THE EFFECT OF MUSİC ON THE COMFORT AND ANXIETY OF THE ELDERLY LIVING NURSING HOME

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The importance of music therapy and

its effects on patients' recovery was emphasized

by Florence Nightingale in the 19th century,

and recognized as a nursing approach

which reduces

pain and anxiety

and increases a patient's comfort.

*Khorshıd L. Akın E. (2007). Mekanik Ventilatöre Bağlı Hastalarda Anksiyete Yönetiminde Müzikle tedavinin Yeri. Yoğun Bakım Hemşireliği Dergisi; 11(2):83-88.

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Comfort,

which includes relief,

achieving tranquility and the ability to overcome problems,

is a subjective concept.

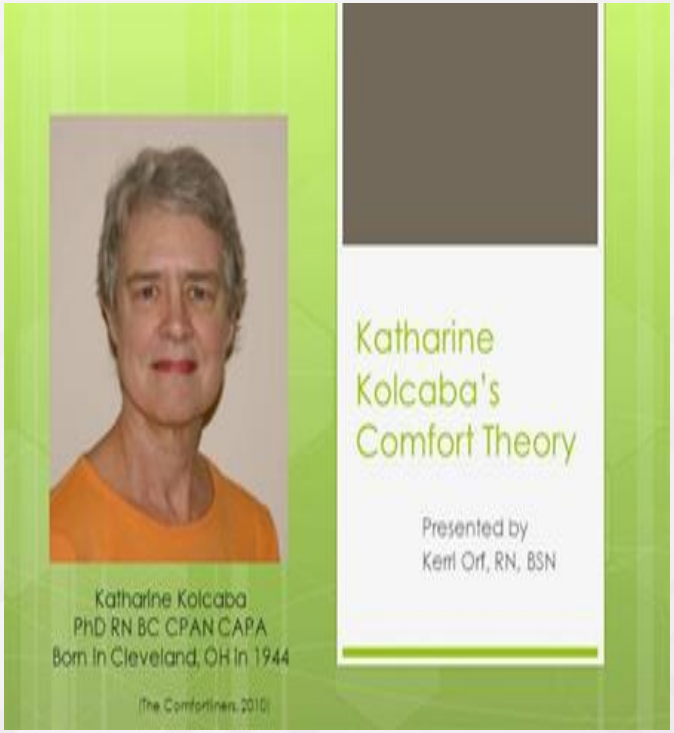
One way of making this concept

as objective as possible is the ability to measure it.

Bekiroğlu, T. (2011). Klasik Türk Müziğinin Hipertansiyon Hastalarının Kan Basınçlarına Ve Anksiyete Düzeylerine Etkisi, Gaziantep Ü. Sağlık Bilimleri Enstitüsü, Yükseklisans Tezi, Gaziantep.

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According to Kolcaba's Comfort Theory, nurses identify the comfort needs of individuals in a stressful health care environment, and implement nursing approaches to increase comfort concerning unmet needs, evaluating the extent to which they achieve the result of eliminating anxiety or reducing it to a minimum.



*Karabacak, Ü. (2004). Meme Kanserli hastalarda Konforu Destekleyici Hemşirelik Bakımının Ve Eğitiminin Radyoterapi Uygulaması ile Etkileşimi, İ. Ü. Sağlık Bilimleri Enstitüsü, Doktora Tezi, İstanbul.

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Anxiety

can be seen as

one of the basic human

emotions.

* Öner, A. (2012). Yetişkin Bireylerin Anksiyete Bozukluğuna Sahip Olup Olmaması ile Kullandıkları Mizah Tarzları Arasındaki ilişkinin incelenmesi, Çukurova Ü. Sosyal Bilimler Enstitüsü, Yüksek lisans Tezi, Adana.

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Nurses,

who are in constant contact with the residents of old people's homes, will naturally act as guides to the old people in reducing anxiety levels and increasing comfort.



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Examining the literature:

We found studies of the use of music with patients

in intensive care units and various clinics in the hospital environment,

but we came across no studies examining

the effects of music on comfort and anxiety specifically on the

residents of the elderly living nursing home.

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AIM



To examine

the effect of music on the residents

of the elderly living nursing home.

