DOI: https://doi.org/10.53350/pjmhs2115103217

ORIGINAL ARTICLE

The Effect of Exercise on Death Anxiety

HASAN BUĞRA EKİNCİ[1], AHMET YAVUZ MALLI[2], NURCAN DEMİREL[3], CEMIL TUĞRULHAN ŞAM[4]
[1,2]Erzincan Binali Yıldırım University, Sports Science Faculty
[3,4]Atatürk University, Sports Science Faculty
Correspondence to: Hasan Buğra Ekinci, Email: hasan.ekinci@erzincan.edu.tr, Cell: +905326030414

ABSTRACT

Aim: This research is planned to identify the effect of exercise on death anxiety in women in the post-menopausal period.

Methods: This research is an experiment patterned study (Pre-test/post-test control group model). This model is a two-factor experimental design that shows repetitive measurements (pre-test- post-test) and subjects (experiment-control) in different categories. A total of 36 women voluntarily participated in the study in Erzincan, including 18 women in the experimental group who go through menopause and exercise, and 18 women in the control group who go through menopause and never exercise. The experimental group were given Pilates exercises 3 days a week for 8 weeks, and the control group were asked to preserve their daily lives without regular exercise. In the research, personal information form containing sociodemographic variables of individuals and the Templer Death Anxiety Scale (DAS) form adapted to Turkish by Akça, Köse (2008) were used as data collection tools. After identifying the distribution characteristics in the analysis of the data, paired t-test was used for in-group comparisons and independence sample t-test was used for intergroup comparisons in order to identify the effectiveness of the exercise program and to discover the difference between the first and last test scores of the groups.

Results: In the Death Anxiety Scale, the mean death anxiety score was found to be 8.66 as a result of the pre-test performed in the experimental group. And after the exercise, the mean score was 8.38. Although there was no statistically significant difference, there was a decrease in the death anxiety score averages. The mean pre-exercise death anxiety score of the control group was found to be 8.33. The mean post-exercise score was found to be 8.22.

Conclusion: There was no significant effect of 8 weeks of exercise on death anxiety. It is understood that even if exercise has some positive physical and psychological contributions on the subjects during this period, a strong anxiety such as death cannot be eliminated in such a short time.

Keywords: Exercise, Death Anxiety, Menopause

INTRODUCTION

A human being is born like any living thing, lives for a while and eventually dies, but what distinguishes a human from other living things is that, through their ability to perceive time and to think, they are aware that one day they will taste death. This state of consciousness contributes to the fact that a person acts responsibly and causes fear and anxiety. This excitement, called fear of death or anxiety of death, is considered one of the most important existential states felt[1].

Many intellectuals have tried to explain death anxiety. According to Gustav (1997), for example, the main cause of death anxiety is “fear of life”. The people who are most afraid of living are the people who are most afraid of death[2]. Fromm states that there are two forms of death anxiety. First, the natural fear that death is inevitable when all humans face death; the second is the death anxiety that makes one feel constantly nervous. The anxiety of death, which constantly makes a person nervous, is due to the failure of life and the inability to adequately make use of life[3]. Existentialist Yalom, on the other hand, states that death anxiety exists everywhere and, at all ages, and a person spends a part of one’s life energy on controlling this anxiety[4].

It is death that implements many defense mechanisms in humans. Although working in a way that death never comes to mind suppresses the fear of death that is felt, it will not be able to change the reality of death. Human is helpless in the face of death. A person may complain about the inevitability of death, express their anger and hatred, or try to alleviate this fear with some ceremonies and rituals. Although funeral ceremonies that have survived to the present day vary according to cultures, the main underlying cause is associated with the desire to get rid of death anxiety and escape from it[5]. It can also be considered that exercise can be used as a tool to eliminate death anxiety.

Sport is a concept that develops organically in social life and fuses with culture[6]. Sport can be defined as a pedagogical, biological and social phenomenon that improves a person’s psychological and natural health, allows them to reach a certain level mentally and motorically, and regulates their social behavior[7,8]. It is also known that it significantly increases the psychological, physiological, mental health of people and makes people happy. It is observed that depression and anxiety symptoms decrease in individuals who play sports and that, as a result, individuals become calmer, more peaceful and happier[9].

