and coping in the sample of adult family caregivers of adult patients. Participants were 46 family caregivers recruited through caregiver websites. Participants completed the Revised Collett–Lester Fear of Death and Dying Scale, the Center for Epidemiological Studies Depression Scale–Revised, the Ways of Coping Questionnaire, and a demographic questionnaire. Multiple regression analysis identified significant relationships between death anxiety, depression, coping, and duration of caregiver experience. The findings of this study provide medical practitioners and psychologists with enhanced knowledge, facilitating development of interventions to help family caregivers deal with death anxiety and achieving efficient coping.

**Keywords:** *caregiving, caregiver depression, death anxiety, fear of death, caregiver coping, family caregivers*

### Introduction

Family caregiving is the primary method of long-term care delivery around the world. In the United States, about 65.7 million family caregivers provide millions of hours of assistance valued at \$450 billion in 2009 for an average of 4.6 years (AARP Public Policy Institute, 2011; Family Caregiver Alliance, National Center on Caregiving [FCA], 2011; National Alliance for Caregiving & AARP, 2009). Family caregivers provide unpaid help to a relative (e.g., spouse, significant other, parent, child, or other family member) incapable of performing the daily living tasks due to a medical condition or advanced age (FCA, 2011). The World Health Organization (2010) estimates that there will be 1.2 billion people over age 60 by 2025 and 2 billion people by 2050. Rapid growth of the aging population, the associated increase of patients with chronic conditions requiring home care, and advances in medicine have extended patients' lives. This shift of care from institutional to home-based will inevitably continue to increase the number of family caregivers in a home setting.

The term *family caregiver* refers to an unpaid relative who provides help to the patient incapable of performing daily living tasks (National Alliance for Caregiving & AARP, 2009). Illnesses such as stroke, cancer, Alzheimer's disease, Parkinson's disease, traumatic brain injury, AIDS, childhood

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This paper is based upon the first author's doctoral dissertation. She would like to acknowledge the support of her dissertation committee: Drs. Virginia Salzer, Lee M. Stadtlander, and Jennifer Plebani.

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muscular dystrophy, developmental disorders, various forms of disability, or simply very old age, all require family caregiving. The average duration of a caregiver's role is 4.6 years, with 34% of caregivers reporting caring for their ill relative for 1 to 4 years, 31% caring for them 5 or more years, and 15% caring for 10 or more years (FCA, 2011).

### **Effects of Caregiving on the Caregiver**

Caring for the ill loved one results in serious implications for the caregiver, including increased financial, emotional, and physical burdens. Caregivers face restrictions in their social life leading to isolation, as well as reduced or lost employment (Brazil, Bainbridge, & Rodriguez, 2010; FCA, 2011). As many as 70% of working caregivers reported suffering work-related difficulties, with 12% having to reduce work hours and 9% being forced to give up work completely (FCA, 2011).

Family caregiving affects caregivers' physical health; the negative effects of caregiving on the health of caregivers have been established by many researchers in the past 2 decades. Caregiving has been associated with a decline in immune function (Glaser & Kiecolt-Glaser, 2005; Murphy, Christian, Caplin, & Young, 2007), cardiovascular changes such as hypertension (Vitaliano & Katon, 2006), development and progression of many illnesses (Lovell & Wetherell, 2011), and increased mortality (Glaser & Kiecolt-Glaser, 2005; Hauser & Kramer, 2004; Lovell & Wetherell, 2011; Schulz & Beach, 1999; Waldrop, Kramer, Skretny, Milch, & Finn, 2005). Negative health effects are caused by the lack of time to devote to self-care and negligence of protective health behaviors (such as maintaining a healthy diet, exercising routinely, keeping medical appointments, and getting adequate sleep) due to the caregiving burden. In addition, caregiver depression has been associated with severe weakening of the immune system in a number of studies (Vedhara & Irwin, 2005).

### **Psychological Distress in Caregivers**

Many caregivers face severe psychological distress (Cassidy, 2011; Cassidy & McLaughlin, 2015; Pinguart & Sorensen, 2003; Pinguart & Sorensen, 2011). Anticipation of a negative patient outcome, anticipatory grief, emotional distress from watching their loved ones suffer from pain as they weaken and deteriorate, inability to change the course of events, feelings of guilt, resentment, and disappointment all have a profound impact on caregivers' mental health (Waldrop et al., 2005). Often, caregivers also need to deal with the patient's verbal and physical aggression, confusion, and anger, which may accompany some dementia and terminal cancer conditions (Pinguart & Sorensen, 2003). Coping with such intense emotional stressors and anticipatory grief becomes a necessary adjustment in the life of the patient's family members (Cassidy & McLaughlin, 2015).

Depression is one of the most common conditions suffered by caregivers (Brazil et al., 2010; Rivera, 2009; Smith, Williamson, Schulz, & Miller, 2011). Among family caregivers, 40% to 70% experience clinical symptoms of depression (FCA, 2011), which may manifest as an emotional reaction to the caregiving stress (Rivera, 2009; Smith et al., 2011). Depression in caregivers may contribute to anticipatory grief and vice versa (Holley & Mast, 2010).

Caregivers suffering from depression are at higher risk for complicated grief and further worsening of depressive symptoms during bereavement (Holtlander & McMillan, 2011). Studies have found an association between depression and weakening of the immune system (Vedhara & Irwin, 2005); caregiver depression produces a negative impact on health and may contribute to higher mortality (Rivera, 2009; Smith et al., 2011).

Mental health care providers and researchers have been interested in how the impact of caregiving varies for individual family caregivers. For some family caregivers, caregiving leads to serious mental health consequences. Yet other caregivers with similar responsibilities cope well and manage to avoid or minimize the detrimental effects of caregiving. Some research suggests that personal value and belief systems of the family caregivers may influence the level of psychological distress (Carver & Connor-Smith, 2010; Tew, Naismith Pereira & Lewis, 2013). Other studies have suggested that the choice of becoming a caregiver is an important factor (Pinquart & Sorensen, 2003; Pinquart & Sorensen, 2011).

## **Coping**

Coping is the behavioral and cognitive efforts used by individuals as they try to minimize the effects of stress (Lazarus & Folkman, 1984). Coping is a conscious, process-oriented effort and involves using specific skills to manage stress (Lazarus & Folkman, 1984). Coping can be adaptive, which reduces stress levels or maladaptive, which increases stress levels. Coping can also be reactive, leading to an action taken in response to the stressor, or proactive, leading to an action to minimize effects of the future stressor. Coping can be influenced by personal characteristics such as age, gender, education, as well as social and environmental factors (Carver & Connor-Smith, 2010; Raggia, Tascab, Paneraib, Neria, & Ferrib, 2015).

Caregivers use coping strategies to adjust to the changing life events and to manage the illness of the patient under their care (Cassidy & McLaughlin, 2015). Measuring the efficacy of caregivers' coping involves identifying what coping strategies the particular caregiver uses. These strategies can range between appraisal-focused, problem-focused, and emotion-focused strategies (Lazarus & Folkman, 1984). There are positive aspects in each type of coping strategy. Couper et al. (2006) reported that caregivers using problem-solving strategies demonstrated lower levels of distress than caregivers who used appraisal- or emotion-focused coping strategies. Kelly et al. (1999) reported that strategies such as denial and avoidance lead to greater strain in coping. Greater caregiver strain is associated with maladaptive coping strategies that include "avoidance, passivity, self-blame, and resignation" (Redinbaugh, Baum, Tarbell, & Arnold, 2003, p. 903). Confidence in their coping abilities allows caregivers to demonstrate better psychological adjustment (Cassidy, 2011).

## **Death Anxiety**

Being in close contact with the patient and watching his or her physical deterioration and pain may awaken family caregivers' own fears of death and dying (Yalom, 1980). Death anxiety is a fundamental fear and is theorized to be one of the major components of the existential beliefs of every individual (Neimeyer, 1994). Constant awareness of one's own mortality may be elevated in critical times or stages of one's life. During the course of a lifetime, there are several critical stages and events that may trigger a stronger sense of death anxiety, such as retirement, death of a close relative, and major milestone birthdays such as 60 or 70 (Yalom, 1980). Moore and Williamson (2003) noted that fear of death is a natural reaction to confrontation with death. Caregivers may directly or indirectly be more likely to experience this type of anxiety. There are a few studies examining death anxiety in caregivers (e.g., Bachner, O'Rourke, & Carmel, 2011; Neimeyer, Wittkowski, & Moser, 2004). Caregivers who express greater death anxiety are less accepting of the patient's impending death; on the other hand, caregivers who demonstrate death acceptance tend to be capable of acknowledging their own mortality (Bachner et al., 2011; Neimeyer et al., 2004). The

inability to accept the impending death of the patient could lead to less ability to cope with caregiver stress.

Caregivers face substantial barriers discussing the illness and impending death with the patient (Bachner & Carmel, 2009). Death and dying are the most difficult issues to discuss for terminal patients and their caregivers (Zhang & Siminoff, 2003). Bachner, Davidov, and Carmel (2008) suggested that caregivers and patients may enter a mutual protective buffering communication to avoid discussing fears and death-related issues in an effort to protect each other.

There are many studies of death anxiety in the elderly (Fortner & Neimeyer, 1999; Fortner, Neimeyer, & Rybarczyk, 2000; Missler et al., 2011; Neimeyer et al., 2004; Wagner & Lorion, 1984; Wink, 2006). Contrary to the common belief that death anxiety increases as the person nears the end of life in old age, no association has been found; Feifel and Nagy (1980) reported that the elderly tend to report lower levels of death anxiety than younger adults. Death anxiety is associated with having physical problems, psychological distress, weaker religious beliefs, and lower ego integrity, life satisfaction, and resilience (Fortner & Neimeyer, 1999). Gender and age do not tend to be related to death anxiety (Fortner et al., 2000); however, Lester (1994) reported that women demonstrated higher levels of death fear than men. Fear of losses and aging anxiety are consistent predictors of death anxiety (Benton, Christopher, & Walter, 2007). Spirituality is a significant predictor of reduced fear of death (Harrawood, 2009–2010; Wink, 2006), and spiritual experiences help individuals deal with their death anxiety (Kuhl, 2005).

Death anxiety has been associated with a variety of psychopathological morbidities, including anxiety, obsessive–compulsive disorder, depression, hypochondriasis, agoraphobia, and serious health threats due to the weakening of the immune system (Barr & Cacciatore, 2008; Furer & Walker, 2008; Hintze, Templer, Cappelletty, & Frederick, 1994; Neimeyer et al., 2004; O’Gorman, 1998). The relationship between depression and death anxiety mostly in the elderly population, bereaved individuals, and HIV patients has been confirmed in a number of studies, with depression found to be a strong predictor of death anxiety (Barr & Cacciatore, 2008; Hintze et al., 1994; Lonetto & Templer, 1986; Neimeyer, 1994; O’Gorman, 1998; Wagner & Lorion, 1984). Research on death anxiety in caregiving has primarily addressed professional caregivers, such as physicians, hospice workers, and nurses (Sharif Nia, Lehto, Ebadi, & Peyrovi, 2016).

The relationship between caregiving and depression has also been extensively researched (Smith et al., 2011). Lazarus and Folkman (1984) suggested that person-specific beliefs play a major role in determining response to threatening life situations. The lack of research into the relationship between death anxiety and coping clearly reveals a need to explore the relationship between death anxiety, coping, and depression in family caregivers.

### **Theoretical Framework of Coping**

Lazarus and Folkman (1984) developed the transactional theory of stress. It is an interpersonal approach to coping and adjustment, which states that coping is a process during which an individual forms an appraisal of the stressor, responds to the stressor with an action, and then reevaluates the stressor. Caregivers use coping strategies to accept the illness of the patient under their care and learn to adjust to the changing events in their lives. Adaptive problem-focused coping strategies can also prepare caregivers to deal with anticipatory grief. By using adaptive coping strategies, caregivers are able to minimize the negative effects of caregiver distress and burden (Cassidy, 2011;

Redinbaugh et al., 2003). Confidence in coping abilities allows caregivers to demonstrate better psychological adjustment (Cassidy, 2011). For example, Redinbaugh et al. (2003) examined 31 pairs of hospice patients and their family caregivers and found that caregivers who accepted the patient's illness, came to terms with illness-related problems, and maintained confidence in being able to deal with upcoming problems demonstrated lower levels of caregiver strain.

The current study examined if death anxiety would be a significant predictor of depression and coping in a sample of adult family caregivers of adult patients. The research questions were whether death anxiety could predict depression and coping in family caregivers and whether death anxiety is related to participant demographics. The study examined family caregivers to adult patients only, as caregiving of children may be influenced by other factors and explained through other theories, given the emotionality of the bond between children and their parents. The study also did not focus on caregivers of patients with a specific illness (such as Alzheimer's disease or cancer) and, rather, attempted to establish a general association of the examined variables in caregiver experience. The primary investigator's Institutional Review Board approved this study (Approval #06-13-12-0081857).

## Method

### Participants

The convenience sample included individuals currently involved in family caregiving of adult patients or those who have been involved in family caregiving in the last 5 years. To participate in the study, the caregiver and the patient under care needed to be over 18 years old and fluent in reading English. Invitations to participate in the study were posted on several caregiver resource websites. The study was hosted on SurveyMonkey.com.

To conduct multiple regressions with two predictor variables and the goal of obtaining a power of .80, this study used an alpha level of .05 and a medium effect size of .26. The recommended sample size was determined to be 40 participants. The final sample consisted of 46 participants between the ages of 24 and 78 ( $M = 56.43$ ,  $SD = 11.25$ ). The majority of participants were females (89.1%,  $n = 41$ ) and 10.9% ( $n = 5$ ) were males. Approximately 78% ( $n = 36$ ) were European American, 9% ( $n = 4$ ) were African American, 9% ( $n = 4$ ) were Latinos/Hispanics, and 4% ( $n = 2$ ) did not answer the question about race. The sample achieved represents the general caregiver population. In contrast, the average age of caregivers in the United States is 48 years old, with 66% of caregivers being female, 72% of caregivers reported themselves as European American, 13% as African American, and 12% as Latinos/Hispanics (National Alliance for Caregiving & AARP, 2009).

The majority of caregivers in the study (60.9%,  $n = 28$ ) were married, 17.4% ( $n = 8$ ) were living with their partners, 10.9% ( $n = 5$ ) were divorced or separated, 6.5% ( $n = 3$ ) were widowed, and 4.3% ( $n = 2$ ) were single. Approximately 35% ( $n = 16$ ) of caregivers had bachelor's degrees, 32.6% ( $n = 15$ ) had master's degrees, 15.2% ( $n = 7$ ) had completed some college, 13% ( $n = 6$ ) had graduated high school, and 4.3% ( $n = 2$ ) had doctoral degrees. Regarding country of residence, 91.3% ( $n = 42$ ) were from the United States, whereas Belgium (2.2%), Mexico (2.2%), and the Russian Federation (2.2%) each had one participant. One participant did not answer this question. Relative to geographic location in the United States, California had the largest number of participants (15.2%,  $n = 7$ ), followed by Maryland (8.7%,  $n = 4$ ), Illinois (6.5%,  $n = 3$ ), and Florida (6.5%,  $n = 3$ ). Other states represented in the sample included Alabama, Arizona, Georgia, Hawaii, Idaho, Kansas, Kentucky, Maine,

Michigan, Minnesota, Nebraska, Nevada, New York, North Carolina, Oregon, Pennsylvania, Tennessee, Texas, Virginia, and Wisconsin.

## Rationale

The current study examined whether death anxiety would be a significant predictor of depression and coping in the sample of adult family caregivers of adult patients and if participant demographics would be significant predictors of death anxiety. There were two primary research questions for the study. (a) Can death anxiety predict depression and coping in family caregivers? (b) How do scores on the Revised Collett–Lester Fear of Death and Dying Scale (RCL-FODADS) relate to participant demographics (age, gender, education level, number of children, relationship to patient, and duration of caregiver experience)?

## Instrumentation

### Death Anxiety

The RCL-FODADS (Lester, 1994) is a 32-item scale on which the items are separated into four subscales, with eight items each. The scale assesses the individual's attitudes to his or her own death, own dying, death of others, and dying of others. The main distinction of the RCL-FODADS from other measures of death anxiety is that it allows distinguishing between the fear of death and the fear of dying and between fears of own death and dying from the fears of death and dying of the others (Lester, 1994). Respondents are required to indicate the extent to which they are disturbed or made anxious by different aspects of death and dying on a 5-point scale from *very* through *somewhat* to *not*. The statements include items such as "I would not feel anxious in the presence of someone I knew was dying." A total score is derived by summing the scores for each item, yielding a maximum score of 40 for each subscale. The scale demonstrates internal consistency (Cronbach's  $\alpha$ ) of 0.91 for Fear of Death of Self, 0.89 for Fear of Dying of Self, 0.72 for Fear of Death of Others, and 0.87 for Fear of Dying of Others (Lester, 1994). Two-day test–retest reliability was 0.85 for Fear of Death of Self, 0.79 for Fear of Dying of Self, 0.86 for Fear of Death of Others, and 0.83 for Fear of Dying of Others (Lester, 1994). The fears of death and dying from the RCL-FODADS correlate significantly with neuroticism for both women and men and extraversion for men (Lester, 1994).