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MATERIALS & METHODS



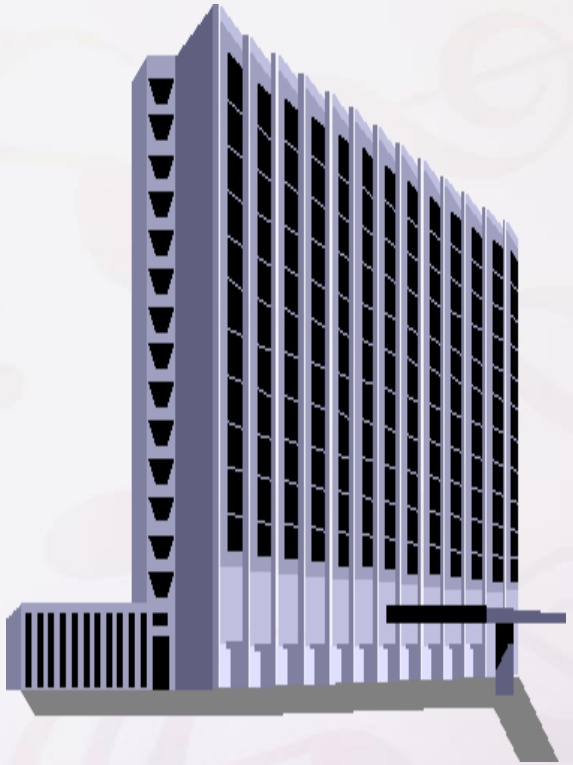
TYPE OF RESEARCH

This was a randomized controlled experimental study, with pre-test, post-test and a control group

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LOCATION AND DATE

The study was conducted at an Izmir Municipality old people's home between **15 December 2013 and 15 May 2014.**



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POPULATION AND SAMPLE









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Inclusion criteria were:

- Being over the age of 60
- Literate
- **Turkish-speaking**





Having no hearing problem

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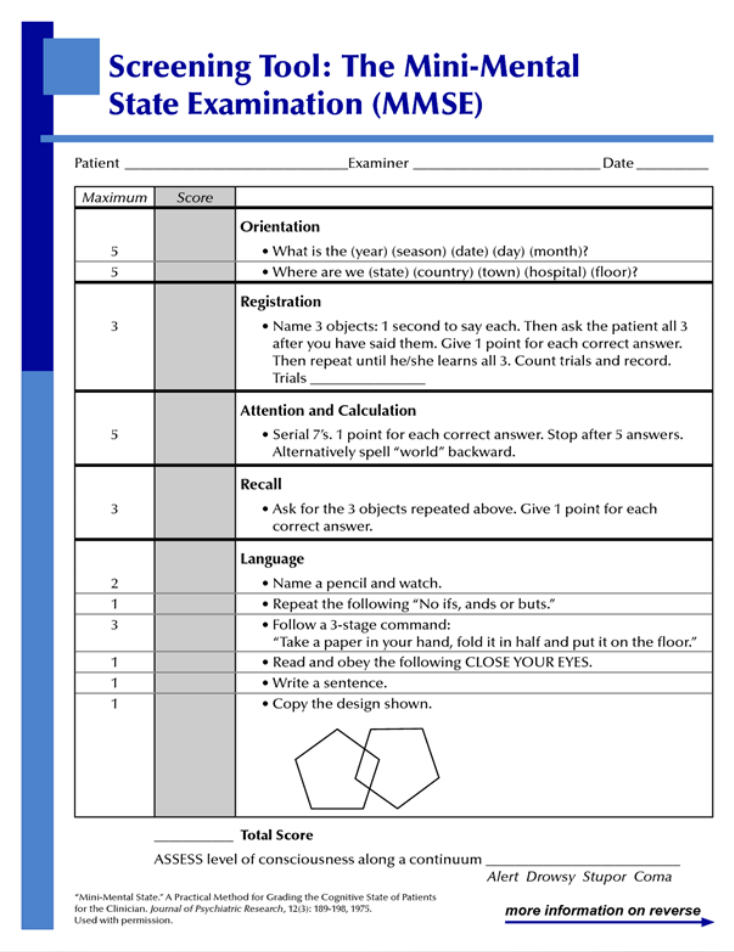
Having normal cognitive functions (Standardized Mini-Mental Test – SMMT):

0-12: severe

13-22: medium

23-24: slight

25-30: no cognitive disorder



Screening Tool: The Mini-Mental State Examination (MMSE)

Patient _____ Examiner _____ Date _____

Maximum	Score	
		Orientation
5		• What is the (year) (season) (date) (day) (month)?
5		• Where are we (state) (country) (town) (hospital) (floor)?
3		**Registration** • Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat until he/she learns all 3. Count trials and record. Trials _____
5		**Attention and Calculation** • Serial 7's. 1 point for each correct answer. Stop after 5 answers. Alternatively spell "world" backward.
3		**Recall** • Ask for the 3 objects repeated above. Give 1 point for each correct answer.
		Language
2		• Name a pencil and watch.
1		• Repeat the following "No ifs, ands or buts."
3		• Follow a 3-stage command: "Take a paper in your hand, fold it in half and put it on the floor."
1		• Read and obey the following CLOSE YOUR EYES.
1		• Write a sentence.
1		• Copy the design shown.