In general, it is known that death anxiety has a multidimensional structure. Variables such as age, gender, socio-cultural factors, developmental process, personality traits, terminal illness conditions, and religious beliefs are most commonly associated with death anxiety[10,11,12,13].

There is no consensus on the extent to which age affects death anxiety. It is understood that not only age, but also health status, life history, adaptation to the aging process and socioeconomic status play a role in identifying

the level of anxiety[14].

The purpose of this study is to investigate the role of exercise in death anxiety when identifying the level of anxiety..

MATERIAL & METHODS

Research Design: This research is an experiment patterned study (Pre-test/ post-test control group model). This model is a two-factor experimental pattern that shows repetitive measurements (pre-test- post-test) and subjects (experiment-control) in different categories[15].

Research Group: The study was carried out in Erzincan with the participation of 36 healthy-volunteer subjects in total, 18 women in the post-menopausal experimental group and 18 women in the control group.

Data Collection: A medical report was requested from the experimental group indicating that there is no harm in playing sports. The experimental group were given Pilates exercises 3 days a week for 8 weeks, and the control group were asked to preserve their daily lives without regular exercise.

Exercise Program: In the study, the subjects underwent an 8-week Pilates program by a Pilates specialist. In this study, the exercise program designed by Çakmak Yıldızhan, Ağgön was used[16].

Data Collection Tools: In the research, personal information form containing sociodemographic variables of individuals and the Death Anxiety Scale (DAS) form developed by Templer (1970) and first adapted to Turkish by Şenol (1989) are used as data collection tools[17,18]. In this study, which is carried out to discover the anxiety and fear of death on the elderly, the Templer Death Anxiety Scale has been translated into Turkish and the validity and reliability of the scale has been found via face validity and test-retest methods. Test-retest reliability has been found to be .86[18]. In addition, Akça and Köse (2008) conducted the adaptation study of the scale again in their research. Accordingly, the reliability coefficient of the scale has been found to be .79 by the three–week test - retest method[19].

In this study, the Cronbach's Alpha coefficient of the scale is calculated as α=.61 for the pre-test and α=.64 for the post-test. It is observed that the reliability coefficients of the scales used in the study are sufficient. It is also stated that the reliability coefficient is at an acceptable level if it is between .60-.80[20].

Data Analysis: The skewness values of the death anxiety pre-test–post-test score distributions of the experimental and control groups were found to be between (-1.059 and .301) and kurtosis values (1.319 and 0.64). It is stated that it is appropriate to use parametric analyses if the skewness and kurtosis values are between -1.5 and +1.5[21]. SPSS 21.0 program was used in the analysis of the data obtained from the research group. In addition, in order to test the normality of the data, the results of the Kolmogorov-Smirnov (K-S) test were also examined, as the number of data in the study was 36. It is stated that the Kolmogorov-Smirnov test can be used if the sample size is greater than 35[22,23]. If the Kolmogorov-Smirnov test "Sig." values are p≥ .05, the data are also indicated to be normally distributed[24]. Accordingly, paired t-test was used for in-group comparisons, and independence-sample t-test was used for intergroup comparisons.