### Depression

The Center for Epidemiological Studies Depression Scale–Revised (CESD-R; Eaton, Ybarra, Muntaner, & Tien, 2004) is a 20-item scale that was initially developed by Radloff (1977) to screen for depression in the general population. Respondents are required to indicate how often they have felt this way in the past week or so on a 5-point scale with scores of 0 (*not at all or less than 1 day*), 1 (*1–2 days*), 2 (*3–4 days*), 3 (*5–7 days*), and 4 (*nearly every day for 2 weeks*). The statements include items such as "I had trouble keeping my mind on what I was doing." Scores range from 0 to 80, with the higher score indicating greater depression levels. The mean score of the CESD-R was 31.0. Scores above 16 indicate depressive symptomatology. The scale has been tested using personal interview, paper, telephone, and the Web and has a well-proven validity and reliability. The scale demonstrates internal consistency (Cronbach's  $\alpha$ ) of 0.89 and excellent test–retest reliability (Eaton et al., 2004).

### Coping

The Ways of Coping Questionnaire (WCQ) was developed by Lazarus and Folkman (Lazarus & Folkman, 1984; Folkman & Lazarus, 2005) and represents a 66-item scale, measuring thoughts and

acts used by people dealing with internal and/or external stressors. The WCQ consists of the eight subscales measuring coping processes, including Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal. Items have been designed to be answered thinking about a specific stressful situation. Respondents are required to indicate the extent to which they used each of the proposed actions in the stressful situation from 0 to 3 with responses of 0 (*does not apply or not used*), 1 (*used somewhat*), 2 (*used quite a bit*), and 3 (*used a great deal*). Subscale scores range from 0 to 30 for all subscales with higher scores, indicating greater use of coping strategy (Kieffer & MacDonald, 2011). The statements include items such as “I turned to work or another activity to take my mind off things” and “I went on as if nothing had happened.” Lazarus and Folkman (1984) reported internal consistency reliabilities across the eight scales ranging from .61 to .79.

In this study, instrument reliability was examined with Cronbach’s alpha. The internal consistency of the CESD-R was .928. Cronbach’s alpha for the WCQ was .903 for all items. The RCL-FODADS had a reliability coefficient of .927 for all items.

### **Demographic Questionnaire**

The demographic questionnaire collected information about age, gender, race, religion, marital status, number of children, and education. In addition, the questionnaire gathered details of caregiver experience, including the relationship to the patient, the nature of patient’s diagnosis, the duration of caregiving so far or in total (if patient died in the last 5 years), and whether or not the patient shared fears or feelings about the illness or death and dying with the caregiver.

## **Results**

The single most frequent patient diagnosis was cancer (26.1%,  $n = 12$ ), followed by Alzheimer’s disease (23.9%,  $n = 11$ ) and dementia (8.7%,  $n = 4$ ). Low-incidence diagnoses included renal failure (4.3%,  $n = 2$ ), traumatic brain injury (2.2%,  $n = 1$ ), general aging (2.2%,  $n = 1$ ), stroke (2.2%,  $n = 1$ ), and Parkinson’s disease (2.2%,  $n = 1$ ). Nearly 33% ( $n = 15$ ) of caregivers had been told that the patient’s condition was terminal, 56.5% ( $n = 26$ ) had been told that it was not terminal, and 10.9% ( $n = 5$ ) were unsure. The largest percentages of caregivers (34.8%,  $n = 16$ ) had been providing care for their patients for 2–5 years, 5–9 years (23.9%,  $n = 11$ ), 1–2 years (21.7%,  $n = 10$ ), and 10 years or more (8.7%,  $n = 4$ ).

Fifty-four percent ( $n = 25$ ) of caregivers reported that the patient was aware of the illness and implications, 32.6% ( $n = 15$ ) of patients were not aware, and 13% ( $n = 6$ ) of caregivers were not sure whether or not the patient was aware. Eighty-seven percent ( $n = 40$ ) of caregivers were aware of the patient’s prognosis and 13% ( $n = 6$ ) were not sure. Sixty-three percent of caregivers ( $n = 29$ ) were concerned that they may suffer from the same condition as the patient in the future, 23.9% ( $n = 11$ ) were not concerned, and 13% ( $n = 6$ ) were not sure.

In the majority of cases (58.7%,  $n = 27$ ), patients did not share their feelings and fears about illness. For instance, they did not discuss the possibility of recurrence in case of cancer or the fear of suffering pain. Approximately one third of patients (34.8%,  $n = 16$ ) had discussed such feelings, and 4.3% ( $n = 2$ ) shared those feelings with others but not their caregivers; whereas 2.2% ( $n = 1$ ) of caregivers were not sure whether patients shared their feelings and fears about illness.

Likewise, in the majority of cases (67.4%,  $n = 31$ ), patients did not share fears about death and dying. For example, they had not discussed the possibility of dying, way of dying, what happens during and after dying, or a desire to avoid experiencing pain during the dying process. Nearly 22% ( $n = 10$ ) of patients had, however, expressed those concerns, and 2.2% ( $n = 1$ ) shared those feelings with others but not their caregivers, whereas 8.7% ( $n = 4$ ) were not sure whether patients shared their feelings about death and dying.

In all cases, patients were provided home care. However, 19.6% ( $n = 9$ ) of patients were also provided care in a hospital. Sixty-five percent of caregivers ( $n = 30$ ) did not have previous caregiving experience prior to the current patient, whereas 28% ( $n = 13$ ) had previous experience, and 7% ( $n = 3$ ) have also been professional caregivers by occupation (nurse, nurse's aide). Ninety-one percent of caregivers ( $n = 42$ ) received no support, payouts, or benefits for caring for the patient. For example, they did not receive extended absence or leave from their jobs, monetary support from the state, or the patient's insurance payout benefit. Nine percent ( $n = 4$ ) of caregivers received such benefits.

*Research Question 1: Can death anxiety predict depression and coping in family caregivers?*

Linear regression investigated this research question: The predictor variable was death anxiety, and the outcome variables were depression and coping.

The analysis of variance for the model predicting depression was statistically significant,  $F(1, 44) = 5.44$ ,  $p = .024$ ;  $R^2 = .11$ . Death anxiety was a significant, negative predictor of depression,  $\beta = -.33$ ,  $t = -2.33$ ,  $p = .024$ . As death anxiety increased, there was a corresponding decrease in depression.

The analysis of variance for the model predicting coping was also statistically significant,  $F(1, 44) = 6.23$ ,  $p = .016$ ;  $R^2 = .124$ . Death anxiety was a significant, negative predictor of coping,  $\beta = -.35$ ,  $t = -2.40$ ,  $p = .016$ . As death anxiety increased, there was a corresponding decrease in coping.

As death anxiety was a significant predictor of depression and coping, and duration of caregiver experience was significantly related to death anxiety, hierarchical multiple regressions were conducted to determine how much variance in death anxiety can be explained by the additive effects of depression, coping, and duration of caregiver experience. Thus, in this analysis, the outcome variable was death anxiety.

In Step 1 of the model, depression significantly and negatively predicted death anxiety,  $F(1, 44) = 5.44$ ;  $\beta = -.26$ ,  $p = .02$ . In Step 2 of the model, coping significantly and negatively predicted death anxiety,  $F(2, 43) = 5.01$ ;  $\beta = -.29$ ,  $p = .047$ . The addition of coping to the model added an additional 7.9% of explained variance. This increase in  $R^2$  was statistically significant, indicated by a significant  $F$  change of 4.18,  $p = .047$ . In Step 3 of the model, duration of caregiver experience was a significant predictor of death anxiety,  $F(3, 42) = 5.72$ ,  $p = .019$ . The addition of duration of caregiver experience to the model added an additional 10.1% of explained variance. The total variance explained by the model was 29%.

*Research Question 2: How do scores on the RCL-FODADS relate to participant demographics (age, gender, education level, number of children, relationship to patient, and duration of caregiver experience)?*

The Pearson  $r$  examined the relationship between scores on the RCL-FODADS and participant demographic variables.

There was a significant, positive relationship between death anxiety and duration of caregiver experience,  $r(n = 46) = .34, p = .02$ , two-tailed. As the duration of caregiver experience increased, there was a corresponding increase in death anxiety among caregivers. No other demographic was significantly related to death anxiety.

## Discussion

In Research Question 1, death anxiety was a significant, negative predictor of depression. As death anxiety increased, there was a corresponding decrease in depression. Death anxiety was also a significant, negative predictor of coping: As death anxiety increased, there was a corresponding decrease in coping. This confirms that caregivers fearing death and dying may have a lower ability to cope with caregiving duties, thus suffering more detrimental effects of caregiving. These findings are consistent with the transactional theory of stress (Lazarus & Folkman, 1984), which leads to the expectation that as stress increased, evidenced in the current study with death anxiety, there was less ability to cope.

In the current study, family caregivers with higher death anxiety scores had lower scores in depression. Previous research on death anxiety and depression is scarce and presents contradictory results; for example, Hintze et al. (1994) found an association between death anxiety and depression; however, the study examined only caregivers of HIV patients. Most previous research on death anxiety included only elderly individuals who were not caregivers. For example, Wagner and Lorion (1984) reported that depression was a significant predictor of death anxiety in a sample of elderly individuals. The sample in the present study was caregivers and was not limited to elderly individuals. Specifically, the mean age of this study's participants was 56 years old. Perhaps the difference in the relationship between death anxiety and depression could be associated with age, and younger individuals may experience death anxiety in the absence of depression; further studies are needed to clarify this finding.

Grief may contribute to the development of depression; however, in family caregivers of nonterminal patients or in family caregivers who avoid accepting the possibility of death of their patients, death anxiety may indeed not be associated with depression. Elizarrarás-Rivas et al. (2010) did not find an association between death anxiety and depression in their sample of family caregivers of patients hospitalized with influenza A(H1N1) in Mexico. Further, according to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (American Psychiatric Association, 2013) depression, as a disorder, is characterized by anhedonia and apathy, which are the loss of ability to experience pleasure and the withdrawal from emotional reactions. This is especially true for patients in severe depression, who are said to have a "nonreactive mood," which means they are unable to get out of their depressed condition. It is possible that depressed caregivers are so withdrawn emotionally that they are unable to experience fear of death or fear of dying for themselves, as well as do not have fears of death and dying of others. Thus, nondepressed caregivers, being emotionally healthy, may be more capable of experiencing death anxiety and other emotional reactions as they become involved in caregiving. This hypothesis requires further investigation in future studies.

Lack of depression in family caregivers, coupled with a lower ability to cope with caregiving duties, suggests the presence of death anxiety as a factor interfering with coping. It may be helpful to screen

caregivers who have normal scores on depression instruments, yet report coping difficulty with caregiving duties, for death anxiety. Another possible explanation of the finding is the duration of caregiver experience in the sample. Sixty-five percent of caregivers had more than 2 years of caregiver experience. Perhaps they had the opportunity or specific resources to help them deal with their depression in the first years of assuming the caregiving role. Also, in examining the specific coping strategies used most often by the sample (i.e., self-controlling, planful problem solving), it is possible that caregivers utilizing problem-focused coping have a lower chance of becoming depressed versus those who use avoidance or passive coping (Kelly et al., 1999; Redinbaugh et al., 2003).

The correlational analyses investigated by Research Question 2 revealed a significant, positive relationship between death anxiety and duration of caregiver experience. As duration of caregiver experience increased, there was a corresponding increase in death anxiety among caregivers. It is evident that caregiving changes the lives and the future expectations of the family caregivers and may trigger a deep existential reevaluation (Yalom, 1980), as the awareness of one's own mortality and fears of death and dying increase (Bachner et al., 2011). The longer the caregiver experience lasts, the more the caregivers may be immersing themselves into the existential reevaluation and realizing the shortness of life, and the fact that their own life is passing by, thus increasing their own death and dying fears. In other words, the longer the fears of death and dying persist in the caregiver, the more these fears turn into death anxiety.

Additional research of factors that contribute to caregiver burden and specifically death anxiety as a predictor of poor coping are needed to help design interventions for family caregivers. Differential factors within the personal value and belief system of family caregivers may contribute to lower ability to withstand the caregiving strain. The current study found that death anxiety increased with an increase of duration of caregiver experience, which is an important factor to consider when carrying out the caregiver assessment.

Understanding that death anxiety may interfere with coping and developing interventions to help family caregivers deal with death anxiety would allow family caregivers to better cope with their difficult burden and hopefully suffer from less negative effects of caregiving. Contrary to previous research (Lonetto & Templer, 1986; Neimeyer, 1994; Wagner & Lorion, 1984), the present study suggested that death anxiety could be present in family caregivers in the absence of depression. This calls for the recommendation that caregivers be assessed for depression, coping efficacy, and death anxiety at the same time, as the absence of depression may not exclude the presence of death anxiety and vice versa.

Generalizability of the present study is important to consider. The study's sample primarily was drawn from family caregivers from the United States; thus, the findings cannot be generalized to a general population of caregivers worldwide. However, the findings could inspire research in other countries to identify similarities and/or differences that could be interpreted in light of different national policies for caregiver support, cultures, and public policy initiatives. In addition, the study did not limit participation to caregivers of patients with specific conditions. The single most common patient diagnosis was cancer (26.1%), followed by Alzheimer's disease (23.9%), and dementia (8.7%). Future studies could focus on specific patient conditions to be able to compare findings across different conditions and identify specific differences between terminal and nonterminal conditions. Future studies could also use other measurement instruments for the variables of death anxiety, depression, and coping to determine if findings would be replicable. Finally, participation in this

study was limited to caregivers of adult patients. Future studies could examine the relationship among death anxiety, depression, and coping in caregivers of children.

Timely response interventions in support of caregivers are crucial both for safeguarding the fragile health of the caregiver and for the maintenance of uncompromised care for the patient at home. Family caregivers carry out an important function in societies. The rapid increase of the aging population worldwide will continuously raise the number of patients in need of care due to medical conditions or advancing age, and this, in turn, will raise the number of family caregivers. Timely efforts to design effective assessment and intervention programs to support the caregivers will help improve the lives of both the patients and their caregivers, as well as protect caregivers from negative effects with the much needed task of family caregiving.

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## Effects of Zikr Meditation and Jaw Relaxation on Postoperative Pain, Anxiety and Physiologic Response of Patients Undergoing Abdominal Surgery

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### Abstract

The surgical experience and hospital environment is an anxiety-provoking event. Pain and anxiety are the most common distressing adverse effects in the early postoperative period. Routine pharmacologic Methods may impair the recovery of patients for their sedative and emetic effects. Therefore, patients' relaxation is the cornerstone for a successful post operative pain & anxiety managements and it is among the interventions addressed to improve physiologic response. The aim of this study was to examine the effects of zikr meditation and Jaw relaxation on reducing postoperative pain, anxiety and physiologic response. the study hypothesized that Patients who practiced zikr meditation & Jaw relaxation exercise in experimental group have less pain, anxiety and physiologic parameter than in control group & pre intervention .the study was conducted at The findings of the present study showed that patients undergoing surgery who practice zikr meditation & jaw relaxation have significantly lower subjective indices of anxiety and pain, after following the guideline of Zikr meditation & jaw relaxation practice. However, the study showed that there was no statistically significant difference between the two groups in the physiological responses. These responses included the systolic and diastolic blood pressure, heart rate, and respiratory rate. These findings imply a possible benefit of such guideline in improvement of the delivery of efficacious nursing management that decreases pain severity and anxiety for patient undergoing surgery. Therefore, zikr meditation & jaw relaxation therapy could be incorporated into clinical practice as a routine nursing intervention before and after abdominal surgery.

