

## Original Article

## Pain Status of Individuals Residing at Nursing Homes

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### Abstract

**Objective:** This study has been conducted for the purpose of determining the pain problem of elderly residents of nursing homes and factors that have an impact on pain.

**Methods:** A total of 75 elderly persons residing at 3 nursing homes affiliated to the Social Services and Child Protection Agency and Municipalities and an elderly person protection home within the boundaries of the province of Antalya have been approached. Study data were obtained through the “Standardized Mini Mental Test”, “Visual Analogue Scale”, “McGill Pain Questionnaire” and “Questionnaire Form”.

**Results:** The total pain score average of the individuals is  $30.20 \pm 22.92$ . The total pain score average has been determined to be high in females, those who have resided for a long period of time in the nursing home, regular analgesic users, those who do not use non-pharmacological interventions. Mobilization, stress, anger, and sadness are the top ranking factors that initiate and increase pain and among factors decreasing pain the top ranking one is rest, the second is mobilization, and third is hot application.

**Conclusion:** As a result of this study, pain exists as a problem in elderly people, in terms of successful pain control is needed that health professionals instruct their practices considering factors that initiating, increasing and decreasing older people’s pains, pharmacological and non-pharmacological interventions status in holistic perspective.

**Keywords:** Pain, nursing home, elderly, assessment

### Introduction

With the increase in life expectancy in the past century, the elderly population has increased worldwide. The population aged 65 and older, which was 6.0% of the total population in 1990, increased to 9% in 2019 and is expected to reach 16% in 2050 (World Population Ageing, 2019). In parallel with the rapid increase of the elderly population in Turkey and the world, health problems specific to age are increasing and are gradually becoming more significant (Eti Aslan, 2003; Yıldız et al., 2009; Ozel et al., 2014).

Health problems that occur in old age may cause acute and chronic pain. In the Panel on Pain, the American Geriatrics Society has expressed that 45-80% of individuals residing at nursing homes experience constant pain (AGS, 2002; Hutt et al.,

2006; Dirk et al. 2019). Acute pain is observed to be at the same rate for all age groups. Chronic pain increases until the 65-70 age group and reaches the highest level in the 70-75 age group. In older age groups (75 years old and higher) it decreases. It is anticipated that two thirds of individuals aged 65 and older experience chronic pain. Chronic pain affects more than 50% of elderly individuals in society and affects more than 80% of individuals residing in nursing homes (Allcock et al., 2002; Cavalieri, 2002; Budnick et al., 2020;). Blomqvist et al., (2003) express the prevalence of pain among elderly residents of nursing homes as 75%; determined to vary between 35-53% by Jakobsson et al., (2003); Horner et al., (2005) express this rate as 76%, and Nestler et al., (2018) as 77.8%. The prevalence of pain among elderly people living in

Turkey varies between 25-50% and the pain prevalence of elderly people residing at nursing homes/ institutions is between 45- 80% (Tavsanlı et al., 2013; Dogan & Goris, 2018).

Pain has a negative impact on all living activities of elderly individuals and causes their life quality to decline (Berry&Dahl, 2000; Mamhidir et al., 2017; Brunkert et al., 2020). In the study conducted by Ferrell et al., (1990) it has been determined that pain has had a constant impact on the functional abilities of 75% of elderly individuals and in another one of their studies (Ferrell et al., 1995) it has been determined that elderly individuals cannot even meet their most basic daily living needs due to pain. In addition to the level of income, occupation, level of education, place of birth, ethnicity, physical fitness status, depressive symptoms, living environment, religious belief, cultural characteristics, psychological factors, current illnesses, medication being used and non-pharmacological interventions also have an influence on the sensation of pain (Stein, 2001; Fuentes et al., 2007; Tanrıverdi et al., 2009; Knopp-Shiota et. al.,2019).

Evaluation of pain is insufficient in individuals living in the nursing homes. Pain assessment and known factors that affect pain in elderly people could allow to build a successful pain management with a holistic perspective. Successful pain control in elderly individuals can contribute to increasing life quality by preventing problems that may result from pain and minimizing their impact on Activities of daily living (ADLs). It is considered that it may contribute to cost, which is another aspect of health problems in elderly persons.

## Methods

**Sample:** The study was conducted on elderly individuals residing in 3 nursing homes (n:179) affiliated to the Republic of Turkey Ministry of Family And Social Policies and municipalities and an elderly person protection home within the boundaries of the province of Antalya. The research population consisted of 179 people. To determine the sample size, we used stratified sampling method and included a total of 75 people from three centers (48, 15, and 12 people respectively), who met the inclusion criteria. The participants of the study were all elderly individuals living in a nursing home in Antalya, who had a good cognitive state (those scoring between 18 and 30) according to the

Standardized Mini Mental Test (SMMT), suffering pain according to the Visual Analogue Scale (VAS), and volunteering to participate in the study. We continued to collect the questionnaires until the optimum sample size was reached.

**Data collection:** The research data were collected in two phases: In the first phase, SMMT and VAS tests were administered at a face-to-face meeting with the individual living in the nursing home. In the second phase, the individuals scoring between 18 and 30 according to SMMT and those reporting pain according to VAS were interviewed once again to administer “the McGill Pain Questionnaire (MPQ) and a questionnaire form. The instruments were filled out in rooms where the elderly individuals could be alone for the purpose of having them respond to the form conveniently and prevent them from interacting with each other. The application of the instruments took approximately 30-45 minutes.