_____ **Total Score**

ASSESS level of consciousness along a continuum _____

Alert Drowsy Stupor Coma

"Mini-Mental State." A Practical Method for Grading the Cognitive State of Patients for the Clinician. *Journal of Psychiatric Research*, 12(3): 189-198, 1975. Used with permission.

more information on reverse

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Not having been exposed to environmental factors

(three or more people living in one room, heat, light, noise)

thought to affect the comfort of old people



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Not having recently suffered an attack of a chronic illness



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- Not having suffered

an acute illness such as flu

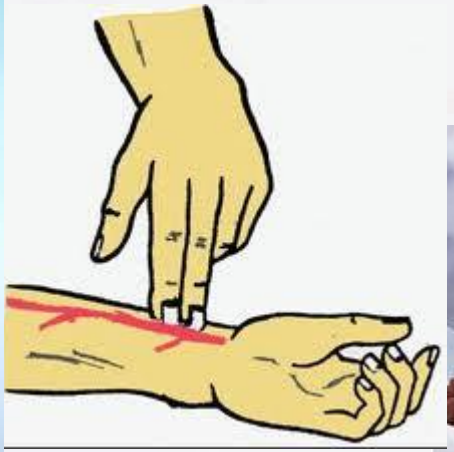
in the past three days



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Showing normal vital signs



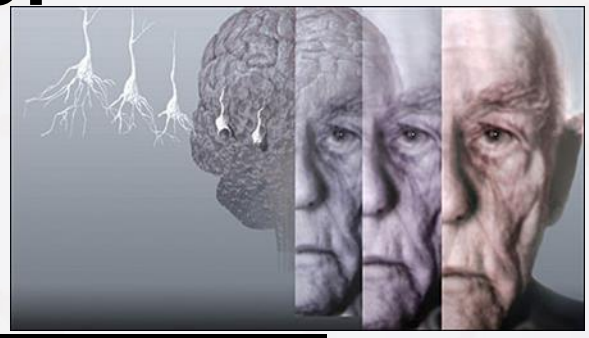




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Not having a diagnosis of

- **Parkinson's,**
- **Alzheimer's,**
- **dementia or**
- **major depression.**

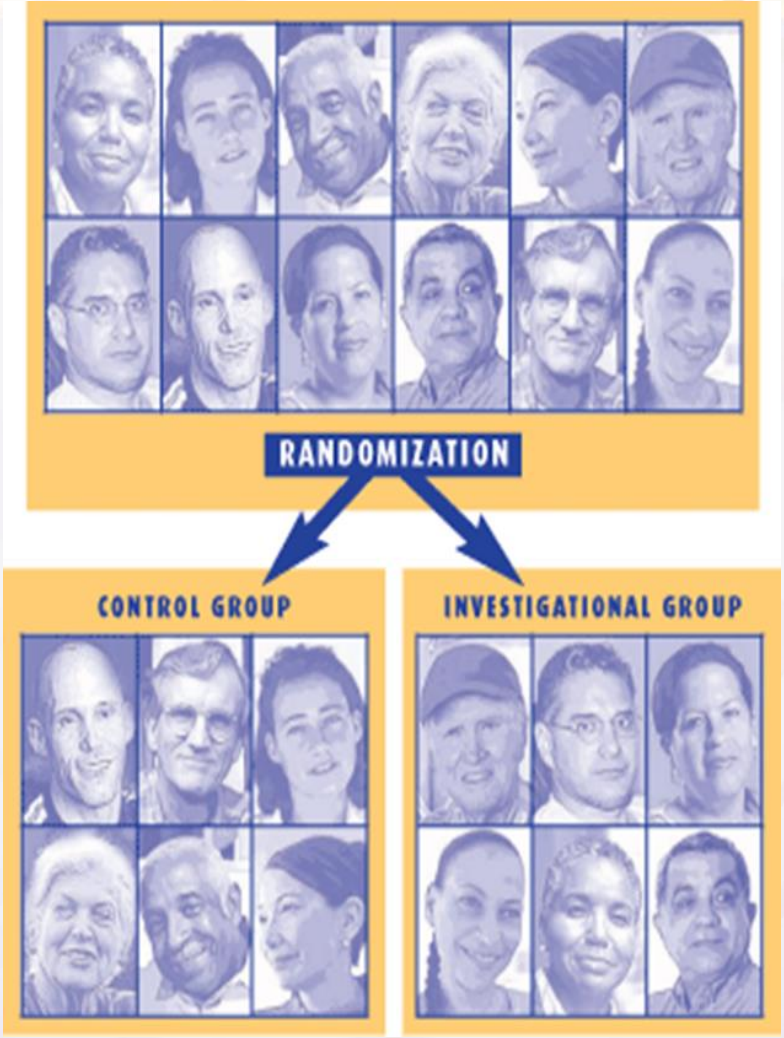




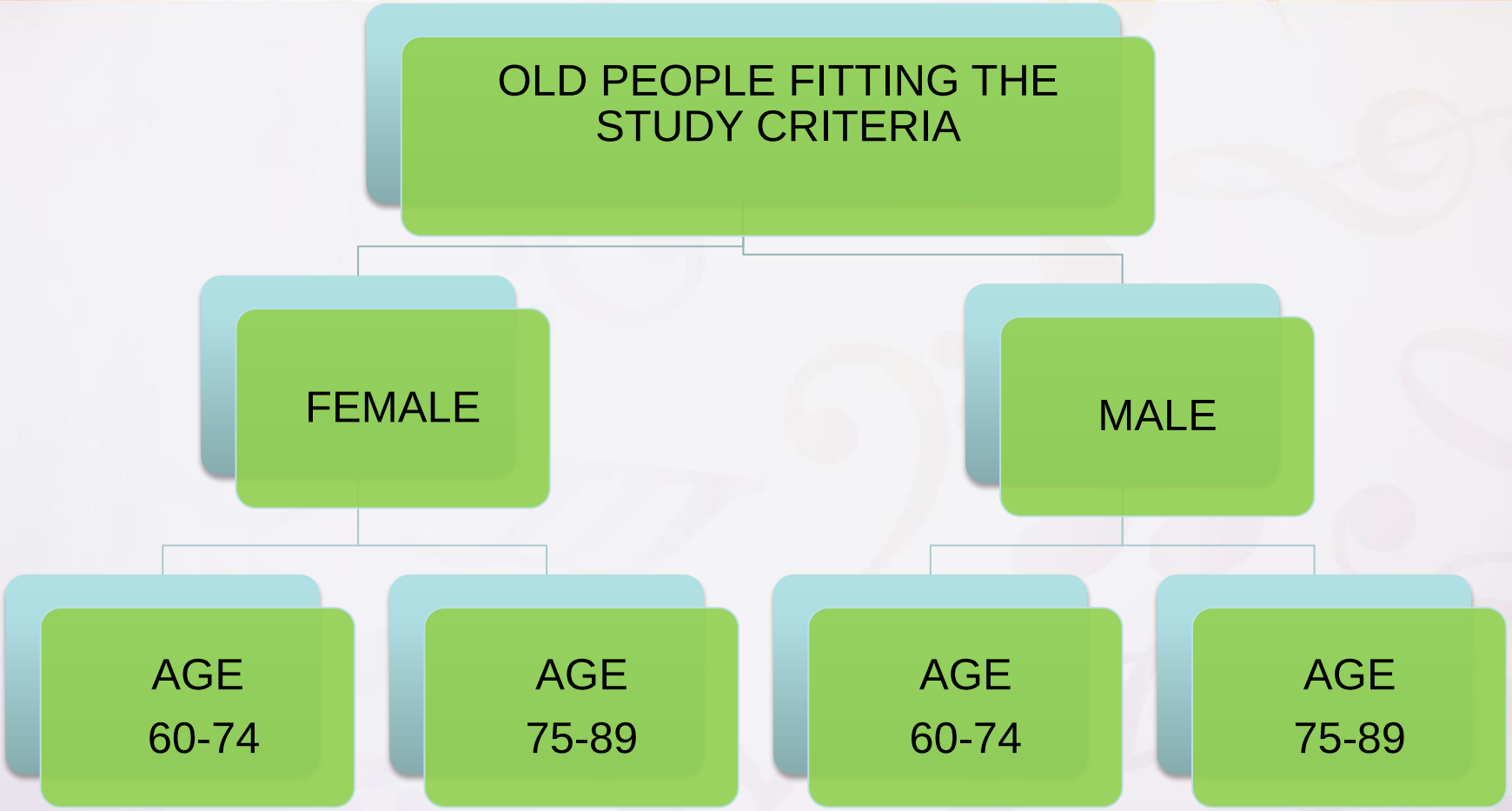


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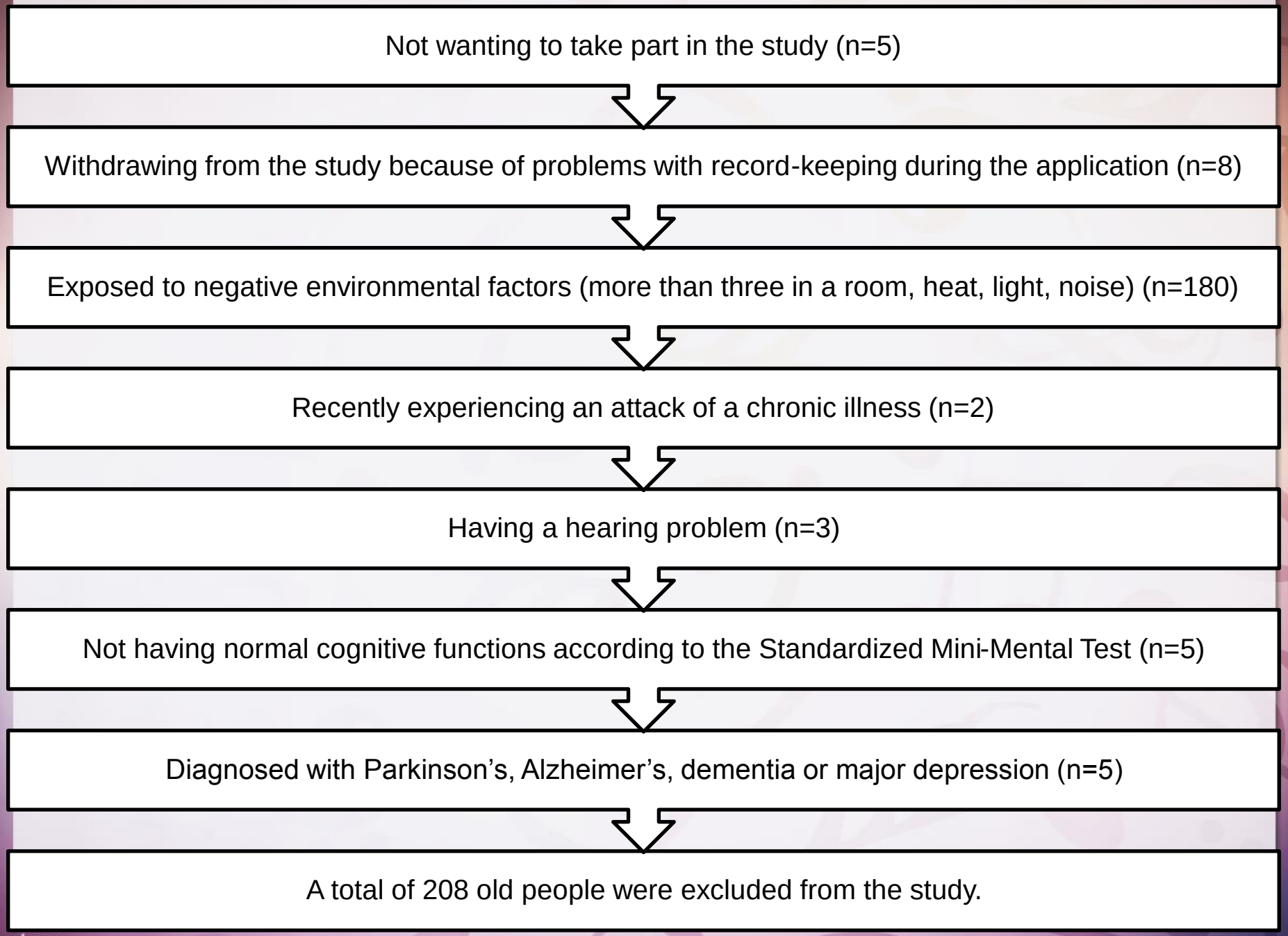
RANDOMIZATION



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OLD PEOPLE FITTING THE STUDY CRITERIA