**Key words:** zikr meditation, Jaw relaxation, Pain, Anxiety, physiologic response, abdominal surgery

### Introduction

Pain and anxiety are the most common distressing adverse effects in the early postoperative period. Routine pharmacologic methods—opioids and benzodiazepines—may impair the recovery of patients for their sedative and emetic effects. Most previous studies have been focused on the treatment of preoperative anxiety , or late postoperative pain, Good, Stanton-Hicks, Grass(1999) and Good, Stanton-Hicks, Grass(2001). Preoperative patients may worry about pain and discomfort and, as a result, they may experience anxiety and fear (Mitchell 2000). If not well managed, anxiety reactions could negatively influence health and delay recovery (Brull et al. 2002, Giannoudis et al. 2006). In Turkey, 93.7% of the patients undergoing surgery report that they suffer from severe pain (Aslan, 2005 as cited sacide &Ummu,2010).additionally, Lee (2004) reported that 77–98% of patients experience postoperative pain and of these, 40–80% report moderate-to-severe pain and half (40–50%) further report unsatisfactory pain management. postoperative pain can cause stress and anxiety. Particularly, severe pain after upper abdominal surgeries can multiply the complications by adversely affecting the respiratory functions and mobilization of the patient owing to the proximity of the incision site to the diaphragm (Richards & Hubbert,2007). Pain management is crucial for surgical patients. Postoperative pain management strives to prevent the side effects of pain, facilitate recovery, and reduce treatment costs by minimizing or eliminating the patient's distress (Arslan & C,elebio\_glu, 2004 as cited sacide yidizi & Ummu yidlizi,2010). ).Pain management is both pharmacological and non-pharmacological (Pellino et al. 2005). Although analgesics are widely used to relieve severe acute and chronic pain, studies showed that non-pharmacological pain management can reduce the emotional effect of pain, enhance adjustment and make

patients believe that they can control their pain, thus reducing pain and promoting sleep (Schaffer & Yucha 2004). The literature demonstrates that relaxation causes a drop in blood pressure, heart rate, and breathing rate, as well as in pain responses and anxiety (Kesler, Patterson, & Dane, 2003). Relaxation exercises first became the subject of nursing research in 1971, when Aiken and Henrichs used systematic relaxation training as a nursing approach for patients scheduled to undergo open-heart surgery. From then on, nurse researchers have used relaxation exercises to reduce anxiety, muscle tension, and pain in preoperative and postoperative patients Dickinson et al. (2008) reviewed 29 randomized controlled trials to evaluate the effects of relaxation therapy and found that there were significant reduction in SBP and DBP in people with elevated blood pressure. Relaxation therapy could complement analgesics to help postoperative patients better manage pain and anxiety. Demiralp & Oflaz, 2007; Friesner, Curry, & Moddeman, 2006). Studies from several countries have found that relaxation decreased the sensory and affective components of postoperative pain. In many of these studies, investigators tested the jaw relaxation technique (Flaherty & Fitzpatrick 1978, Ceccio 1984, Horowitz et al. 1984, Mogan et al. 1985, Good 1995a, Good et al. 1999, 2001a, 2001b), and this was effective in nearly all of the studies. Holistic nursing is nursing practice resulting in healing the whole person as human being that has interconnectedness of body mind social cultural spiritual aspect (Dossey, Keegan, & Guzzeta, 2005). Holistic nursing always correlates with religion or belief system. Islam as a holistic view provides spiritual tenets, which can be applied in nursing practice. Spirituality intervention comprises of the Islamic tenets based on the holy Qur'an (Syed, 2003), prophet Muhammad's life ways (Loukas, Saad, Tubbs, & Shoja, 2010), and modified conventional methods. Spirituality intervention is applied in many fields of nursing such as medical, surgical, maternity, pediatric, psychiatric, critical, and community nursing. Its benefit has shown in several aspects including helping patients to accomplish spiritual duty and to elicit a relaxation response of calmness and mindfulness and activate neurological pathways for self-healing process by promoting self-preservation on psychological adaptation, physiological status, transpersonal caring relationship, and spirituality for connectedness with God (Hudak, Gallo, & Morton, 1998). Development of spirituality intervention starts from routine to research and to nursing practice. Zikr meditation is usually followed as an Islamic prayer that can be practiced at any time. In a regular basis, Zikr therapy is performed twice a day wherever it is convenient to perform either in the morning or the evening (Syed, 2003). Zikr results in peaceful body mind spirit to promote one's optimal harmonization, which enhances psychological, social, spiritual, and physical health status (Abdel-Khalek & Lester, 2007; Syed, 2003). Original Islamic relaxation technique utilizes Zikr therapy. Zikr therapy is the remembrance of Allah, and requires one to sit or lie comfortably, with eyes closed, and practice remembrance of Allah through recitation of: "Subhanallah, alhamdulillah, allahu akbar" "Glorious is Allah, praise to Allah, Allah is the greatest" for 20 to 30 minutes (Damarhuda, 2005; Mardiyono et al., 2007; Purwanto & Zulaekah, 2007; Sitepu, 2009). Zikr therapy could reduce psychological problems. Zikr therapy for 25 minutes reduced preoperative anxiety (Mardiyono et al., 2007). Zikr therapy for 30 minutes could relieve postoperative pain 6-8 hours ( $t=5.29$ ,  $p<.01$ ) and 24-30 hours ( $t=7.79$ ,  $p<.01$ ) in Muslim patients undergoing abdominal surgery (Sitepu, 2009). The types of Eastern meditation are Zen, Buddhist, Taoist, and Islamic meditation such as Zikr meditation. Zikr meditation has strength and brings physical and spiritual benefits. The physical benefits include aspects such as purifying the heart from all negative attitudes and emotions; gaining freedom from worldly stress, anxiety, despair, and depression; and becoming highly focused and ambitious. In addition this increases spiritual strength and vitality, breathes the spirit of life into the heart, and the individual becomes one of those who are genuinely alive. (Tim Zahra, 2006). During Zikr meditation, consciousness of the object of meditation is directed to Allah (SWT). Thus, this transcendental meditation is mostly used as a way to bring ourselves closer to Allah (SWT) or transcendently united with Allah (Subandi, 2002 as cited Purwanto, 2007). Among Muslims, belief of God (Allah) can help them if something happen wrong in their life such as having problem or sick. They believe that they would touch the Allah which, in turn, could help them to strengthen their soul, body, and mind. Once Zikr meditation practice is performed, the autonomic nervous system is stimulated less, and this in turn decreases physiological responses. Previous studies have found the positive outcomes of practicing Zikr meditation among surgical patients and psychological disturbance. Mardiyono et al. (2007) found that Zikr therapy subhannallah for 25 minutes can decrease anxiety in major surgery the study found that there were significant differences between the control and experimental group  $n=70$  in blood pressure, temperature, respiration and pulse . We conducted this controlled clinical trial to evaluate the effects of zikr meditation and Jaw relaxation on reducing postoperative pain, anxiety and physiologic response.

## Materials and Methods

### Aim of the Study:

The aim of this study was to examine the effects of zikr meditation and Jaw relaxation on reducing postoperative pain, anxiety and physiologic response.

### The Study Design:

Randomized controlled design was carried out, with an experimental and control group, pretest-posttest.

### Research Questions:

The following research questions were asked in this study:

1. Is there a difference between pain severity pre and post zikr meditation practices & Jaw relaxation exercise?
2. Is there a difference between anxiety level pre and post zikr meditation practices & Jaw relaxation exercise?
3. Is there a difference between physiologic responses (blood pressure, respiration & heart rate) pre and post zikr meditation practices & Jaw relaxation exercise?
4. Is there a difference between pain, anxiety & physiologic responses in patients undertake zikr meditation practices & Jaw relaxation exercise (experimental group) and those who receive routine care (control group)?

### Research Hypotheses:

H.1 patients who practiced zikr meditation & Jaw relaxation exercise have significantly less pain severity postoperatively than would those did not. (pre relaxation & control group)

H.2 patients who practiced zikr meditation & Jaw relaxation exercise have significantly less anxiety level postoperatively than would those did not. (pre relaxation & control group)

H.3 patients who practiced zikr meditation & Jaw relaxation exercise have significantly lower blood pressure, respiration & heart rate postoperatively than would those did not. (pre relaxation & control group)

H.4 patients who practiced zikr meditation & Jaw relaxation exercise in experimental group have less pain, anxiety and physiologic parameter than in control group

### Research variables:

#### *Independent variables*

The Independent variables in the study is *zikr meditation and Jaw relaxation exercise*.

#### *Dependent variables:*

Dependent variables are *pain, anxiety, blood pressure, respiration and heart rate*

#### Setting:

This study was conducted at surgical wards in Mansoura University Hospitals. Is teaching hospital for medical and nursing students. In addition hospital provide wound dressing twice a day after surgery. Also, allow patients to discharge home early after surgery, in case the patient has no complications. Patients are admitted to the hospital one or two day before surgery.

#### Population and Sample

Sample were assigned to two groups, experimental group N= 20 and control group N=20

#### *Inclusion criteria:*

Adult patients (18 years to 60 years) scheduled for major abdominal surgery, which were expected to receive pain controlling analgesia PCA, to ambulate after surgery, they were fully conscious, well oriented, and able to communicate verbally.

#### *Exclusion criteria:*

Patients with epidural analgesia and patients with smaller surgeries such as; laparoscopy.

Instrumentations:

The following tools were utilized to collect data pertinent to study:

1. *Background data and Medical Information Form*: this included sex, age, educational status, occupation, religion, marital status, medical illnesses and history of previous surgery. The medical information form included the information of diagnosis, type of operation, type of anesthesia, site of surgical pain, and pain control analgesia used.

2. *Pain rating scale (PRS)*

This study used a pain rating scale to measure pain; the scale has been widely used to evaluate subjective Phenomena, such as sensations, perceptions and Reactions. Subjects indicated their degree of pain, using a scale of 0–10, with 0 indicating the least amount and 10 indicated the greatest amount. This scale has been found to be reliable as well as easy and convenient to use. (Wewers & Lowe, 1990). PRS was chosen as a measurement, tool because it had been regarded as a valid tool in measuring perceptions of pain intensity, it was suitable for assessing postoperative pain (Coll, Ameen, & Mead, 2004), and it was easy and quick to use in practice by the nursing staff. Reliability the PRS have been reported to be reliable for measuring pain Ware, Epps, Herr, & Packard (2006) used PRC in pain in the older minority adults and the test-retest reliability coefficient was .87 and it was easy to score and record. In the present study, the researcher did not test the reliability of the PRC instrument, but the researcher asked post-operative patients to rate their pain by using PRC. It was found that they could understand and rate their pain& anxiety correctly.

3. *Hamilton anxiety scale*

The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms, the reported levels of interrater reliability for the scale appear to be acceptable. Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where <17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe.

4. *Physiological Data Collection Form*:

The physiological data collection forms included the details about blood pressure, heart rate, and respiratory rate. The blood pressure and heart rates were measured by using the digital blood pressure. The respiratory rate was measured by the researcher with a stop watch.

Validity:

The content validity was established by a panel of ten expertise (five professors nurses and three physicians and two experts in Zikr meditation), who reviewed the tools for clarity, relevance, comprehensiveness, understanding, applicability and simplicity for implementation and according to their opinion some modifications were applied.

Pilot study:

A pilot study was conducted with 3 subjects in order to test the suitability of the explanations in the guidelines. The results from the pilot study showed that the 3 subjects could read and understand the process of Zikr meditation practices and jaw relaxation exercise. The time they spent in practicing Zikr meditation lasted 20 minutes for each period, & 10 min in jaw relaxation. The subjects could also understand and use the VAS & STAI Rating Scale. The subjects rated the intensity of pain from 7 to 6 after surgery on day 1 and 6 to 5 on day 2.

Procedure

A researcher screened patients preparing for abdominal Surgery from a patient list in the nursing station every afternoon in an effort to identify potential candidates. Inform the head nurses and staff nurses about the purposes of the research study, the protocol for data collection, and the framework of the study. On the day of admission (1 day before surgery), potential subjects who met the inclusion criteria were approached for participating in the study. The researcher then explained to the subject the objectives, the procedures for conducting the study, When the subjects agreed to participate in this study, the researcher gave them a consent form for signing, randomly

assigned them to two groups (experimental & control group). Interviewed them for demographic data form, all subjects were taught to use PRS & Hamilton anxiety scale

### ***Experimental group***

#### ***Intervention practice***

The researcher taught zikr meditation and jaw relaxation therapy (intervention practice) to the patients in the experimental group and practiced with them, At the end of meeting session, the researcher gave a handbook of guidelines for Zikr meditation & jaw relaxation technique to the subjects so that, they can read and practice it at any time. Patients were encouraged to use the guidelines for practice whenever they wanted. When subjects were ready, the researcher made the environment around the beds to be quiet, a sign was placed on the outside of the door to the patient's room, the ceiling light was turned off and the curtain pulled for twin-bed patients to keep the patient quiet and without interruption. Patients were encouraged to assume a comfortable position while performing the practice and researcher were available to ensure that the patient was not interrupted. The practice of intervention group was started by undertaking deep breath for 5 minutes, followed by jaw relaxation practice for 10 minutes for relaxation then remembrance of Allah Sub Hanna Wataa'la (SWT) for 15 minutes in according with the practice of Zikr meditation. By saying "sub Hanna Allah" (God is the holiest) 33times. "Alhamdull llah" (all prize to God) 33times. "Allahu-akbar" (God is the greatest of all) 33times & :lailaha-illa Allah"(there is no God but allah)33times while counting on the tasbih (kind of rosary), one round of intervention lasted for 30 minutes. The researcher then asked subjects to return to the demonstration for one more round in order to make sure that the subjects could practice it correctly.

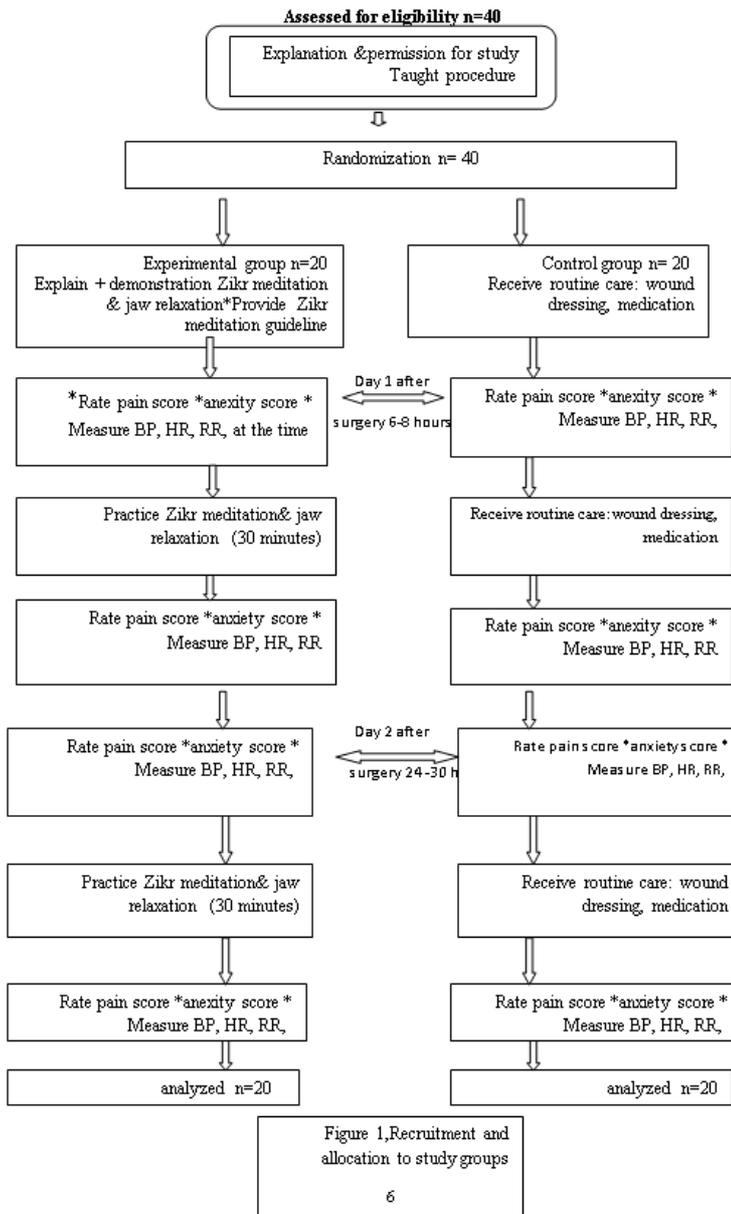
From postoperative days one–two (two consecutive Days), the researchers assisted patients in reading and practicing zikr meditation guidelines and jaw relaxation technique every day. They assessed pain and anxiety levels and recorded blood pressure, heart rate and RR before and after the intervention from the day of surgery to postoperative day two. On Day 1 (6-8 hours after surgery) the subjects were measured for the pain and anxiety scores and , BP, HR, and RR. These data were used as a baseline to compare later changes in physiological, pain and anxiety scores. The BP cuff was constantly tied on the patient's hands until the end of Day1 intervention. The subjects were then asked to practice Zikr Meditation and jaw relaxation for one cycle (lasting 30 minutes). After finishing the practice , subjects were asked to rate their pain, anxiety score by using pain & anxiety scale, The BP, HR, and RR were measured immediately after finishing the practice . On Day 2 (24-30 hours after surgery) the subjects were asked to rate their pain, anxiety score and then their BP, HR, and RR were again measured. These data was used as a baseline to compare changes, then, subjects were asked to practice Zikr Meditation and jaw relaxation for one more cycle (lasting 30 minutes).

#### **The Control Group**

There were no interventions for patients in the control group and, instead, they were encouraged to rest in bed and received routine care, Routine nursing cares included pain medication around the clock and wound dressing. The data collection procedure was the same for both groups. This study did not interfere with patients' medication Regimens. Analgesics were given to patients in accordance with physician orders, ward routines.

**Protection of human rights (Ethical considerations)**

Official written permissions to conduct the study was obtained from the Director of Mansoura University Hospital. Verbal explanation of the nature and the aim of the study were performed to medical and nursing staff in surgical wards. In addition for participants who met the inclusion Criteria, I would explain, in person, the purpose of the study, experimental intervention procedures and data collection. Participants were enrolled after written consent was obtained. The researcher emphasized that the participation is absolutely voluntary and confidential as well as anonymity, privacy, rights and safety of the subjects was absolutely assured throughout the whole study



After the data were collected, the next process were data entry that involved the conversion of raw source material to a useable data file in a form of data analysis. The variables were defined and coded to facilitate using the statistical package named SPSS 10.0. The statistical analyses of this study were as follow:

**Descriptive statistics:** To use frequencies, mean and standard deviation of score experimental and study groups.

**Chi-square:** To use the comparative between experimental and study groups regarding some variables.

**T- Test:** To use for compares the actual difference between two means in relation to the variation in the data.

Table (1a): Frequency and percentage of demographic and relevant clinical characteristics (N=40).