RESULTS

Table 1. Table showing the design of the study

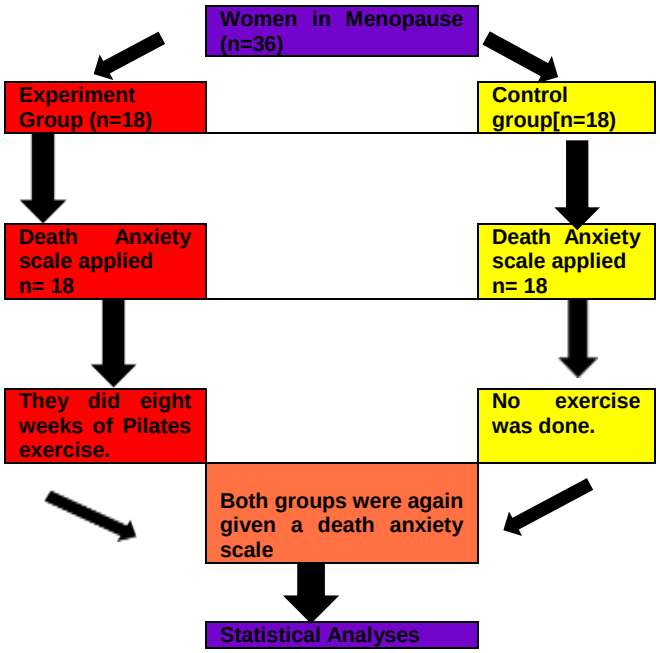

Table 2. Paired Sample t-Test Results on Death Anxiety Score Changes Pre- and Post- Exercise

	Experiment group		Control group		t	p
	ave	ss	ave	ss		
Pre-Exercise	8.6	2.9	8.3	2.6	.435	.669
Post-Exercise	8.3	2.6	8.2	3.04	.185	.855
Paired t-tes/p	.679		.847			

As shown in table 2, there is no statistically significant difference found between these two groups when the test results of the experimental and control group pre- and post-exercise are compared. No statistically significant difference is found when the pre-post test results of the control group were compared. Although there is a decrease in the pre- and post-exercise test results of the experimental group, no statistically significant difference has been found (p>0.05).

DISCUSSION

Although there are very few studies on death anxiety found in the literature review, studies on depression, anxiety and stress levels support this view. As a matter of fact, in Ekici et al. (2008)'s study on women, it is revealed that the Pilates exercise they applied to the participants reduce the depression level in the participants from severe to mild[25]. Babayiğit (2009), in their research on women, finds that a 12-week exercise program reduces anxiety levels in women and improves their quality of life[26]. Antunes et al. (2005) conducts aerobic exercises for participants 3 days a week for 6 months and finds that anxiety decreases and quality of life improves in the experimental group, while there is no change in the control group[27]. In the research carried out by Angın (2012) on women with

postmenopausal osteoporosis, it is seen that Pilates exercises have a positive effect on bone mineral density, muscle strength, flexibility, physical performance and quality of life[28].

CONCLUSION

In the study, it is concluded that although 8-week Pilates exercise reduces the level of death anxiety, it does not affect it in a statistically significant way. Death is one of the most powerful anxieties in human life. When the pre-exercise death anxiety scores of the women participating in the study are examined, it is seen that they have a high level of anxiety. However, it is seen that an 8-week exercise period cannot alleviate such a strong anxiety. Yet, the decrease in post-exercise scores suggests an idea that longer-term exercise programs can be effective. The findings obtained from this research are limited to the scales used, the methods and techniques applied, the sample employed and the time and conditions under which the research was conducted.

As a matter of fact, it would not be correct to generalize the results, and in order to better demonstrate the relationship between death anxiety and exercise in our country, it is necessary to conduct a lot more studies on different sample groups with longer exercise periods and different types of exercises. In this regard, this study is expected to be a reference for future studies.