FEMALE
MALE
AGE 60-74
AGE 75-89
AGE 60-74
AGE 75-89

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Not wanting to take part in the study (n=5)
Withdrawing from the study because of problems with record-keeping during the application (n=8)
Exposed to negative environmental factors (more than three in a room, heat, light, noise) (n=180)
Recently experiencing an attack of a chronic illness (n=2)
Having a hearing problem (n=3)
Not having normal cognitive functions according to the Standardized Mini-Mental Test (n=5)
Diagnosed with Parkinson’s, Alzheimer’s, dementia or major depression (n=5)
A total of 208 old people were excluded from the study.
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Of the 264 residents of the old people's home:

56 people

were included in the study and formed the research sample –

28 in the experimental group and 28 in the control group.

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DATA COLLECTION



«An Old People's Identification Form»

with seven questions

to collect characterization information on the residents of the home

(age, gender, marital status, education level, known illnesses, regularly-used medications, length of stay in the home)

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Anxiety levels were measured

with the 21-item

Beck Anxiety Scale developed by Beck et al. (1988) and tested for validity and reliability in Turkey by Ulusoy et al. (1988).

A higher total score shows higher anxiety levels.

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The old people's comfort levels

were measured using a

General Comfort Scale

(with 48 items,

24 containing positive statements and

24 with negative statements),

developed by Kolcaba in 1992 and tested for validity and reliability by Kuğuoğlu & Karabacak (2004).

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DATA COLLECTION

The old people were monitored for 22 days



***Lai, H.L., Good, M. (2005).** Music İmproves sleep quality in older alduts. *Journal of ADVENCED Nursing, 49(3):234-244.*

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- The control group received no intervention.



- On the first day the identification form was applied.

- On days 1, 8, 15 and 22, the Beck Anxiety Scale and the General Comfort Scale were applied.

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In the experimental group

On the first day,

the identification form, the Beck Anxiety Scale and the General Comfort Scale were applied before the application of music.

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An expert music teacher was consulted to determine music which would be restful for the old people, and a piece of

Turkish classical music (Nihavend makamı)

was chosen for its relaxing effect.