Items	Experimental G (n =20)		Control G. (n=20)		X2	P value
	No	%	No	%		
Age:						
• <25	7	35.0	5	25.0	2.167 <sup>a</sup>	.538
• 25-34	4	20.0	3	15.0		
• 35-45	3	15.0	7	35.0		
• > 45	6	30.0	5	25.0		
X ± SD	2.40± 1.273		2.60± 1.142			
Sex:						
• Male	12	60.0	12	60.0	.404	.525
• female	8	40.0	8	40.0		
Education:						
• illiterate	6	30.0	7	35.0	.154	.926
• read	7	35.0	7	35.0		
• secondary	7	35.0	6	30.0		
Occupation :						
• Housewife	11	55.0	10	50.0	1.059	.589
• Government	3	15.0	2	10.0		
• Non-government	6	25.0	8	40.0		
Residence :						
• Urban	13	65.0	12	60.0	.107	.744
• Rural	7	35.0	8	40.0		

Marital status :						
• Single	5	25.0	4	20.0	5.037	.081
• married	11	55.0	16	80.0		
• widowed	4	20.0	0	0.0		
Income :					.417	.519
• enough	13	65.0	11	55.0		
• not enough	7	35.0	9	45.0		

Table(1a) shows that :

Respondent's age ranged from more than 25 to above 45 years. The mean age of the subjects in the experimental group was  $2.40 \pm 1.273$  years and in the control group, it was  $2.60 \pm 1.142$  years. Most of the subjects in experimental and control groups have education level from read & write to secondary school (70 % & 65% respectively). Three fifth of subjects were male (60 %). Almost three fifth of experimental group and the majority of control group were married (55% & 80% respectively). More than half of subjects in both groups were housewife. There were no statistically significant differences in the demographic characteristics between the experimental and control group.

**Table (1b): Frequency and percentage of demographic and relevant clinical characteristics (N=40).**

Items	Experimental G. (n =20)		Control G. (n=50)		X2	P value
	No	%	No	%		
<b>Previous surgery :</b>						
• Yes	15	75.0	14	70.0	.125	.723
• No	5	25.0	6	30.0		
<b>Days in hospital before surgery:</b>						
• One	11	55.0	17	85.0	4.111	.128
• Two	9	45.0	0	0.0		
• Three	0	0.0	3	15.0		
<b>Diagnosis:</b>						
• Intestinal Problems	5	25.0	5	25.0	2.833	.726
• Oncology problems	7	35.0	5	25.0		
• Others	8	40.0	10	50.0		

(Hysterectomy/caesarian, hernia,appendicitis.						
<b>Site pain :</b>						
• Abdomen	17	80.0	18	90.0	1.318	.517
• other sites	3	20.0	2	10.0		
<b>Type of operation :</b>					.360	.548
• major	13	65.0	10	50.0		
• minor	7	35.0	10	50.0		
<b>Type of anesthesia :</b>					2.000	.368
• General	19	95.0	19	95.0		
• Spinal	1	5.0	1	5.0		

**Table (1b) Indicate that:**

The subjects in experimental and control groups were scheduled for the major surgery(65% &50% respectively). Most of the subjects in both the groups had others problems (Hysterectomy, caesarian, hernia,appendicitis) and this was followed by cancer problems. Most of the subjects in both groups were undergoing general anesthesia and were admitted to the hospital 1 day before surgery. There was no statistical significant difference in the relevant clinical characteristic between experimental and control groups (Table 1b).

**Table (2) Mean and standard deviation of pain severity before and after Zikr meditation & jaw relaxation in the experimental and control groups .No =40**

Items	Experimental G. (n =20)		Control G. (n=20)		t-test	P value
	Mean	SD	Mean	SD		
<b>Pain 6-8 hours after surgery (Day 1)</b>						
• <b>Before</b>	3.85	.366	3.60	.598	1.594	.119
• <b>After</b>	2.55	.605	2.05	.224	3.468	0.001*
<b>Pain 24 -30 hours after surgery (Day 2)</b>						
• <b>Before</b>	2.85	.587	3.25	.639	2.062	0.046*
• <b>After</b>	1.50	.513	2.05	.605	.3.101	0.004*

**Table (2) Clarifies that:**

The mean pain severity on day 1 (6-8 hours after surgery) before Zikr meditation &jaw relaxation in the experimental group was 3.85±.366 and 3.60±.598 in the control group. The mean pain severity after Zikr meditation &jaw relaxation in the experimental group was 2.55±.605 and 2.30±.224in the control group. There was a significant difference in the pain severity after Zikr meditation &jaw relaxation in the experimental and control group (t=3.468,

$p < .01$ ). Also pain severity on day 2 (24-30 hours after surgery): The mean pain severity before Zikr meditation & jaw relaxation in the experimental group was  $2.85 \pm .587$  and  $3.25 \pm .639$  in the control group. There was a significant difference in the relative change of pain severity between the groups, ( $t = 2.062$ ,  $p < .01$ ). Also the mean and standard deviation, pain severity after Zikr meditation & jaw relaxation in the experimental group was  $1.50 \pm .513$  and  $2.05 \pm .605$  in the control group ( $t = 3.101$ ,  $p < 0.01$ ) (Table 2).

**Table (3) Comparison of Mean and standard deviation of the physiological response before and after Zikr meditation & jaw relaxation on day 1 (6-8 hours after surgery) of the experimental and control group.**

Items	Experimental G. (n =20)		Study G. (n=20)		t-test	P value
	Mean	SD	Mean	SD		
<b>Blood Pressure</b>						
• Before	1.85	.813	1.60	.754	1.009	.320
• After	1.30	.470	1.25	.444	.346	.371
<b>Heart rate :</b>						
• Before	1.65	.489	1.40	.503	1.594	.119
• After	1.30	.470	1.25	.444	.346	.731
<b>Respiration:</b>						
• Before	1.95	.224	1.85	.366	1.042	.304
• After	1.40	.503	1.35	.489	.319	.752

**Table (3) Reveals that :**

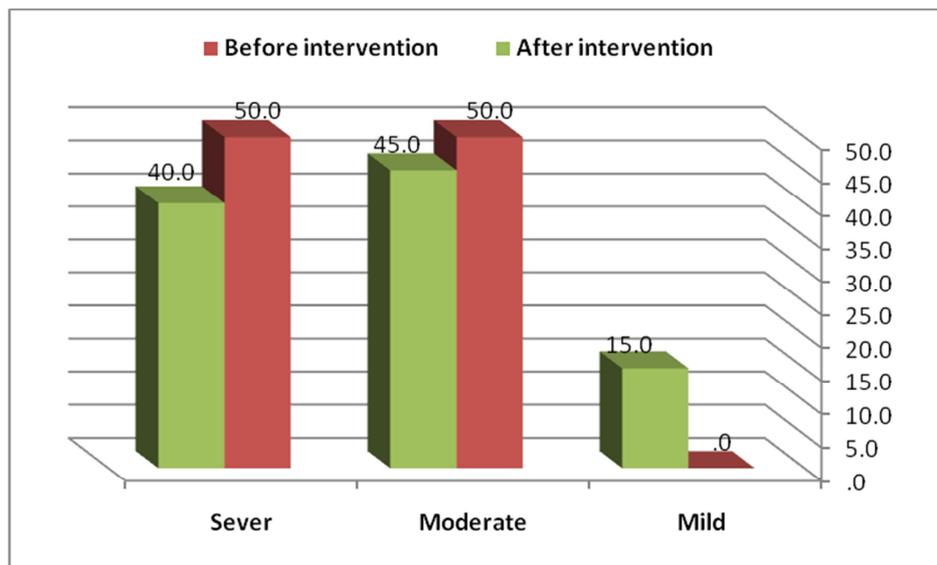
There was no statistically significant difference in the physiological responses (blood pressure, heart rate & respiration) pre and post practicing Zikr meditation & jaw relaxation on day 1 after 6- 8 hours of surgery. Additionally There was no statistically significant difference in the physiological responses (blood pressure, heart rate & respiration) between the experimental and control group.

**Table (4) Comparison of Mean and standard deviation of the physiological response before and after Zikr meditation & jaw relaxation on day 2 (24-30 hours after surgery) of the experimental and control group.**

Items	Experimental G. (n =20)		Study G. (n=20)		t-test	P value
	Mean	SD	Mean	SD		
<b>Blood Pressure</b>						
• Before	1.45	.686	1.40	.503	.263	.794
• After	1.20	.410	1.15	.366	.406	.687
<b>Heart rate :</b>						
• Before	1.75	.444	1.45	.510	1.983	.055
• After	1.35	.489	1.20	.410	1.050	.300
<b>Respiration:</b>						
• Before	1.80	.410	1.80	.410	.000	1.00
• After	1.30	.470	1.40	.503	-.650	.520

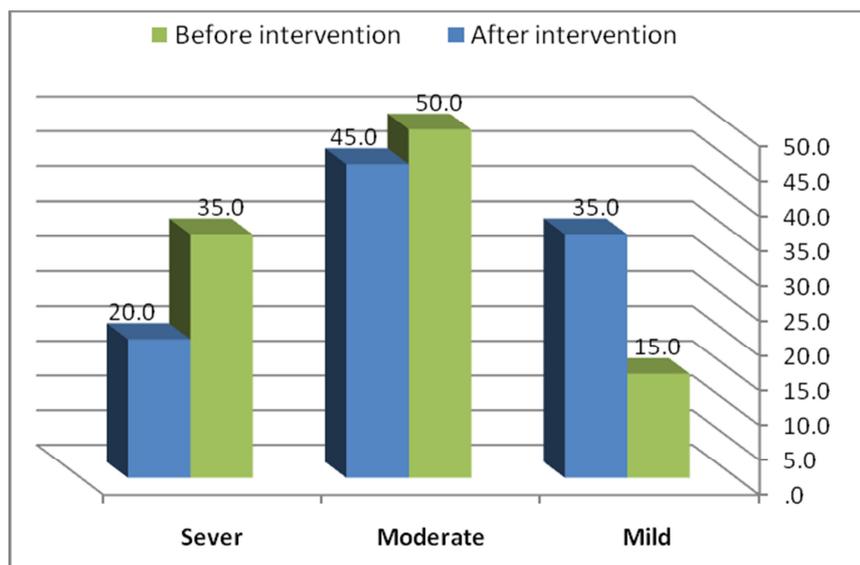
**Table (4) shows that :**

There was no statistically significant difference in the physiological responses (blood pressure, heart rate & respiration) between the experimental and control group as well as pre & post practicing Zikr meditation & jaw relaxation on day 2 ( $p > 0.05$ ).



**Figure (2): Percentage distribution of the study patients according level of anxiety pre /post ziker meditation & jaw relaxation at day 1**

**It is obvious from this figure that:** fifths of the patients (50.0%) had severe anxiety pre intervention, compared to (40.0 %) post intervention Moreover, (50.0%) had moderate anxiety pre - intervention, compared to (45.0 %) post intervention at day1.



**Figure (3): Percentage distribution of the study patients according level of anxiety pre /post zikr meditation & jaw relaxation at day 2.**

It is clear from this figure that, more than one third of the patients (35.0%) had severe anxiety pre intervention, compared to (20.0 %) post intervention .moreover, (35.0%) had mild anxiety pre intervention compared to.(15.0 %) post intervention .In addition (50.0%) had moderate anxiety pre - intervention, compared to (45.0 %) post intervention at day2.

### **Discussion**

The surgical experience and hospital environment is an anxiety-provoking event. Despite the use of analgesics, patients may feel anxiety and pain before and after surgery, delaying their recovery. Pi-Chu Lin,(2011). Pain and anxiety are the most common distressing adverse effects in the early postoperative period. Pain management is crucial for surgical patients to decrease patient discomfort and anxiety. Some studies have suggested that practicing Zikr therapy can alleviate perioperative pain and anxiety (Mardiyono, Angraeni, & Sulistyowati, 2007) and postoperative pain (Sitepu, 2009). Similarly, Ikedo et al., (2007) mentioned that meditation is one of the non-pharmacological strategies that can improve physical health, reduce pain, enhance immune responses, improve emotional well-being, and foster spiritual growth. This is the first study combining zikr meditation & jaw relaxation, technique for patient undergoing surgery

The most notable findings of this study are the marked and constant statistical significant difference in pain severity before and after Zikr meditation & jaw relaxation on day 1 (6-8 hours after surgery) and on day 2 (24- 30 hours after surgery) (Table 2). However, pain severity in the control group also decreased from day 1 to day 2 after surgery. This may be due to the fact that the pain pattern was worst on post- operative day 1, and then the pain decreased continuously on the following days because the abdominal muscles started recovering (Fongkaeo, 2002; Tyler et al., 1993). Also all the patients in this study were Muslims and they practiced Zikr meditation on the routine basis in their daily lives. Therefore, Zikr meditation & jaw relaxation proved to strengthen the soul, body, and mind which in turn helped the subjects in control group to reduce the sensation of pain in the first and second day after surgery. However, pain severity in experimental group was significantly lower than control group because the experimental group practiced the program of Zikr meditation & jaw relaxation for 30 minutes longer than the control group. These findings confirm hypothesis(1) that suppose patients who practiced zikr meditation & Jaw relaxation exercise have significantly less pain severity postoperatively than would those did not.(pre relaxation & control group.

This results is congruent with a study done by Chen et al. (1998) who showed the worst pain severity on post-op day one (scores up to 6), with a mean of 4. and Sitepu. (2009) who found that Zikr therapy has been

approved to reduce postoperative pain. Similarly Yucha, (2004)& Pellino et al. (2005) attributed to Zikr therapy, thoughts from pain to the remembrance of the God almighty lead to patients feel comfortable and calm (Kakigi et al., 2005). prayer the most common self-reported means of controlling pain.13 **Kristine L. Kwekkeboom and Elfa Gretarsdottir** (2006) emphasized that, Pain distress was significantly lower after jaw relaxation compared to control. Relaxation is very effective as a treatment strategy for painful and stress-making conditions( Burke, Lemone& Mohn-Brown ,2003). Several studies have shown that relaxation reduces the sensory and emotional dimensions of postoperative pain. In many of these studies the researchers tested the jaw relaxation method and this method has been effective in almost all of these studies (Roykulcharoen, 2004, Stanton-Hicks, Grass, Cranston Anderson, Choi, Schoolmeesters, et al.,1999, Good, *Stanton-Hicks, Grass, Cranston Anderson, Lai, Roykulcharoen, et al.* 2001, Good, Cranston Anderson, Stanton-Hicks, Grass,Makii,2002 ,Good, Cranston Anderson, Ahn, Cong, Stanton-Hicks,2005 & Seers, Crichto, Tutton, Smith, Saunders,2008).

Results of this study revealed that, there was no significant difference between the two groups in the physiological responses on day 1 and day 2. These responses included the systolic and diastolic blood pressure, heart rate, and respiratory rate. They were measured either before Zikr meditation & jaw relaxation, at the time of, and after the practice of Zikr meditation & jaw relaxation. This findings not support the 3<sup>rd</sup> hypothesis which suppose that , patients who practiced zikr meditation & Jaw relaxation exercise have significantly lower blood pressure, respiration & heart rat postoperatively than would those did not. (pre relaxation& control group).

This is congruent with Mardiyono et al. (2007),who found that, there were insignificant differences between the control and experimental group (n = 70) in blood pressure, temperature, respiration, and pulse.

Opposite findings can be drown from study carried out by **Benson** who asserted that prayer provides physiological responses, such as decreased heart rate, decreased blood pressure, and decreased episodes of angina in cardiology patients. . Benson 1998. Prayer may bring stress-reducing results, Meisenhelder.2000 such as decrease in blood pressure or increase in the immune function. Some studies have suggested that exposure to relaxation may improve the hemodynamic status of patients. Astin, Shapiro, Eisenberg, Forsy,(2003) and Pargament,(1997). Similarly, studies reported that practicing meditation decreased the heart rate (Danucalov et al, 2008), the respiratory rate (Arambula., 2001, and blood pressure (Yucel, 2007).

In the present study ,the results showed statistically significant differences in the anxiety level pre & post practicing intervention(zikr meditation & jaw relaxation ) in experimental group and between the experimental and control groups ( $p < 0.05$ ). The findings is in accordance with 2<sup>nd</sup> hypothesis H.2 patients who practiced zikr meditation & Jaw relaxation exercise have significantly less anxiety level postoperatively than would those did not. (pre relaxation& control group).

These findings are consistent with Mardiyono et al. (2007) who found that Zikr therapy for 25 minutes can decrease anxiety in major surgery. Interestingly, Formal prayer has been shown to be an effective way to enhance happiness and physical health (Abdel-Khalek, 2007), alleviate anxiety, and depression among Muslim students, in Iraqi, in Kuwait and USA (Abdel-Khalek & Lester, 2007), Relaxation reduces the anxiety and pain by creating the feelings of self-confidence and self-control and reducing negative feelings and restoring hope and gives patients the possibility of participating in their improvement and since it is an active coping strategy, it can be used at any time (Wilkie, Kampbell, Cutshall 2000). Some studies have suggested that exposure to relaxation can alleviate perioperative pain and anxiety, ( Jane, Wilkie, Gallucci, Beaton ,Huang,2008)

Another study by **Heye, Foster, Bartlett, and Adkins (2002)** reported that, relaxation techniques reduced anxiety by preventing pain transmission from reaching the spinal cord and by relaxing muscles. Nonpharmacologic nursing applications in the postoperative period (relaxation techniques, prayer ,back massage, cold/hot compresses, etc.) help the individual both to attain his/her expectations and to reduce his/ her fear, anxiety, and pain (**Gregory, 2005**).