REFERENCES

1. Yıldız M. Death Anxiety and Religiosity. 2004; İzmir: Theology Foundation Publications.
2. Gustav JC. Spirit and Death (Trans. Ender Gürol, Analytical Psychology). 1997; İstanbul: Paye Publisher.
3. Fromm E. Kendini Savunan İnsan (Çev.Necla Arat). 1994; İstanbul: Say Yayıncılık.
4. Irvin D Yalom. (2011). Existential Psychotherapy (Existential Psychotherapy), Trans: Zeliha İyidoğan Babayiğit. 2011; İstanbul: Kabalacı Publishing.
5. Hökelekli H. Psychology of Religion. 1993; Ankara: Turkish Religious Foundation Publications.
6. Talimciler A. Sociology of Sport Sport of Sociology. 2015; İstanbul: Bağlam Publishing.
7. Ölmez E. Görme The Effect of Sports on the Socialization Process of Persons with Disabilities. Master Thesis. 2010; Ankara: Gazi University.
8. Seçer E, Yıldızhan Çakmak Y. The Relationship between Physical ActivityC Levels and Psychological Resilience of University Students. Propósitos y Representaciones 2020; 8(SPE2): 598.
9. Secer E, Demirel N, Sam C.T. The Effect of the Exercise Program on Attention Deficits and Exam Anxiety Levels of Students Preparing for the LGS Exam through Distance Education during Covid-19 Pandemic Process 2020; Ambient Science: 303-308.
10. Pollak JM. Correlates of Death Anxiety: A Review of Empirical Studies. OMEGA-Journal of Death and Dying 1980; 10:2: 97-121.
11. Aday RH. Belief in Afterlife And Death Anxiety: Correlates And Comparisons. OMEGA-Journal of Death and Dying 1985; 15:1: 67-75.
12. Harrawood LK, White LJ, Benshoff JJ. Death Anxiety in a National Sample of United States Funeral directors and its Relationship with Death Exposure, Age, and Sex. OMEGA-Journal of Death and Dying 2009; 58:2: 129-146.
13. Fortner BV, Neimeyer RA. Death Anxiety in Older Adults: A Quantitative Review. Death Studies 1999; 23:5: 387–411.
14. Kastenbaum R. Death Anxiety. In Encyclopedia of Stress. İn: G. Fink (Ed.). 2000; San Diego: İn chief: Academic Press.
15. Büyüköztürk Ş. Experimental Patterns: Pretest-posttest Control Group Pattern And Data Analysis. 2016; Ankara: Pegem Academy Publications.
16. Çakmak Yıldızhan Y, Ağgön E. The Effects of Regular Physical Activities on Subjective Well-Being Levels in Women of Menopause Period. Balneo Research Journal 2020; 11:2: 224-229.
17. Templer DI. The Construction and Validation of A Death Anxiety Scale. Journal of General Psychology 1970; 82:2: 165–177.
18. Şenol C. Anxiety and Fears Regarding Death in the Elderly Living in Institutions in Ankara Province. Master Thesis. 1989; Ankara: Ankara University Social Sciences Institute.
19. Akça F, Köse İA. Adaptation of Death Anxiety Scale (DAS): Validity and Reliability Studies. Journal of Clinical Psychiatry, 2008; 11:1.
20. Kalaycı Ş. SPSS Applied Multivariate Statistical Techniques (8th Edition). 2018; Detay Publications, Ankara.
21. Tabaschnick BG, Fidell LS. Using Multivariate Statistics (6th Edit.). 2013; Boston: Pearson
22. Demir E, Saatçioğlu Ö, İmrol F. Examining Educational Researches Published in International Journals in Terms of Normality Assumptions. Current Research in Education 2016; 2(3): 130-148.
23. McKillup S. Statistics Explained: An İntroductory Guide for Life Scientists (Second edition). 2012; Cambridge, UK: Cambridge University Press.
24. Field A. Discovering Statistics Using SPSS (Five Edition). 2017; London: SAGE Press
25. Ekici G, Yakut E, Akbayrak T. Effects of Pilates Exercises and Connective Tissue Manipulation on Pain and Depression in Females with Fibromyalgia: A Randomized Controlled Trial. Physiotherapy Rehabilitation, 2008; 19:2: 47-54.
26. Babayiğit DM. The Burden of Caring for Relatives of Dialysis Patients and Its Relationship with Anxiety, Depression and Quality of Life Levels in Patients. 2009; T.R. Ministry of Health Bakirkoy Dr. Sadi Konuk Training and Research Hospital. Master Thesis.
27. Antunes HKM, Stella SG. Santos RF, Bueno OFA, Mello MTD. (2005). Depression, Anxiety and Quality of Life Scores in Seniors After an Endurance Exercise Program. Brazilian Journal of Psychiatry 2005; 27:4: 266-271.
28. Angın E. The Effects of Pilates Exercises on Bone Mineral Density, Physical Performance and Quality of Life in Postmenopausal Women with Osteoporosis. Doctoral Thesisi. 2012; Ankara: Hacettepe University Health Sciences Institute.