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30 minutes of music was played to

the experimental group

between 20:00 to 22:00

for 22 days.

On days 8, 15 and 22,

the General Comfort Scale and the Beck Anxiety Scale were applied.

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Examining the relevant literature,

it was seen that music had been played to this age group for periods of 25-30 minutes.

*Judith, H. W., Smith, S., Guinn, C. (2010). The Efficacy of Music Therapy, American Society of PeriANESTHESİA Nurses

**Cole, L., Lobiondo-Wood, G. (2012). Music As An Adjuvan Therapy İn Control Of Pain And Symptoms İn Hospitalized Adults:A Systematic Review, Pain Management Nursing: pp 1-20, American

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In the literature,

music had been played to old people between **20:00 and 22:00**, as the most suitable time, after they had completed activities such as shopping or eating supper.

Fraser, Joy., Ross, K. (1993). Psycho-physiological Effects of Back Massage on Elderly Institutionalized Patients, Journal of Advanced Nursing,18,238-245

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- In order to provide motivation and to make the experience more memorable, daily plans were used with the old people

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Week 1	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music
Week 2	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music
Week 3	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music	I listened to music

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Dependent and Independent Variables

Dependent variables:

The old people's total mean scores on the Beck and Comfort Scales



Independent variables:

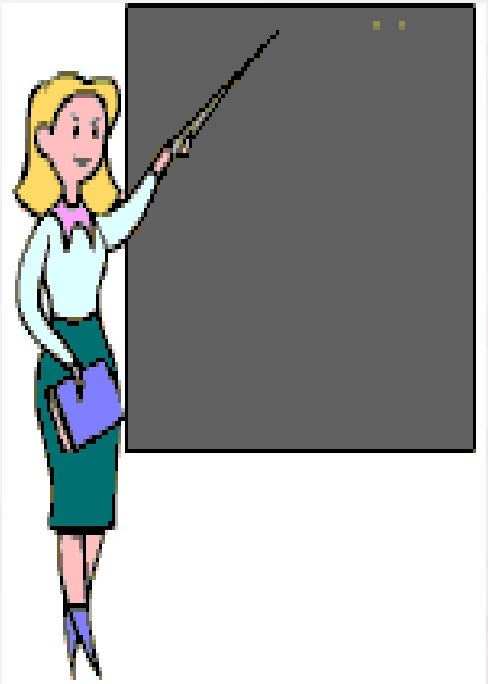
The old people's age, gender, marital status, education level and chronic illness; environmental factors and music.

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EVALUATION OF STUDY DATA

The difference between groups by week was examined with the Mann-Whitney test,

and the difference between total mean scores between weeks was examined with Least Significant Difference (LSD) analysis.



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ETHICS



- The study was performed in accordance with ethical principles
- Written permission was obtained from the Nursing Faculty Scientific Ethics Committee
- and informed consent was obtained from all participants

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FINDINGS

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Total Mean Score Distribution of Experimental and Control Groups on General Comfort Scale by Weeks

A statistically significant difference was found between

total mean scores on the General Comfort Scale

of old people

in the experimental group by weeks

($\chi 2=30.558$, $p=0.000$).

WEEKS	Experimental Group X ±Ss
Week 1	3.19±0.38
Week 2	3.23±0.32
Week 3	3.40±0.27
Week 4	3.58±0.25
	$\chi^2=30.558$, $p=0.000$

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Total Mean Score Distribution of Experimental and Control Groups on General Comfort Scale by Weeks

No statistically significant difference was found between

total mean scores on the General Comfort Scale

of old people in the control group by weeks

(χ^2=5.033, p=0.169).

WEEKS	Control Group X ±Ss
Week 1	2.97±0.30
Week 2	3.01±0.33
Week 3	3.08±0.32
Week 4	3.09±0.43
	χ^2=5.033, p=0.169

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The differences between weeks of the mean total Comfort Scale score of the experimental group were examined.

- No significant difference was found in Weeks 1 and 2,
- but a significant difference was found between Weeks 3 and 4 ($p<0.05$).

- There was a significant difference between Week 2 and Weeks 3 and 4 ($p<0.05$),

- and a statistically significant difference was also found between Weeks 3 and 4 ($p<0.05$).

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In the control group:

- No significant difference was found between Week 1 and Weeks 2, 3 and 4 ($p>0.05$),
- no significant difference was found between Week 2 and Weeks 3 and 4 ($p>0.05$),
- and no significant difference was found between Weeks 3 and 4 ($p>0.05$).