### **Conclusion:**

Management of pain and anxiety in surgical patients is an important concern for clinical professionals. The results of this study indicate that patients undergoing surgery who practice zikr meditation & jaw relaxation exercise have significantly lower subjective indices of anxiety and pain, after following the guideline of Zikr meditation & jaw

relaxation practice. The subjects following the practice of Zikr meditation & jaw relaxation, showed statistical significant difference in pain severity at day 1 (6-8 hours after surgery) and at day 2 (24-30 hours after surgery). However, the result of this study showed that there was no statistically significant difference between the two groups in the physiological responses on day 1 and day 2. These responses included the systolic and diastolic blood pressure, heart rate, and respiratory rate. Additionally, the level of anxiety can improved significantly after implementation of the zikr meditation & jaw relaxation. Therefore, zikr meditation & jaw relaxation therapy could be incorporated into clinical practice as a routine nursing intervention before and after abdominal surgery.

#### **Relevance to clinical practice**

Clinical practice should include zikr meditation & jaw relaxation Therapy to alleviate pain and anxiety in patients undergoing surgery.

#### **Conflict of interest**

The authors declare that they have no conflict of interests.

#### **Acknowledgments**

Thanks to all patients who took part in the study, to all the nurses and other healthcare staff on the wards involved..

#### **Funding**

No funding sources were provided.

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# Death Anxiety, Death Depression, Geriatric Depression and Suicidal Ideation among Institutionalized and Non-Institutionalized Elders

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**Abstract-** The number of elderly people is growing very fast in both developed and developing Countries. The rapid change in the social and cultural values had made a tremendous impact on mental well being of elders. Death anxiety is a complicated factor that is experienced with variable severity during one's life, and is also influenced by a variety of factors such as environmental events, age, and sex. Death anxiety is an attitude that an individual holds towards death. It is defined as a negative and apprehensive feeling that one has when thinking about death and dying and is used interchangeably with fear of death. Several studies have shown that when death awareness and its associated anxiety are increased, individuals respond by defending and/or intensifying their cultural beliefs. Depression is a serious condition for people of all ages, but for older people depression is often associated with other co-morbid conditions, such as physical disability, dementia and anxiety that exacerbate the distress experienced by older people and their carers and studies also revealed that geriatric depression is prevalent in rural south India. Studies reveals that institutionalized elderly have more stress and less quality of life compared to non-institutionalized ones and non- institutionalized elderly had a higher life satisfaction than institutionalized and there is also gender difference.

**Aim:** The aim of the study is to investigate the death anxiety, death depression, geriatric depression and suicidal ideations among institutionalized and non-institutionalized elders.

**Method:** For the purpose the study which consists of 40 elders who are institutionalized at Warangal, and 40 elders who are staying with families at Warangal. The age range of the elders is 60 to 80 years and the informed consent was taken from the participants. The tools used are Death Anxiety Scale, Death Depression Scale, Geriatric Depression Scale (GDS) and The Modified Scale for Suicidal Ideation.

**Results:** The results shows that 47.5% elders are having mild death anxiety and 52.5% are having moderate level of death anxiety in both institutionalized and non-institutionalized elders. The institutionalized elders are having significant death depression, geriatric depression and suicidal ideation than non-institutionalized elders but there is no significant difference in death anxiety among institutionalized and non-institutionalized elders. There is no significant difference in death anxiety and death depression among institutionalized elders based on gender but non-institutionalized male elders are having significant death anxiety than female elders. The single elders are having

significant death depression, geriatric depression and suicidal ideation than coupled elders. There is no significant difference between death anxiety, death depression, geriatric depression and suicidal ideation based on age, SES, educational background of the elders and it is also found that rural elders are showing significant death depression than urban elders and urban elders are showing significant suicidal ideation than rural elders. There is correlation between death anxiety, death depression and geriatric depression.

**Index Terms-** Death Anxiety, Death Depression, Suicidal Ideation, Institutionalized & Non- Institutionalized Elders.

## I. INTRODUCTION

The number of elderly people is growing very fast in both developed and developing Countries. The rapid change in the social and cultural values had made a tremendous impact on mental well being of elders. In the modern world elders are the mean of a burden on the family in all societies and cultures and mistreatment with elderly is common everywhere (Chokkanathan et al, 2008). Many families who lives in the urban localities are tend to send the elders in the institutions. Institutionalization provokes the feeling of loneliness and neglect in elders. Such living arrangements may have negative effects on the mental health of its residents, because placement is often accompanied by feelings of lack of control over one's own life, and inability to make decisions regarding daily issues (Ron, 2004). Death anxiety is an attitude that an individual holds towards death. It is defined as a negative and apprehensive feeling that one has when thinking about death and dying (Richardson et al., 1983) and is used interchangeably with fear of death (Feifel & Nagy, 1981; Wink & Scott, 2005). It also defined as "vague uneasy feeling of discomfort or dread generated by perceptions of a real or imagined threat to one's existence" (Moorhead et al., 2008). Several studies have shown that when death awareness and its associated anxiety are increased, individuals respond by defending and/or intensifying their cultural beliefs (Pyszczynski et al., 2004). A study revealed that 47.5% elders are having mild death anxiety and 52.5% are having moderate level of death anxiety and 40% of elders are having mild level of death depression and 60% of elders are having moderate level of death depression (Sridevi, 2014). It also found that there is no significant difference between death anxiety, death depression based on age, gender, SES, educational background of the elders

and the rural background elders are having more death anxiety and death depression than urban background elders (Sridevi, 2014).

Depression is a common but frequently unrecognized or inadequately treated condition in the elderly (Cindy & Helen 2011). In the elderly population, either in the institution or non institution, depression is the commonest mental illness (Nandi et al., 1997). Depression in the elderly is a widespread problem that is often not diagnosed and frequently under treated in Korea (Yang & Rim, 2006; Kim et al., 2009). The levels of depression of institutionalized Korean elderly are reported to be higher than those of community residing elderly (Oh & Choi, 2005; & Kim et al., 2009). Loneliness and worsening health have been shown to be risk factors for depressive symptoms. Cacioppo et al., (2006) reported that higher levels of loneliness were associated with more depressive symptoms in older adults. In the process of aging, elderly people experience decreasing physical function and worsened general health (Crews & Zavotka 2006; Bishop et al., 2006; & Kim et al., 2009). It has been found that when considering psychosocial status such depression has a relationship with health (Jeon, Kim, & Kim, 2005; & Kim et al., 2009). Residents in nursing homes have many physical and psychosocial needs, as elderly people who move into nursing homes experience a rapid change in their psychophysical balance (Degenholt et al., 2005; Scocco et al., 2006; & Kim et al., 2009). Recent studies found that the prevalence of depression was 56%, of which 23.2% had severe depression. Sixty percent of the female population and 52% of the male population were found to have depression. Some other study found that female participants would have lower death anxiety, and death anxiety levels would not differ between young adults and older adults (Chuin & Choo). Another study found that 69.5% females and 68.2% males had an average condition; while, 16.3% females and 19.6% males showed low level of death anxiety and whereas, 14.2% females and 12.2% males reported high death anxiety (Tavakoliet al., 2011). Prevalence of depression was found to be significantly higher among those chronic diseases, family conflicts, and lack of psychological support. There was no significant association with age, lack of financial support, literacy level, marital status and absence of a leisure time activity (Wijeratne, et al., 2000). The state of well being varies from 22.1% to 52.1% in the elders and the prevalence rate of mental morbidity is 89/1000 elders with geriatric depression accounting for 60/1000 (Rao, 1993). The study also revealed that geriatric depression is prevalent in rural south India. (Dubey, et, al., 2011). Studies revealed that institutionalized elderly have more stress and less quality of life compared to non-institutionalized ones (Mathew et al., (2009). A study found that the institutionalized elders are having significant depression and suicidal ideation than non-institutionalized elders and single elders are having significant depression and suicidal ideation than coupled elders. Male elders are having more depression than female elders but in suicidal ideation female elders are having more than male elders. The study also revealed that there is no significant difference in depression and suicidal ideation between institutionalized elders and non-institutionalized elders based on age, educational background, socio economic status but urban elders are showing significant suicidal ideation than rural elders (Sridevi, 2014). The point prevalence of elderly suicidal ideation

was 6.1%. Female gender, age over 85 years, low level of education, single status, unemployment. No income, disability, current smoking, self-perceived bad to very bad health, depressive symptoms, various physical disorders (heart disease, diabetes, asthma, osteoporosis), and pain symptoms (joint pain, lower back pain, neck pain, sciatica, headache) were strongly associated with suicide ideation (Hsiang-Lin et al., 2011). The poor physical health including poor vision problems, hearing problem, and greater number of diseases and poor mental health especially in the form of depression are predictor of suicidal ideation in the elderly population (Yip et al., 2003). A research on the social networks of older persons in India to find the impacts of residency in old-age homes, gender differences, and joint and nuclear family residence. This research demonstrates that social networks are important for the welfare of older Indians, one can conclude that social policy that encourages the maintenance of robust networks throughout the life course may be worth pursuing. The analysis of the relationship between social network and gender suggests that current policies that can be seen as supporting gender inequality in terms of property may have a negative impact on the networks of older women (Willigen & Chadha, 2003). Some of the studies concluded that there is a need to pay interdisciplinary attention to the mental health of elderly residents of nursing homes, particularly in the preliminary stages of placement and adjustment (Ron, 2004). Previous findings also suggest that depression can be associated with an increased risk of incidence of dementia and ideation of suicide in the elderly (Devanand et al., 1996; Kim et al., 2009). Therefore, healthcare providers need to recognize the factors associated with depression in the institutionalized elderly so they can be prevented. Treatment for the elderly patients with depression should involve biopsychosocial dimensions targeting mood, cognition and functional ability at the same time (Cindy & Helen 2011).

## II. METHODOLOGY

**Aim:** The aim of the study is to examine the death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders.

### **Objectives:**

1. To assess death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders.
2. To assess death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders based on type and gender of the elders.
3. To assess death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders based on age, educational background, socio economic status and domicile of elders.

### **Hypothesis:**

1. There would be significant difference in death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders.

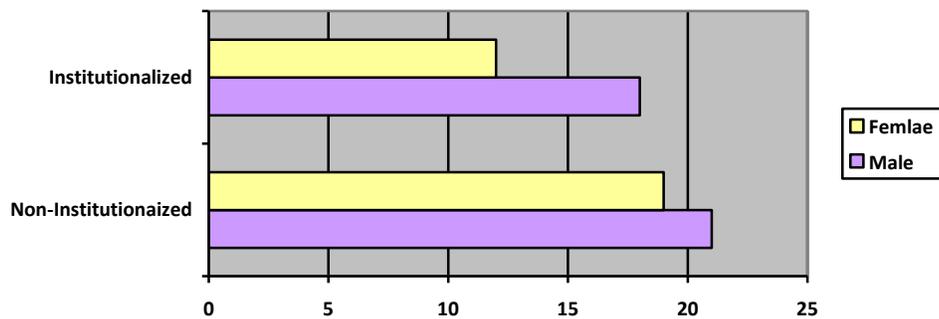
2. There would be significant deference in death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized and non-institutionalized elders based on type and gender of the elders.
3. There would be significant difference in death anxiety, death depression, geriatric depression and suicidal ideation among institutionalized elders and non-institutionalized elders based on age, educational background, socio economic status and domicile of elders.

**Procedure:** The sample consists of 40 elders who are staying at old age home (Institutionalized) at Warangal, and 40 elders who are staying with their families (Non-Institutionalized) in the surroundings of Warangal. The tools Socio demographic data for the purpose of the study, Death Anxiety (DAS) developed by Templer D.I (1970), Death Depression Scale (DDS) developed by Templer et al., (1990), Geriatric Depression Scale (GDS) developed by Yesavage J.A. in 1983 and The

Modified Scale for Suicidal Ideation developed by Ivan W. Miller in 1991 were used in this study. The elders who were institutionalized, elders who were staying along with their family members, the age range of the elders is 60-80yrs with both genders, and the elders who are single, widows, diverse and couples were included in this study. The elders who have Alzheimer's and Parkinson disorder, neurological conditions, substance abuse, and having any past or present psychiatric history were excluded from the study. 40 samples collected from old age home and 40 samples collected who are staying with their family members. Informed consent was taken from the participants from who are willing to participate in this study. Mean, Standard deviation were calculated, student 't' test & 'F' test were used to find out the significance of difference between the elders for various variables selected for the study.

### III. RESULTS & DISCUSSION

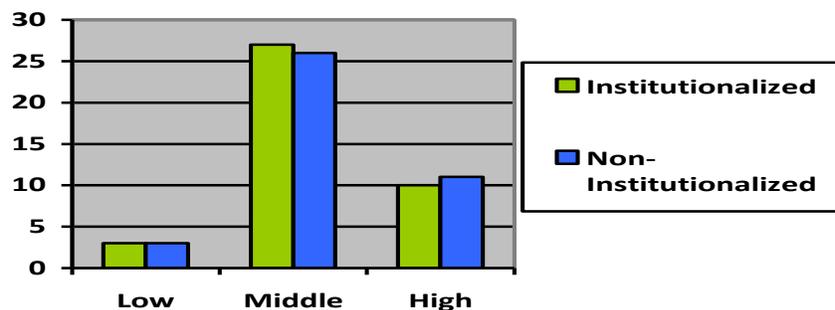
**Graph-1: Institutionalized & non-institutionalized elders based on gender**



The graph-1 gives demographic data of institutionalized and non institutionalized elders based on gender. It gives that Non-institutionalized female elders are 19 (48%), male elders are 21

(52%) and institutionalized female elders are 12 (30%), male elders are 18 (70%). In this sample male elders are more than female in both institutionalized and non-institutionalized elders.

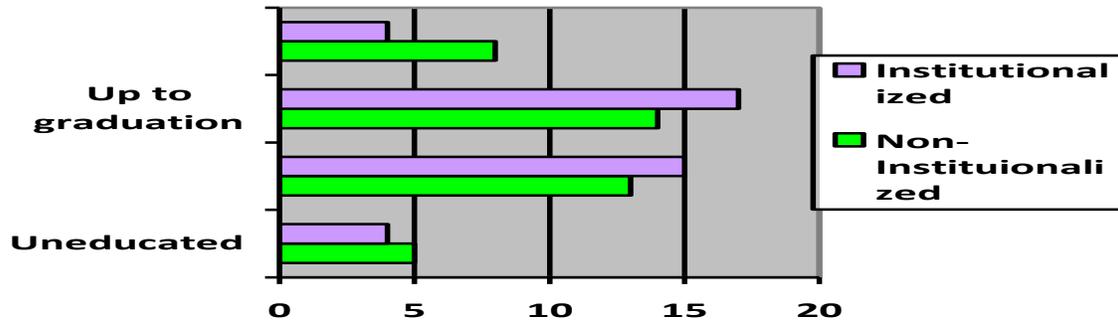
**Graph-2: Socio Economic Status of Institutionalized & non-institutionalized elders**



Graph-2 gives the socio economic status of non-institutionalized elders and institutionalized elders. The Non-institutionalized elders from low Socio Economic Status are 3(7.5%), middle SES are 26(65%), and high economic status are,

11(27.5%). The institutionalized elders from low SES are 3(7.5%), middle SES are 27(67.5%), and high economic status are, 10(25%). In this sample middle socio economic status elders are more than low and high socio economic status.

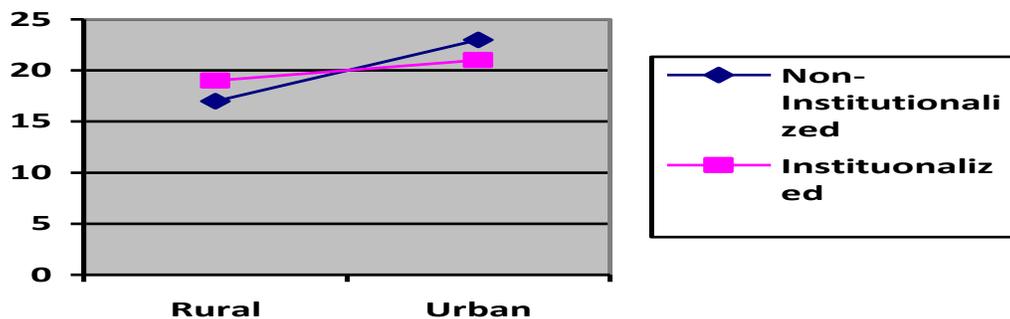
**Graph-3: Educational Background of Institutionalized & non-institutionalized elders**



Graph-3 gives the educational background of the institutionalized and non-institutionalized elders. Non-Institutionalized elders educational background such as uneducated are 5(11%), up to 10<sup>th</sup> class are 13(30%), up to graduation are 14(31%), and post graduation & above are

8(18%). Institutionalized elders educational backgrounds such as uneducated are 4(10%), up to 10<sup>th</sup> class are 15(38%), up to graduation are 17(42%), and post graduation & above are 4(10%). In this sample most of the elders are educated up to 10<sup>th</sup> class and graduated from both the groups.

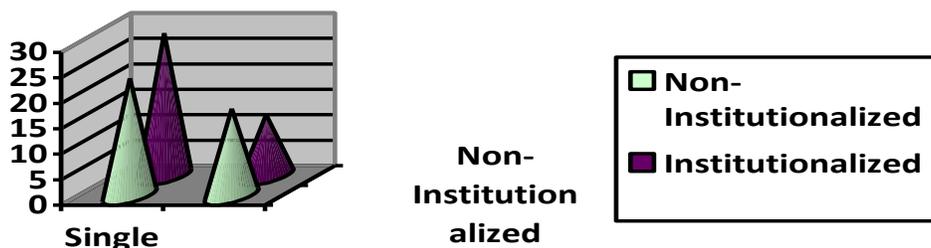
**Graph-4: Domicile of Institutionalized & non-institutionalized elders**



Graph-4 gives the domicile of the institutionalized and non-institutionalized elders. Non-institutionalized elders from rural background are 17(39%) and urban background are 23(52%).

Institutionalized elders from rural background are 19(47.5%) and urban background are 21(52.5%). In this sample most of the elders are belongs to urban background from both the groups.

**Graph-5: Type of (Single/Coupled) Institutionalized & non-institutionalized elders**



Graph-5 gives the type (Single/Coupled) of institutionalized and non-institutionalized elders. Non-Institutionalized single elders are 23(52%) and coupled elders are 17(39%).

Institutionalized single elders are 28(70%) and coupled elders are 12(30%). Most of the elders are single elders from both the groups.

**Table-1: Means, SD and significance of death anxiety, death depression, geriatric depression & suicidal ideation in non-institutionalized and institutionalized elders**

Item	Type	N	Mean	SD	t	df	
DAS	Institutionalized	40	7.35	1.92	0.387	78	0.7
	Non-Institu	40	7.17	2.11			
DDS	Institutionalized	40	9.5	2.81	3.17	78	0.003*
	Non-Institu	40	7.92	1.54			
GDS	Institutionalized	40	18.95	4.01	5.50	78	0.000**
	Non-Institu	40	14.70	2.76			
RSSI	Institutionalized	40	26.92	7.95	3.73	78	0.000**
	Non-Institu	40	20.75	6.78			

Table -1 gives the Means, SD and significance of death anxiety, death depression, geriatric depression and suicidal ideation in institutionalized and non-institutionalized elders. There is no significant difference in death anxiety among institutionalized and non-institutionalized elders. The Mean(±)SD scores of death anxiety in institutionalized elders is 7.35(±)1.92 and in non-institutionalized elders is 7.17(±)2.11. The both institutionalized and non-institutionalized elders are having same level of death anxiety. There is a significant difference in death depression among institutionalized elders and non-institutionalized elders. The Mean(±)SD scores of death depression in institutionalized elders is 9.5(±)2.81 and in non-institutionalized elders is 7.92(±)1.54. When the two groups

compared, the institutionalized elders are having significant death depression than non-institutionalized elders and it is significant at 0.00 level.

It also shows that there is a significant difference in depression and suicidal ideation among institutionalized and non-institutionalized elders. The Mean(±)SD scores of depression in institutionalized elders is 18.95(±)4.01 and in non-institutionalized elders is 14.7(±)2.76 and for suicidal ideation in institutionalized elders is 26.92(±)7.95 and in non-institutionalized elders is 20.75(±)6.78. When the two groups compared, the institutionalized elders are having significant depression and suicidal ideation than non-institutionalized elders and it is significant at 0.000 level.

**Table-2: Significance of death anxiety, death depression, geriatric depression & suicidal ideation in Non-Institutionalized and institutionalized elders based on gender and type of elders (Single/Coupled)**

Type	Item	Gender	Single/Coupled
<b>Non-Institutionalized</b>	<b>DAS</b>	0.000**	0.13
	<b>DDS</b>	0.75	0.001**
	<b>GDS</b>	0.00**	0.73
	<b>RSSI</b>	0.02*	0.04*
<b>Institutionalized</b>	<b>DAS</b>	0.69	0.202
	<b>DDS</b>	0.09	0.39
	<b>GDS</b>	0.578	0.04*
	<b>RSSI</b>	0.802	0.01*

Table -2 gives the significance of death anxiety, death depression, geriatric depression & suicidal ideation in institutionalized and non-institutionalized elders based on gender and type of elders. There is no significant difference in death anxiety and death depression among institutionalized elders based on gender but there is a significant difference in death anxiety among non-institutionalized elders based on gender. The Mean(±)SD scores of death anxiety in female institutionalized elders is 7.15(±)1.8 and in male elders is 7.42(±)2.00. The Mean(±)SD scores of death anxiety in non-institutionalized female elders is 5.68(±)1.82 and in male elders is 8.52(±)1.28.

For death depression in institutionalized female elders is 8.66(±)1.07 and in male elders is 9.85(±)3.23. The Mean(±)SD in non-institutionalized female elders is 7.84(±)1.57 and male elders is 8(±)1.54. It shows that the non-institutionalized male elders are having significant death anxiety than female elders and it is significant at 0.001 level. It also shows that there is no significant difference in death anxiety and death depression between institutionalized male and female elders. The institutionalized male and female elders are having same level of death anxiety and death depression among them. When the two groups compared; for total 80 elders, the Mean(±)SD scores of

death anxiety in female elders is 6.25(±)1.93 and in male elders is 7.89(±)1.8 and the Mean(±)SD sores of death depression in female elders is 8.16(±)1.43 and in male elders is 9.06(±)2.78 It shows that the institutionalized elders that male elders are having significant death anxiety than non-institutionalized elders and it is significant at 0.000 level. All the elders are showing same level of death depression among them.

There is a significant difference in depression and suicidal ideation among institutionalized and non-institutionalized elders based on gender. The Mean(±)SD sores of depression in female institutionalized elders is 19.5(±)3.5 and in male elders is 18.71(±)4.23. The Mean(±)SD in non-institutionalized female elders is 12.84(±)1.5 and in male elders is 16.38(±)2.57. For suicidal ideation in institutionalized female elders is 27.41(±)7.51 and in male elders is 26.71(±)8.25. The Mean(±)SD in non-institutionalized female elders is 17.38(±)7.95 and male elders is 23.80(±)6.28. It shows that the non-institutionalized male elders are having significant depression and suicidal ideation than female elders and depression is significant at 0.001 level and suicidal ideation is significant at 0.01 level. It also shows that there is no significant difference in depression and suicidal ideation between institutionalized male and female elders. The institutionalized male and female elders are having same level of depression and suicidal ideation among them. When the two groups compared; for total 80 elders, the Mean(±)SD sores of depression in female elders is 15.41(±)4.11 and in male elders is 17.71(±)3.76. It shows that the institutionalized elders are having significant depression and suicidal ideation than non-institutionalized elders and it is significant at 0.000 level.

It also gives that there is no significant difference in death anxiety among institutionalized and non-institutionalized elders based on type of elders but there is a significant difference in death depression among non institutionalized elders. The Mean(±)SD sores of death anxiety in single institutionalized elders is 7.6(±)2.09 and in coupled elders is 6.75(±)1.35. The Mean(±)SD in non-institutionalized single elders is 7.6(±)1.87 and in coupled elders is 6.58(±)2.31. For death depression the Mean(±)SD in institutionalized single elders is 9.75(±)3.14 and in coupled elders is 8.91(±)1.78. The Mean(±)SD in non-institutionalized single elders is 8.6(±)1.15 and coupled elders is 7(±)1.54. It shows that both institutionalized and non-institutionalized single and coupled elders are having same level of death anxiety. The non-institutionalized single elders are showing significant death depression than coupled elders and it is significant at 0.001 level. There is no significant difference in death depression among institutionalized elders which indicates that institutionalized single and coupled elders are having same level of death depression. When the two groups compared; single elders are having significant death anxiety and death depression than coupled elders. Death anxiety is significant at 0.01 level and death depression is significant at 0.001 level.

It shows that there is a significant difference in depression and suicidal ideation among institutionalized and non-institutionalized elders based on type of elders. The Mean(±)SD sores of depression in single institutionalized elders is 20.1(±)4.11 and in coupled elders is 16.25(±)2.09. The Mean(±)SD in non-institutionalized single elders is 14.56(±)2.38 and in coupled elders is 14.88(±)3.27. For suicidal ideation in

institutionalized single elders is 29.42(±)7.45 and in coupled elders is 21.08(±)5.88. The Mean(±)SD in non-institutionalized single elders is 22.65(±)6.77 and coupled elders is 18.17(±)6.77. it shows that non-institutionalized single and coupled elders are having same level of depression, but single elders are showing significant suicidal ideation than coupled elders and it is significant at 0.01 level. The institutionalized single elders are showing significant depression and suicidal ideation than coupled elders and it is significant at 0.01 level. When the two groups compared; single elders are having significant depression and suicidal ideation than coupled elders. Depression is significant at 0.01 level and suicidal ideation is significant at 0.001 level.

**Table-3: Significance of death anxiety, death depression, geriatric depression and suicidal ideation among elders based on age, educational background, SES and domicile.**

Item	Age	Education	SES	Domicile
DAS	0.927	0.309	0.685	0.241
DDS	0.625	0.074	0.626	0.004**
GDS	0.286	0.721	0.314	0.882
RSSI	0.204	0.473	0.629	0.047*

Table -3 gives the Means, SD and significance of death anxiety, death depression, geriatric depression and suicidal ideation in institutionalized and non-institutionalized elders based on age range of elders, education, Socio economic status and domicile of the elders. When the two groups compared there is no significant difference in death anxiety and death depression institutionalized elders and non-institutionalized elders based on age range of the elders. All the elders are having same level of death anxiety and death depression. The Mean(±)SD sores of death anxiety in uneducated, educated up to 10<sup>th</sup> class, graduated and post graduated elders are 7.88(±)2.31, 7.28(±)1.8, 7.41(±)2.14 and 6.3(±)1.8 respectively. The Mean(±)SD sores of death depression in uneducated, educated up to 10<sup>th</sup> class, graduated and post graduated elders are 7.88(±)1.61, 8.21(±)1.75, 9.58(±)3.13 and 8.25(±)1.05 respectively. The Mean(±)SD sores of death anxiety in low SES, middle SES, and high SES of elders are 6.66(±)2.25, 7.37(±)1.82, and 7.14(±)2.43 respectively. The Mean(±)SD sores of death depression among low SES, middle SES, and high SES of elders are 7.83(±)2.78, 8.7(±)1.71, and 8.9(±)3.5 respectively.

The Mean(±)SD sores of death anxiety in rural and urban background of elders are 7.55(±)1.91, and 7.02(±)2.07 respectively. The Mean(±)SD sores of death depression among rural and urban background of elders are 9.5(±)2.68, and 8.04(±)1.89 respectively. It shows that there is no significant in death anxiety and death depression among elders based on educational background, socio economic status and domicile. All the elders are having same level of death anxiety and death depression but rural elders are showing significant death depression than urban elders and it is significant at 0.05 level. It also gives the Means, SD and significance of Depression & suicidal ideation in institutionalized and non-institutionalized

elders based on age range of elders, education, Socio economic status and domicile of the elders. When the two groups compared there is no significant difference in depression and suicidal ideation between institutionalized elders and non-institutionalized elders based on age range of the elders. All the elders are having same level of depression and suicidal ideation. The Mean( $\pm$ )SD sores of depression in uneducated, educated up to 10<sup>th</sup> class, graduated and post graduated elders are 18.22( $\pm$ )2.53, 16.42( $\pm$ )3.59, 16.74( $\pm$ )4.55 and 16.91( $\pm$ )4.71 respectively. The Mean( $\pm$ )SD sores of suicidal ideation in uneducated, educated up to 10<sup>th</sup> class, graduated and post graduated elders are 25.33( $\pm$ )7.76, 22.25( $\pm$ )8.11, 25.22( $\pm$ )7.59 and 22.83( $\pm$ )8.91 respectively.

The Mean( $\pm$ )SD sores of depression in low SES, middle SES, and high SES of elders are 19.83( $\pm$ )9.02, 16.75( $\pm$ )3.84, and 16.33( $\pm$ )4.4 respectively. The Mean( $\pm$ )SD sores of suicidal ideation among low SES, middle SES, and high SES of elders are 22.83( $\pm$ )9.02, 23.49( $\pm$ )8.1, and 23.85( $\pm$ )7.45 respectively.

The Mean( $\pm$ )SD sores of depression in rural and urban background of elders are 16.88( $\pm$ )4.6, and 16.88( $\pm$ )3.57 respectively. The Mean( $\pm$ )SD sores of suicidal ideation among rural and urban background of elders are 21.88( $\pm$ )8.52, and 25.43( $\pm$ )7.2 respectively. It shows that there is no significant in depression and suicidal ideation among elders based on educational background, socio economic status and domicile. All the elders are having same level of depression and suicidal ideation. But urban elders are showing significant suicidal ideation than rural elders and it is significant at 0.01 level.

**Table-4: Correlation of DAS, DDS, GDS and RSSI**

Item	DAS	DDS	GDS	RSSI
DAS	1	0.364**	0.366**	0.351**
DDS	0.364*	1	0.264*	0.055
GDS	0.366**	0.264*	1	0.722**
RSSI	0.351**	0.55	0.722**	1

\*\* Correlation is significant at the 0.01 level.

\* Correlation is significant at the 0.05 level.

Table-4 gives the correlation of DAS, DDS, GDS and RSSI and they are correlated at 0.01 level and 0.05 level but there is no correlation found between DDS and RSSI.

#### IV. CONCLUSION

- The institutionalized elders are having significant death depression, geriatric depression and suicidal ideation than non-institutionalized elders and having same level of death anxiety in both elders.
- The single elders are having significant death anxiety, death depression, geriatric depression and suicidal ideation than coupled elders.
- The male elders are having significant death anxiety than non-institutionalized elders and all the elders are showing same level of death depression. There is gender difference on depression and suicidal ideation among institutionalized and non-institutionalized elders which

indicate that male elders are having significant geriatric depression and suicidal ideation than female elders.

- There is no significant difference in death anxiety, death depression, geriatric depression and suicidal ideation between institutionalized elders and non-institutionalized elders based on age, educational background, socio economic status and domicile of elders. All the elders are having same level of death anxiety and death depression but rural elders are showing significant death depression than urban elders and urban elders are showing significant suicidal ideation than rural elders.

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## **A Study of the Effect of Dzikir on the Psychology of Students With Disciplinary Problems Using Heart Rate Variability (HRV)**

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**Abstract:**-'*Dzikir*' recitation was combined with biofeedback for this experiment. Recitation of '*dzikir*' (Islamic recitation) is known to have positive impacts towards emotion. When properly recited, '*dzikir*' could bring calmness to the mind and emotions. An emotion at peace could then bring better results from any actions. Twenty secondary school students with disciplinary misbehavior were chosen to undergo a biofeedback procedure that incorporated '*dzikir*' recitation. '*Dzikir*' intervention enabled the students to make changes themselves using the technique of "Heart Rate Variability" (HRV). Students were given technical chanting slowly and loudly of the 'la ilaha illa Allah' '*dzikir*'. The study found that students who successfully completed the '*dzikir*' training were able to make changes within themselves. The students had successfully achieved the change score "HRV Coherence" of the VLF spectrum of LF and HF spectrum conditions. The study had found that this technique was very effective and suitable to be implemented to assist students in making behavioral changes. This technique can be used in schools to improve the effectiveness of the disciplinary problems prevention programs and thus enabling education programs to be implemented successfully.

**Keywords:** '*dzikir*', biofeedback, heart rate variability

### **INTRODUCTION**

Disciplinary problems among secondary school students in Malaysia are reported to be getting more serious. Until now, various techniques and approaches have been implemented in order to decrease and deal with all manner of disciplinary problems in schools. Generally, the approach being normally taken is guidance and counseling by the teachers.[1] However, in dealing with more serious disciplinary cases, court ruling is involved and the problematic students would be placed at correctional institutions. At these institutions, the students would undergo rehabilitation programs which are focused towards planned behavioral changes with the implementation of a module being developed within a period of 6 months to a year.[2]

Biofeedback has been recognized as the latest technique to help individuals in self control (mind & emotions). Through this technique, the individual's performance in self control would be quantified and displayed on the computer monitor. This physiological information is a product of psychological reactions, in which any psychological changes would affect the physiology. This combined information is crucial in learning intervention training program. The objective of the training is rehabilitation; therapies involved are to alter the psychological components that are difficult to be seen and quantified. [2] The emotional status has direct and significant effects on behaviors. Individuals who could control their emotions effectively could then better control whatever activities they are involved in. Those who failed to control their emotions would normally get themselves involved in behavioral problems.[3]

### ***Dzikir***

The recitation of *dzikir* was incorporated in the experiment. Recitation of *dzikir* (Islamic recitation) is known to have positive impacts towards emotion. The word "*dzikir*" is derived from the Arabic word "*dzakara*" which means remembering.[3] As a terminology, it means practice speech through recitations and remembrance of Allah, The Creator. *Dikir* is the best traditions of worship and most pleasing to Allah, the lightest and most easily done by not having certain conditions and rules. It can

be done at any time, any place and at any state.[4] *Dikr* has psychological and spiritual benefits. Psychologically, it gives a sense of spiritual comfort and it gives a sense of being closer to God [5]

For this research, the *zikr* methods used were *jahri* and *sirri*. *Jahri* means reciting verbally or aloud by tongue. *Sirri* or *khofi* means reciting in an undertone manner or in heart. *Dzikr jahri* was commonly practiced during the time of Prophet Muhammad (s.a.w), especially after prayers[6] Prophet Muhammad (s.a.w) also mentioned that *dzikr sirri/khofi* is considered as the best of *dzikr* but *dzikr jahri* is also allowed.[6] Based on this, despite the difference in *dzikr* recitations, both have their own effects on human's physiology as being explained in the next paragraph. The effect of *dzikr* recitation was already being proven in a previous experiment. [11]

*Dzikr*, when properly recited could bring calmness to the mind and emotions. An emotion at peace could then bring better results from any actions. The words recited during *dzikr* recitation acts as the focal point in treating a person from within. When combined with psychological relaxation within a person, it would positively influence the autonomic nervous system (a control system in the body that acts largely unconsciously) in regulating the heart rate, respiratory rate and the metabolic rate [7], by lowering the physiological processes.