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Distribution of Total Mean Scores on the Beck Anxiety Scale of the Old People in the Experimental and Control Groups by Weeks

WEEKS	Experimental Group X ±Ss	Control Group X ±Ss
Week 1	14.60±12.23	13.67±8.91
Week 2	11.42±9.98	12.64±7.84
Week 3	6.78±5.19	13.32±9.53
Week 4	3.57±4.59	11.32±8.13
	χ^2=42.416, p=0.000	χ^2=4.601, p=0.203

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Distribution Of Differences Between Weeks Of Total Mean Scores On The Beck Anxiety Scale Of Old People In The Experimental And Control Groups

WEEKS		Experimental Group BAÖ X ±Ss	p	Control Group BAÖ X ±Ss	p
1. Week	2. Week	-2.863	0.004	-1.084	0.278
	3. Week	-3.578	0.000	-0.293	0.770
	4. Week	-4.200	0.000	-1.531	0.126
2. Week	3. Week	-2.649	0.008	-0.527	0.598
	4. Week	-4.115	0.000	-1.309	0.191
3. Week	4. Week	-3.612	0.000	-1.861	0.063

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DIFFERENCES BETWEEN WEEKS IN THE TOTAL MEAN BECK SCALE SCORE IN THE EXPERIMENTAL GROUP

- A significant difference was found between Week 1 and Weeks 2, 3 and 4 ($p<0.05$),
- a significant difference was also found between Week 2 and Weeks 3 and 4 ($p<0.05$),
- and a statistically significant difference was found between Week 3 and Week 4 ($p<0.05$).

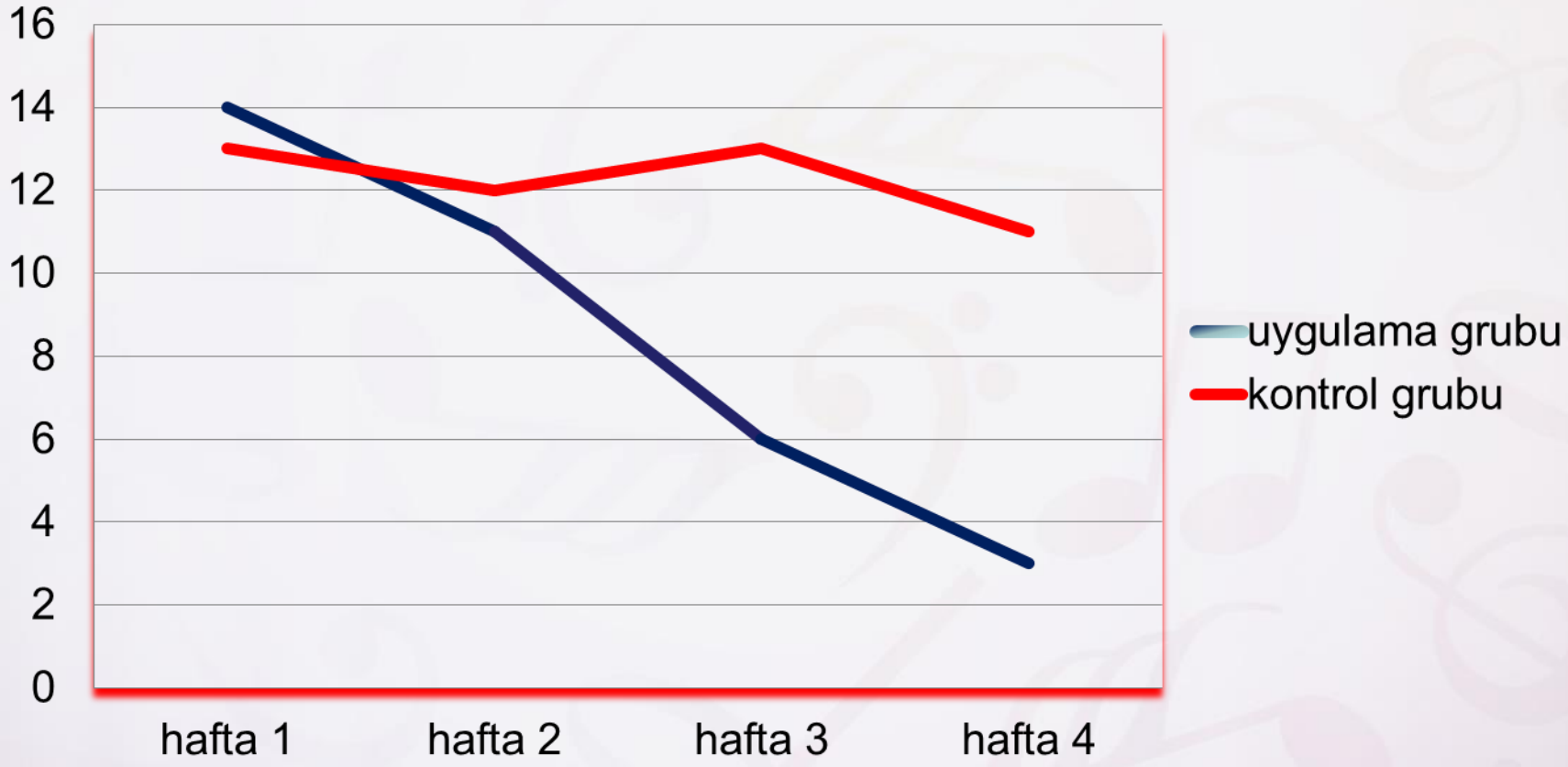
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In The Old People In The Control Group

- No significant difference was found between Week 1 and Weeks 2, 3 and 4 ($p>0.05$),
- No significant difference was found between Week 2 and Weeks 3 and 4 ($p>0.05$),
- And no significant difference was found between Week 3 and Week 4 ($p>0.05$).