This experiment was focused on a group of secondary school students who were known to have disciplinary problems. These students were chosen because they could be categorized as those failing to properly control their emotions. What needed was a mean to calm their emotion and thus better control their own behaviors. *Dzikr* recitation was perceived as the most probable solution to this situation.

Individuals who are able to control emotions would be able to control their behavior better and on beneficial ways.[3] On the other hand, individuals who are unable to control their emotions would face difficulties to perform activities accordingly. They would be easily worried, restless and angry while engaged in any activities. [3] This was expected to be proven by this biofeedback experiment. The recitation of *dzikr* would give certain effects on the emotions of these students.

HRV biofeedback is known to be directly influenced by emotional states. There are three related types of spectrum for this biofeedback: VLF or very low frequency, which is lower than 0.03 Hz; LF or low frequency, which is within the range of 0.03 to 0.15 Hz; and HF or high frequency, which is within the range of 0.18 to 0.4 Hz.[8] Anxiety, for example, is an emotional disturbance. Studies have shown that it has certain effects on HRV and HRV biofeedback training could help solving this problem.[12]

The effectiveness of *dzikr* in improving students through the similar biofeedback exercises was already proven by an experiment done before.[11] The experiment concluded that *dzikr* could significantly decrease the level of anxiety and stress which has remarkable effect on HRV. The changes of mind-body condition were also perceptible during the study.[11]

A high reading of HRV (LF and HF) indicates creativity, psychological flexibility and capacity to adopt faster response in cognitive, affective and physiological emphasis. A low reading of HRV (VLF) shows anxiety, depression and different cardio-vascular. Health factors can also cause an increase in certain heart rhythms; including emotional, anxious thinking, breathing, pressure in the arteries and other behavioral and physiological changes.[3]

The effectiveness of the *dzikr* procedure depends on the student's faith in Allah, The Creator. It could be said as being the matter of the heart, it is closely related to one's emotions. When recited in an undertone manner, or *sirri*, it would be closer to one's heart and it would be more effective to achieve calmness compared to reciting it by *jahri*.

## METHOD

The objective of this experiment was to analyze the effects of *dzikr* recitation on the biofeedback responses of a group of students. The main biofeedback equipment being used in the experiment was emWave desktop Software Kit devices, to detect their emotion through their heart rate rhythm. The same equipment was also being used in a previous experiment [3].

Before the experiment started, these following items must be made available:

1. Student's demographic form (family background information)
2. Guardian's and student's consent form (permission from parents and student)
3. Student's objective form (student's aspirations)
4. Nijmegen Questionnaire (student's physical health conditions)
5. Student's academic record (student's academic performance)
6. Student's disciplinary record (disciplinary offences)

Before the experiment commenced, the information and data about the students must be obtained. The physiological status of the students must be good, so that it would not influence the results. At this stage also, all the relevant forms must be completed. While doing that, the researcher must try to create a friendly environment with the students and tried to make the students felt comfortable.

The next stage was to get the basic HRV readings of the students. These readings would act as a baseline for next experiments. Three minutes was allocated to take the HRV readings of each student. The HRV sensor was attached to the student's ear. After briefly explaining the device to the student, the 'start' button was pressed and the student's HRV reading was taken for three minutes. These readings would act as baseline or reference for the next procedures. After the end of this first session (baseline reading 1), the students should know their actual heart performance at this state based

on the readings of the coherent ratios (red, blue and green bars)

The next stage of the experiment was *dzikr* recitation by *jahri* or aloud. The students were requested to recite the *dzikr La ilaha illa Allah* aloud. Students were reminded to remember Allah in heart while reciting. They were required to inhale slowly through their nose and while exhaling through their mouth, they recited *la ilaha illa Allah*. This exercise would proceed for three minutes. The students' HRV readings were taken throughout the exercise.

The final stage of the experiment was reciting *dzikr* in an undertone manner or *sirri*. Each student was requested to recite the *dzikr* in three minutes and their HRV readings were taken throughout the time. They were required to inhale slowly through their nose and while exhaling through their mouth, they recited *ilaha illa Allah* in their hearts.

## RESULT

The aim was to assess the coherent physiological state, failing which students could change and the emotional coherence reading would increase. Coherence after *dzikr* was higher than normal (baseline). According to the average coherence rate, students in the experiment group, the coherence of HRV biofeedback from baseline to *dzikr* recitation effect was so effective because in most of the cases, the coherence increased.

Referring to Table 2, it could be observed that the value of the VLF was decreasing from pre-*dzikr*, at 68.5 to post-*zikr (sirri)* at 57.5. For the LF spectrum, the value decreased after *jahri* recitation of *dzikr*, from 20 to 18.2, but it reached the highest value after *sirri* recitation at 22.4. However, for the HF spectrum, it showed consistent increase form pre-*dzikr* to post-*dzikr (sirri)*, 14.3 to 16.6 and finally 20.4.

Measures	Mean values			Standard deviation		
	VLF	LF	HF	VLF	LF	HF
HRV						
Pre	68.5	20	14.3	20.4	16.8	15.3
Post 1 ( <i>jahri</i> )	64.7	18.2	16.6	24.4	12.3	22
Post 2 ( <i>sirri</i> )	57.4	22.4	20.4	21.6	12.3	20

**Table 2: Mean Values, Standard Deviation of Average Coherence Rate: At Pre and Post**

The ANOVA statistical test was done to determine the significant difference against the data. The result was shown in **Table 3** below:

Groups	Count	Sum	Average	Variance
VLF	20	1370	68.5	414.3684
LF ( <i>pre-dziker</i> )	20	400	20	283.0526
HF	20	286	14.3	233.2737
VLF	20	1294	64.7	597.5895
LF ( <i>post-jahri</i> )	20	364	18.2	151.7474
HF	20	332	16.6	483.8316
VLF	20	1147	57.35	467.2921
LF ( <i>post-sirri</i> )	20	447	22.35	151.0816
HF	20	408	20.4	417.3053

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	82673.9	8	10334.24	29.0692	2.87E-28	1.9929
Within Groups	60791.3	171	355.5047			
Total	143465.2	179				

**Table 3: ANOVA Test for Significant Difference**

If  $F > F_{crit}$ , the populations are not equal. In this ANOVA test, as shown in **Table 3**, F value was 29.0692 and the value of F crit, was 1.9929. Therefore there was significant difference between the values. The values of VLF, LF and HF before *dziker* recitation and after were all significantly different. There was sufficient evidence to conclude that there was a difference between the value of VLF pre-*dziker* and the values of all spectrums post-*dziker*. The ANOVA statistical test done showed that there was significant difference between the values concerned, i.e the values at baseline and the values after *dziker* recitation, *jahri* and *sirri*.

## DISCUSSION

The observations showed that there were changes in HRV readings in response to the changes in the students' psychophysiology. HRV detected signals after undergoing training on emotional remembrance. When the students started to change to a more emotional calmness, the HF (high frequency) also increased. During this, the student's heart rate was lowered and the beat to beat interval was increased [9]. When the coherent sample was in a state of calm, pulse wave was very smooth then HF would increase. Otherwise, when the individuals were in a state of emotional change, the pulse wave- variable and VLF and LF would increase. The student's heart rate increased and thus lowering the beat to beat interval.[9]

The *jahri* & *sirri* recitation of *dziker* had their effect on the VLF spectrum. The value after *dziker* by *jahri* was lower than the baseline value but the lowest value was after recitation of *dziker* by *sirri*. It showed that the *dziker* recitations had the effect in calming the student's hearts. For the LF spectrum, the value decreased a bit after *jahri dziker* recitation if compared with the baseline value. At this stage, the subjects were in the state of emotional change. There was a disruption in the LF spectrum readings.

[9] According to a study performed by Prima et. al, students achieved high anxiety level in pre test or baseline.[12] This explains the disruption in the LF spectrum readings. However, in this experiment, the value increased back to reach its maximum value after the *sirri* recitation of *dzikr*. The student's emotion became more stable and calm after the *sirri* recitation of *dzikr*.

The HF spectrum showed a different pattern. The value increased after the *jahri* recitation of *dzikr* if compared with the baseline value. It reached its highest value after *sirri* recitation. The value increased consistently. The *sirri dzikr* recitation calmed the student's emotion and thus achieved the desired coherent score. The *dzikr* recitation had calming effects on the students' emotions. As mentioned before in the '*Dzikr*' section of this paper, it was proven by a previous experiment.[11]

The values obtained from this experiment were being tested for significant difference. The result of this test was shown in Table 3. There was significant difference between the values; pre and post *dzikr* recitation. It showed that *dzikr* recitation had affected the HRV biofeedback readings. Similar results were being recorded in previous experiment involving *dzikr* recitation and biofeedback.[11]

This difference showed that there was always a gap between a calm emotional state and a disturbed one. The difference after the recitation of *dzikr* showed how effective *dzikr* recitation was towards calming and stabilizing the emotions. Thus, it further proved the effectiveness of *dzikr* in treating psychological disturbances.

The recitation of *dzikr* is a religious practice. Through religious practice and religious experience; individuals are able to create positive emotions that have association with mental health. Positive emotions that come from religious practice and experience may buffer the daily hassles and stress. Through rituals and rites of passage, religion can increase the positive psychological outcomes by providing community support during major life changes like marriage and death. The religious community promotes altruism, generosity, and forgiveness attitude that enhance the meanings of an individual life. Through these religious practices and beliefs, communities are strengthened and expanded, providing individuals the access to greater social support while also strengthening familial bonds. Finally, religion creates a framework through which social mores can be understood and followed. In this way, the avoidance of certain behaviors (e.g., criminal behavior, substance abuse) that can lead to negative mental and physical health consequences is encouraged and strengthened in the religious community.[10]

## CONCLUSION

Based on the results, *sirri* recitation of *dzikr* is more effective in inducing calmness, compared to *jahri* recitation. The inclusion of *dzikr* recitation in the biofeedback procedure has produced positive results. Therefore, *dzikr* recitation is an essential element in this procedure. It could be concluded also that a combination of nijmigen questionnaires, modules biofeedback chanting and breathing exercises could be used to help students at risk to make behavioral changes. This procedure could be implemented in schools as a strengthening program to improve students' performance and behavior. Although this method requires the usage biofeedback devices, which are expensive, it should not be a barrier for schools and the Ministry of Education to provide the relevant equipment and training to the teachers involved in the program. Training programs and the implementation of this module would make the process of counseling and student performance improvement become more interesting and dynamic.

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# Religiosity and Death Anxiety of College Students

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## ABSTRACT

*This study examines the relationship among gender, religiosity, and death anxiety. A total of 236 college student participants completed the Intrinsic Religious Motivation Scale, Revised Death Anxiety Scale, and a personal questionnaire. Factor analyses, Pearson correlation, and both linear and quadric regression analyses were conducted. The results showed a relationship between religiosity and death anxiety, and a positive relationship between intrinsic religious motivation and frequency of religious service attendance and strength of belief. Female participants seemed to show more fear of pain than their male counterparts. A curvilinear relationship was present because people of intermediate religious motivation had higher death anxiety than those who were both high and low on the religious motivation scale.*

**Keywords:** *religiosity, death anxiety, college student*

## INTRODUCTION

Humans *face* the reality of death. Regardless of status or wanting to live longer or not, the reality of death is present in everyone's life. Certain people are more anxious of their death than others. Richardson, Berman, and Piwowarski (1983) stated, "Death anxiety refers to a negative reaction, and an apprehension and uneasiness which one experiences when contemplating death and dying" (p. 149). A factor that may influence an individual's level of death anxiety is the strength of his or her religious beliefs (Leming, 1979, 1980; Richardson et al.).

Ellis and *Wahab* (2012) describe four theories that provide implications for how religiosity and fear of death may be related. These theories are buffering theory, terror-management theory, curvilinearity theory, and death apprehension theory. Several studies that examined the relationship between religiosity and death anxiety were described in a meta-analysis of intrinsic and extrinsic religiousness by Donahue in 1985. Several studies showed positive correlations, others showed negative correlations, and several showed no significant correlations. However, most studies indicated that death anxiety appeared to be lower in people with strong and integral religious views, and greater in people with more expedient religious beliefs. Numerous studies showed no relation when employing superficial measures of religion (e.g., denominational affiliation). Other studies showed that people who possess intrinsic religious motivations have significantly lower levels of various types of death anxiety than people with extrinsic religious motivations (Clements, 1998; Kraft, Litwin, & Barber, 2001; Martin & Wrightsman, 1965; Minear & Brush, 1980-1981; Richardson et al., 1983; Suhail & Akram, 2002; Templer, 1972). One study indicated that people with regular attendances at religious services have less death anxiety (Duff & Hong, 1995), whereas another indicated that a strong religious commitment was an important determinant of the fear of death (Spilka, Minton, & Sizemore, 1977).

Conversely, a *few* studies have indicated that weak or no religious beliefs are related to a low death anxiety (Cole, 1978, 1979; Ray & Najman, 1974). This contradictory finding may originate from the presence of a curvilinear relationship between religiosity and death anxiety. At least four studies have

suggested that the relationship between religiosity and death anxiety may have a curvilinear component (Aday, 1984-1985; Leming, 1979, 1980; McMordie, 1981; Nelson & Cantrell, 1980). These four studies employed psychometrically sound measures of death anxiety, but their measures of religiosity were weak. Aday employed frequency of church attendance and a single-item measure of religiosity with unknown reliability and validity. McMordie employed a checklist with unknown reliability and validity, in which participants rated themselves as extremely religious, very religious, somewhat religious, slightly religious, not at all religious, or anti-religious. Both measures of religious attendance and orthodox Christian beliefs were included in the study by Nelson and Cantrell. Unfortunately, no evidence of the reliability or validity of the scale was presented. Leming employed a measure of orthodox Christian beliefs with unknown reliability and validity. Studies that identified a curvilinear component in the relationship between religiosity and fear of death were marked by poor and limited measures of religiosity.

One purpose of *this* study is to examine the presence of a curvilinear relationship with better measures and a broader measure of religiosity. This study focuses on intrinsic religious motivation. People with intrinsic religious motivations seek to internalize their religious beliefs, make those beliefs a central aspect of their lives, and live out those beliefs in their lives, irrespective of whether they have orthodox beliefs and attend church regularly (Clements, 1998).

Gender differences in death anxiety have frequently been observed. Females were shown to have more death anxiety in several studies (Abdel-Khalek, 1991; Abdel-Khalek & Omar, 1988; Aday, 1984-85; Davis, Bremer, Anderson, & Tramill, 1983; Ray & Najman, 1974; Schumaker, Barraclough, & Vagg, 2001; Suhail & Akram, 2002; Tang, Wu, & Yan, 2002; Templer, Lester, & Ruff, 1974; Young & Daniel, 1980). At least three studies have shown no significant gender difference (Abdel-Khalek, 2002; Cole, 1978, 1979; Fortner & Neimeyer, 1999), but Cole identified an interaction in single people of a specific gender; single males ( $n = 10$ ) had more death anxiety than single females ( $n = 14$ ).

This study alleviates several shortcomings of previous studies in this area by using the Intrinsic Religious Motivation Scale (IRMS; Hoge, 1972) and the Revised Death Anxiety Scale (RDAS; Thorson & Powell, 1994). Both scales are more sophisticated than those used in numerous previous studies of death anxiety. The most important reason for conducting this study was to compare results with previous studies, which had led to contradictory conclusions regarding the relationship between religiosity and death anxiety. Furthermore, the lapses in understanding from the varied conclusions regarding gender may be alleviated. This study was designed to answer the following research questions: Is there a curvilinear relationship between religiosity and death anxiety when religiosity is measured by intrinsic religious motivation? Is there a curvilinear relationship between religiosity and death anxiety when religiosity is measured by the frequency of attendance at religious services? Do males and females differ in their levels of death anxiety and religiosity?

## METHOD

### Sample

Participants were 236 students at a midsized university in Colorado. All students who participated in the study were 18 years of age and older. Participants were men ( $n = 81$ , 34%) and women ( $n = 155$ , 66%) with a mean age of 23.07 ( $SD = 6.35$ ). Both undergraduate students ( $n = 179$ , 76%) and graduate students ( $n = 57$ , 24%) were included, and most participants were single ( $n = 204$ , 86%). Their religious affiliations were as follows: Catholic, 25% ( $n = 59$ ); Protestant, 36% ( $n = 86$ ); Buddhist, 6% ( $n = 14$ ); Agnostic, 4% ( $n = 10$ ); Atheist, 5% ( $n = 12$ ), and other, 24% ( $n = 55$ ). These figures included participants who chose "other"

and 6 participants who were members of various unspecified religions. Strengths of religious beliefs are as follows: *very strong*, 43% ( $n = 102$ ); *somewhat strong*, 42% ( $n = 100$ ); *not very strong*, 7% ( $n = 16$ ); *not at all*, 3% ( $n = 8$ ); and *I don't believe*, 4% ( $n = 10$ ). Attendance frequency of religious services or meetings were several times a week, 20% ( $n = 47$ ); once a week, 20% ( $n = 48$ ); several times a month, 11% ( $n = 26$ ); several times a year, 23% ( $n = 53$ ); less than once a year, 13% ( $n = 30$ ); never, 9% ( $n = 20$ ); and other, 5% ( $n = 12$ ). A total of 224 participants were included in the attendance frequency of religious services or meetings during statistical analysis when "other" was omitted.