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Total Mean Scores
On The Beck Anxiety Scale
Of The Experimental And Control Groups By Weeks



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RESULTS



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ACCORDING TO THE FINDINGS OF THE STUDY:



Music

increased comfort and

decreased anxiety levels

in the old people in the

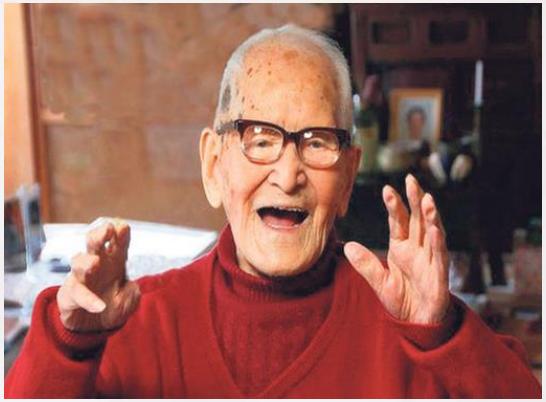
experimental group



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But



no significant change was seen in comfort or anxiety levels among old people

in the control group ($p>0.05$).

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In studies on music therapy

it has been found that music has the effect of

reducing the anxiety levels*

and increasing the comfort levels**

felt by patients.

*Davis, C., Cunningham, S. G. (1985). The physiologic responses of patients in the coronary care unit to selected music. *Heart and Lung .14(6):291-92.*

Hatem, T. P., Lira, P. I., Mattos, S. S. (2006). The therapeutic effects of music in children following cardiac surgery. J Pediatr (RioJ);82(3):186-92.

Lee, O. K., Chung, Y. F., Chan, M. F., Chan, W. M. (2005). Music and its effect on the physiological responses and anxiety levels of patients receiving mechanical ventilation: a pilot study. J Clin Nurs; 14:609-20.

Ovayolu, N., Ucan, O., Pehlivan, S. (2006). Turkish classical music decreases patients' anxiety, pain, dissatisfaction and dose of and analgesic drugs during colonoscopy: A prospective randomized controlled trial. World J Gastroenterol; 14;12(46):7532-6.

Wong, H. L., Lopez-Nahas, V., Molassiotis, A. (2001). Effects Of music therapy on anxiety in ventilatordependent patients. *Heart Lung*; 30: 376-387.

Vizeli, M. (2010). Koroner Anjiyografi Uygulanacak Hastalarda Müzik Terapisinin Anksiyete Düzeyine Etkisi, *Haliç Üniversitesi Sağlık Bilimleri Enstitüsü ,Yüksek Lisans Tezi, İstanbul.*

Yıldırım, S., Gürkan, A. (2007). Müziğin, Kemoterapi Yan Etkilerine Ve Kaygı Düzeyine Etkisi, *Anadolu Psikiyatri Dergisi ; 8:37-45.*

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Elliott, D. (1994). The effects of music and muscle relaxation on patient anxiety in a coronary care unit. Heart Lung. 23(1):27-35.

Tsay, S. L., Wang, J. C., Lin, K.C., Chung, U. L. (2005). Effects of acupressure therapy for patients having prolonged mechanical ventilation support. J Adv Nurs; 52:142-50.

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However, a scan of the literature shows that

other studies on music therapy have generally been conducted in intensive care units and on hospitalized patients*

* Yıldırım, S., Gürkan, A. (2007). Müziğin, Kemoterapi Yan Etkilerine Ve Kaygı Düzeyine Etkisi, *Anadolu Psikiyatri Dergisi ; 8:37-45.*

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Previous studies*

(despite differences in sampling and methods)

support the findings of our study.

*Davis, C., Cunningham, S. G. (1985). The physiologic responses of patients in the coronary care unit to selected music. *Heart and Lung .14(6):291-92.*

Hatem, T. P., Lira, P. I., Mattos, S. S. (2006). The therapeutic effects of music in children following cardiac surgery. J Pediatr (RioJ);82(3):186-92.

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RECOMMENDATIONS



Turkish classical music can be played to old people to help to reduce their anxiety levels and increase their comfort.



Nurses working in old people's homes can make use of this effect and include it in their nursing practice.

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Questions, suggestions and contributions to:

- edayasar35@hotmail.com
- sebnemcinar@gmail.com

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THANK YOU