### **Instrumentation**

Participants completed two scales, the IRMS and the RDAS, and a demographic questionnaire. All instruments were administered simultaneously in a group setting.

Intrinsic Religious Motivation Scale (IRMS) (Hoge, 1972). Allport and Ross (1967) showed a distinction between intrinsic and extrinsic religious motivations with the IRMS. Intrinsic are described as people who seek to internalize their religious beliefs, make those beliefs a central aspect of their lives, and live out those beliefs in their lives. Extrinsic are people who are religious for benefits, such as sociability, security, and solace, or status in the community (Clements, 1998). The IRMS is a 10-item scale, which comprises 10 statements that measure the various ways of being religious. Although it was developed and tested within the Christian tradition, only 2 of the 10 items make specific references to God, and no item refers specifically to Christianity (Hill & Hodd, 1999). Seven intrinsic items are at the top of this scale, and three extrinsic items are at the bottom of the list. A higher score indicated a higher extrinsic religious orientation (Clements; Hill & Hodd). The reliability of the scale was identified as .90 (KR-20), and is highly related to ratings of intrinsic religious motivation (Hoge).

Revised Death Anxiety Scale (RDAS) (Thorson & Powell, 1994). The RDAS consists of 25 statements concerning different elements of the fear of death. According to Thorson, Powell, and Samuel (1998), the "elements of death anxiety assessed by the scale include fears of pain, uncertainty, bodily decomposition, isolation, loss of control, and not being" (p. 1173). The RDAS is a scale with 25 items, and high scores indicate a high death anxiety. The scale has an acceptable reliability and validity (Tang et al., 2002; Thorson & Powell, 1998).

Demographic questions. The demographic section of the questionnaire was designed specifically for this study. This section of the questionnaire consisted of demographic questions regarding characteristics such as gender, age, student status, marital status, and religious affiliation. Two questions targeted religiosity: 1) How strong is your religious belief? Very, Somewhat, Not very, Not at all, or I don't believe, scored 1-5, respectively. A low score indicated a high religious belief. 2) How often do you attend religious services or meetings? Several times a week, Once a week, Several times a month, Several times a year, Less than once a year, or Never, scored 1-6, respectively. A low score showed high attendance services.

## **RESULTS**

### **Measurement Issues**

Before examining the relationship between religiosity and death anxiety, we examined the reliabilities and factor validity of the instruments. Examining the reliability and validity within each study is desirable because reliability and validity are not inherent properties of instruments, but are properties of instruments in particular groups of people (Vacha-Haase, 1998).

Principal axis factor analysis was conducted for both the IRMS and the RDAS. The Kaiser-Meyer-Olkin (KMO) statistics value of the IRMS was .92, and the KMO of the RDAS was .87. The significant chi-square in Bartlett's test of sphericity indicated that both scales were suitable for factor analysis because the correlation matrix was unlikely to be the identity matrix (Cerney & Kaiser, 1977). The number of factors to be extracted was determined using parallel analysis (Kaufman & Dunlap, 2000). Proximax rotation was implemented, and its degree of obliqueness was determined by a hyperplane count (Gorsuch, 1983).

Only one factor was extracted for the IRMS. The first two eigenvalues were 5.69 and 1.26, and the first two eigenvalues from the parallel analysis were 1.44 and 1.30, respectively, which indicates that only one factor accounts for more variance than a corresponding analysis of random numbers. Therefore, the IRMS was assumed to be unidimensional. The reliability and internal consistency of the scale was .92, which is slightly above the reliability reported by Hoge (1972).

However, the RDAS was not unidimensional. Three factors were found for the RDAS. Only the three initial eigenvalues (7.36, 2.16, and 1.67) were greater than the 1.76, 1.61, and 1.53 values, respectively, of the parallel analysis. When determining the obliqueness of the rotation, the hyperplane count showed that a kappa of 4 yielded the best approximation to a simple structure. Moreover, there was a moderate correlation among the three factors (Factor 1 with Factor 2 = .40 and Factor 3 = .50; Factor 2 with Factor 3 = .34). The first factor *Fear of Dying* has 11 items (3, 2, 9, 22, 20, 18, 7, 12, 14, 6, and 19), the second factor *Fear of Pain* has 5 items (15, 1, 23, 10, and 8), and the third factor *Fear of Body Decay* has 4 items (11, 4, 25, and 17). The first factor corresponds to a general fear of death. Cronbach's alpha (internal consistency reliability) of the three factors is .91, .73, and .61, respectively. Cronbach's alpha is .87 for the 25 items of the RDAS.

### **Correlates of Measures of Religiosity**

All three measures of religiosity were significantly related (Table 1). A positive relationship exists between the IRMS and attendance frequency, and a positive relationship exists between the IRMS and strength of belief. Moreover, a positive relationship exists between the attendance frequency and strength of belief. This pattern supports the validity of the IRMS.

### **Gender, Age, and Death Anxiety**

Few significant correlations exist with gender. A significant positive relationship between gender and Factor 2 suggests that female participants seem to show more Fear of Pain than their male counterparts. The IRMS was non-significantly related to gender, and there were few significant correlations with age. A positive relationship between age and Factor 2 indicated that older people seem to experience more Fear of Pain than younger participants. A positive relationship between age and the IRMS indicated that older participants seem to possess greater extrinsic religious motivations than young participants.

### **Religiosity and Death Anxiety**

A relationship exists between religiosity and death anxiety. The IRMS and Frequency of Attendance were significantly related to the RDAS and Factor 1; Factor 3 was related solely to Factor 1. Participants with high scores on the IRMS (persons with "extrinsic" religious motivation) reported significantly higher levels of death anxiety than participants with low scores on the IRMS (persons with "intrinsic" religious motivation). Only the RDAS total and Factor 1 were used when examining the existence of a curvilinear relationship between the IRMS and Death Anxiety because they best represent the construct of general

death anxiety. Two approaches were used to examine the curvilinear relationship: statistical analysis and visual inspection. Both the linear and quadric terms were examined with a multiple regression using the Curve Estimation procedure in SPSS to examine whether a curvilinear quadric relationship exists. The quadratic term accounted for nearly twice as much variance than the linear for both the RDAS total and RDAS Factor 1. A nonparametric smoothing function was applied to the scatter plots between the IRMS with RDAS and RDAS Factor 1 (Systat 11). For nonparametric smoothing, a weighted function of a data subset provides a local estimate for a region without the priori parameters found in parametric smoothing. The results for the RDAS total are shown in Figure 1 and for RDAS Factor 1 in Figure 2. A curvilinear relationship exists between people of intermediate religious motivations with higher death anxiety and both people with high and low on religious motivations (see Curve Fit).

**Table 1: Correlations of RDAS and IRMS**

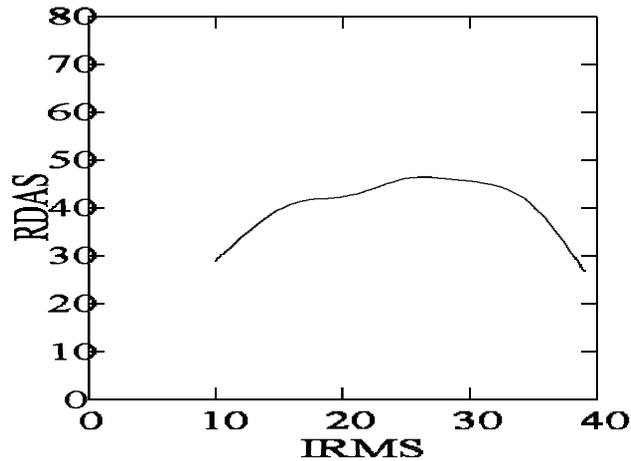
Item	Frequency of Attendance	Strength of Belief	IRMS	RDAS			Total	Sex	Age
				Factor					
				1	2	3			
Attendance	1.00	.65**	.71**	.31**	.12	.26**	.27**	-.05	.09
Belief	.65**	1.00	.67**	.19**	-.01	.09	.10	-.02	.10
IRMS	.71**	.67**	1.00	.33**	.04	.18**	.23**	-.08	.19**
RDAS									
Factor 1	.31**	.19**	.33**	1.00	.37**	.43**	.89**	-.00	-.04
Factor 2	.12	-.01	.04	.37**	1.00	.31**	.65**	.19**	.15*
Factor 3	.26**	.09	.18**	.43**	.31**	1.00	.65**	.10	-.13
RDAS Total	.27**	.10	.23**	.89**	.65**	.65**	.00	.09	-.01
Sex	-.05	-.02	-.08	-.00	.19**	.10	.09	1.00	-.14*
Age	.09	.10	.19**	-.04	.15*	-.13	-.01	-.14*	1.00

\*\* Correlation is significant at the .01 level (2-tailed).

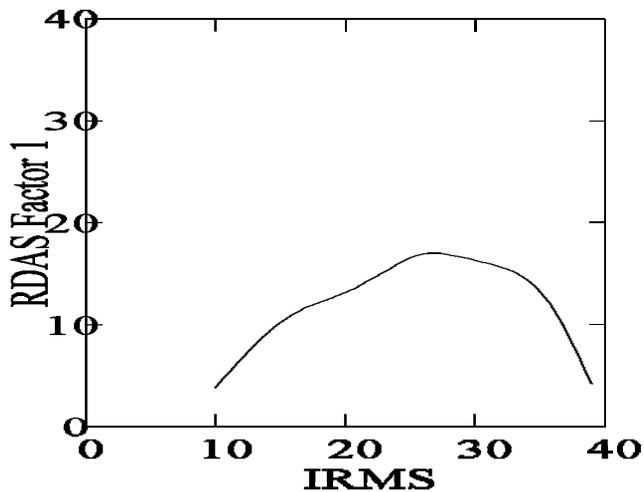
\* Correlation is significant at the .05 level (2-tailed).

For nonparametric smoothing, a weighted function of a data subset provides a local estimate for a region without the priori parameters found in parametric smoothing. The results for the RDAS total are shown in Figure 1 and for RDAS Factor 1 in Figure 2. A curvilinear relationship exists between people of intermediate religious motivations with higher death anxiety and both people with high and low on religious motivations (see Curve Fit).

A series of analysis of variance (ANOVA)-based trend analyses (Tabachnick & Fidell, 2001) were conducted for the three RDAS factors and the RDAS total to further examine this curvilinear relationship by using religious attendance as the predictor variable. Twelve participants were omitted from the analysis because of unusable responses to the demographic survey. A significant linear and quadric trend was identified for Factor 1 [ $F(1, 218) = 11.50, p < .001$ ;  $F(1, 218) = 18.21, p < .001$ ; respectively] and RDAS total [ $F(1, 218) = 7.06, p < .01$ ;  $F(1, 218) = 21.40, p < .001$ ; respectively]. A significant quadric trend was identified for Factor 2 [ $F(1, 218) = 0.69$ ;  $F(1, 218) = 13.25, p < .001$ ; respectively], but not a linear trend. For Factor 3, a significant linear trend was found for Factor 2 [ $F(1, 218) = 10.78, p < .001$ ;  $F(1, 218) = 2.84, ns$ , respectively], but not for the quadric trend. A curvilinear relationship exists between people of intermediate religious attendance with higher death anxiety/fear of dying and people high and low on the religious attendance scale.



**Figure 1: Plot of Revised Death Anxiety Scale (RDAS) total on Intrinsic Religious Motivation Scale (IRMS) with nonparametric smoothing**



**Figure 2: Plot of Revised Death Anxiety Scale (RDAS) Factor 1 on Intrinsic Religious Motivation Scale (IRMS) with nonparametric smoothing**

### DISCUSSION

The analysis suggests the presence of both a curvilinear and linear trend; that is, intermediate levels of religiosity showed a higher death anxiety than either extremes. Moreover, highly religious people showed a lower death anxiety than non-religious people; thus, the relationship appears to be an inverted “J.”

This result differs from that of the Templer and Dotson (1970) study, whereby identified religious variables do not appear to be related to death anxiety, but is similar to that obtained by Clements (1998) who reported that people with intrinsic religious motivations showed significantly lower levels of various types of death anxiety compared to people with extrinsic religious motivations. Moreover, this result was similar to those of studies in which religiosity was argued to be correlated with a low fear of death (Clements; Kraft et al., 2001; Martin & Wrightsman, 1965; Minear & Brush, 1980-1981; Richardson et al., 1983; Suhail & Akram, 2002; Templer, 1972). For example, Young and Daniel (1980) stated that born-again Christians show a lower death anxiety compared to non-born-again Christians. However,

whether people with religiosity owe living with benevolence to philosophy as a type of consoling factor is unknown. Therefore, a further qualitative study is recommended.

A positive relationship exists between intrinsic religious motivation and attendance frequency of religious services or meetings and strength of belief. Moreover, we discovered a positive relationship between attendance frequency and strength of belief. A positive relationship was identified between attendance frequency and death anxiety. This study indicates that a higher attendance frequency of religious services or meetings indicates lower death anxiety. This result is similar to that obtained by Adays (1984-1985) and Duff and Hong (1995), where people who attended church more often had a lower death anxiety. These findings support Durkheim's (1915) notion regarding the importance of participation in shared religious rituals. According to Duff and Hong, central to this ritual theory is solidarity, shared meanings, and a sense of transcendent continuity that becomes more striking in public religious rites; these religious rites strengthen people and protect people from negative thinking. It is different from everyday social interaction.

In the linear regression model of this study, the sum of the IRMS explains only 5.1% of the variability on the RDAS at a significant level [  $F(1, 234) = 12.58, p < .01$  ]. However, a curvilinear relationship exists between people of intermediate religious motivation with higher death anxiety and people who are high and low on the religious motivation scale. This result is similar to that obtained by McMordie (1981), Aday (1984, 1985), Leming (1979, 1980), and Nelson and Cantrell (1980); they noted that a curvilinear relationship existed between people of intermediate religious participation with higher death anxiety and people who were high and low on the religious dimension. A strong belief system may foster a perception of increased control and predictability, which lessens the fear of death. This means that religion may reduce death anxiety when accompanied by a high degree of commitment.

Generally, from a Christian viewpoint, death is like heading home. It is a joyful event because the world is similar to a hotel that is inhabited temporarily. The Bible states that "You don't even know what your life tomorrow will be! You are like a puff of smoke, which appears for a moment and then disappears" (James 4:14). We often prepare for death in life. In this circumstance, we prepare for graduation from each school of life in various stages. Graduation brings responsibility, and responsibility brings courage and loyalty (Bolding, 1974). Therefore, people require determination, perseverance, and sincerity to face life, including death and dying.

In the Bible, Jesus said, "I am the resurrection and the life. Whoever believes in me will live, even though he dies; and whoever lives and believes in me will never die. Do you believe this?" (John 11:25-26). In this study, the participants showing moderate religiosity (religiously ambivalent) have a high death anxiety. If participants have uncertain beliefs, they may be afraid of being refused by God and not know what will occur after death; thus, they have high death anxiety. The reverse is also true; if people know deeply what is occurring in this life, they know they will be accepted by God or gods after death. People may ascertain that death is not death and that after death they will obtain eternal life. Nonbelievers may believe that there is no heaven or hell and that when a person dies, he/she closes his/her eyes and stops breathing; he or she does not know anything and owes nothing. Therefore, a person's death is similar to a light being turned off; the life is ended. Furthermore, no one dies and returns to inform us of the afterlife situation. Nonbelievers may use this reasoning as a manner of believing that death is the end; thus, they may experience lower death anxiety. A future qualitative study is required to understand the differences in religious thoughts among a high religious motivation, low religious motivation, and moderate religiosity group.

There is no gender effect on religiosity and the death anxiety. However, a positive relationship exists between gender and Factor 2 [Fear of Pain ( $r = .19, p < .01$ )], and no relationship exists among gender, Factor 1 (Fear of Dying), and Factor 3 (Fear of Body Decay). This study indicates that female participants

seemed to show more Fear of Pain than male participants. These results differ from those obtained by previous studies: the Abdel-Khalek and Omar (1988) study, in which Kuwaiti college students participated; the Abdel-Khalek (1991) study, in which a Lebanese secondary school and college students participated; and the Tang et al. (2002) study, with Chinese college participants that indicated that females attained higher mean death anxiety scores than their male counterparts. In this study, female participants showed more Fear of Pain than male participants; we must examine the reason.

According to Abdel-Khalek (1991), if specific environmental events have been brought into a person's life, it can change their outlook on death anxiety. The potential for war in the Middle East has always been present. Abdel-Khalek stressed that his Lebanese participants may be different because of different social, political, and historical factors. The participants of this study may have not faced death or other violent acts as an everyday occurrence, which may have given them a different outlook on death and dying compared to the Israelis.

The results of this study are similar to those obtained by Abdel-Khalek (2002), which indicated that no gender differences were detected among college students. However, these findings were researched solely in Arabic and mainly among Muslim college students. In this study, the participants were from numerous different religions. Each participant had their own philosophy of life. The participants of this study had a mean age of 23 years; they were young. There was a positive relationship between age and the IRMS ( $r = .19, p < .01$ ); older participants seemed to possess greater extrinsic religious motivations than young participants. Several undergraduate participants were potentially members of churches, and convenient sampling may have influenced the results of this study.

People with extrinsic religious motivations may at times experience more death anxiety and be in greater need of counseling than people with intrinsic religious motivations. If people need death education, religious issues can be provided by television, magazines, and websites. Moreover, the results of this study suggest that the IRMS of the internal consistency reliability with Cronbach's alpha is .92, and the RDAS of the internal consistency reliability with Cronbach's alpha is .87.

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