**Measures: SMMT:** SMMT was developed by Folstein et al. (1975) to evaluate the extent of cognitive impairment in older adults, the test comprises six different sections: orientation, registration, attention-calculation, recall, language tests and structuring (Flaherty, 2008). SMMT score of 24-30 indicates normal cognitive function, 18-23 mild cognitive impairment, 10-17 medium-to-severe cognitive impairment, and 0-9 severe cognitive dysfunction. Due to diseases such as depression and dementia in elderly individuals, the individual is unable to describe the pain symptom and the pain control methods and effects cannot be evaluated (Hutt et al., 2006; Reynolds et al., 2008; Wall et al., 2020). Individuals with a SMMT score between 18 and 30 were included in the study.

**VAS:** It is a pain measurement instrument widely used to determine the intensity of the pain experienced by people and it consists of a 100 mm ruler with one end representing ‘no pain’ and the other end ‘worst possible pain’(Hawker et al., 2011).

**Questionnaire Form** was created by the researchers. The form includes questions designed to collect socio-demographic data and other factors that may have an impact on pain.

**MPQ:** MPQ was developed by Melzack in 1975 to assess various components of pain. In addition to determining the severity, localization, and

impact of pain, it also evaluates the sensory impacts of pain on the individual. This scale consists of four different sections.

**First Section:** It is based on different word groups. There are 20 sets of word groups and between 2 to 6 differing words in each word group consists of a total of 78 words. Four dimensions of pain are identified in this section: Sensory, affective, evaluative, and miscellaneous. Total Pain Rating Index (PRI) as the fifth index. Expresses the total pain experienced by the individual together with sensory, affective, evaluative, and miscellaneous sub-dimensions of pain. Furthermore, the Number of Words Chosen (NWC) refers to the number of words chosen in identifying the pain.

**Second Section:** It consists of five words, which are “mild, discomforting, distressing, horrible, and excruciating” for the purpose of determining the severity (intensity) of pain. The score obtained from this section constitutes the Present Pain Intensity (PPI). General Total (PRI+PPI+NWC); it includes the total of the pain index, number of words chosen, and intensity of the pain and expresses that the suffered pain has been dealt with in all respects.

**Third Section:** The relation of pain with time is evaluated. In this section “brief,” “momentary,” “transient” constitute the first subgroup, “rhythmic”, “periodic”, “intermittent” constitute the second subgroup, and “continuous”, “steady”, “constant” constitute the third subgroup.

**Fourth Section;** Internal refers to deep and external refers to surface pain (Melzack, 1975; Bryne et al., 1982; Turk et al., 1985; Öksüz et al., 2007; Hawker et al., 2011).

The validity and reliability works of the Turkish version of the MPQ were conducted by Öksüz et al. in 2007 was determined as  $\alpha$ : 0.887 (Öksüz et al., 2007). The Cronbach's alpha reliability coefficient for our study was determined as 0.844.

**Analysis:** For the purpose of evaluating the data obtained in the study, the SPSS (Statistical Package for Social Sciences) version 15 was used. p value less than 0.05 ( $p < 0.05$ ) was considered statistically significant. The percentages were calculated. The MPQ- PRI, PPI, NWC, and PRI+PPI+NWC were averaged and the evaluation of data was calculated over these score averages. For the purpose of determining whether or not score averages

demonstrated ordinary distribution, the Kolmogorov Smirnov test was applied and it was determined that the scale did not demonstrate an ordinary distribution. As parametric conditions could not be achieved for the purpose of comparing two groups the Mann-Whitney U test, in the comparison of three or more groups the Kruskal-Wallis H test was performed.

**Ethical considerations:** This study was approved by the university clinical ethics committee. A written approval was obtained from the Medical Research Ethics Committee of Gazi University Medical School. The implementation authorizations of the study were obtained from the Republic of Turkey Ministry of Family and Social Policies, Metropolitan Municipality Social Services Department Elderly Services Branch, and the Municipality Social Assistance Affairs Department through meetings with concerned units where information was provided on the study. Likewise, a written/verbal consent was obtained from voluntary elderly individuals once they were informed about the purpose and scope of the research.

## Results

The average age of elderly individuals in our study was  $71.4 \pm 9.0$ , and more than half of them were in the 60-74 age group. The female/male ratio was 1.3. Half of the elderly individuals had been residing in the nursing home for 1-5 years. The most common diseases involved cardiovascular system (50.7%) and musculoskeletal system (33.3%). Analgesics (77.61 %) medication were the most used medication and the rate of nonpharmacological strategies used was 42%. In the VAS, that 65.8% of individuals residing at nursing homes reported experiencing pain.

**MPQ Score and Pain Characteristics:** The total pain score average of 75 individuals in this study was  $30.20 \pm 22.92$  (3-101). PRI ( $16.57 \pm 13.25$ ), PPI ( $2.68 \pm 1.25$ ), NWC ( $10.94 \pm 9.04$ ) (Table 1). In addition to an impact in every dimension of pain, it was determined that the impact was higher in the sensory dimension (Table 1). According to the pain characteristics in MPQ was defined that 52% of elderly people were felt the pain in lower extremity, 72 % of them were felt the pain inner (deep). 38.7% of elderly people felt the pain as obtrusive manner and the average was  $3.05 \pm 1.25$ . It was found that 52.2% of elderly people had temporary pain, 76.8%

intermittent pain, and 55% had fixed pain (Table 2).

**Factors Affecting of Pain:** In the MPQ, it was determined that excluding PPI the total pain score average and other sub-dimensions of females was higher than men and this difference was statistically significant ( $Z=376.5$ ,  $P=0.001$ ).

In the study, with regards to the status of previous employment status, we determined that the total pain score averages of housewives were higher than those of laborers, civil servants, and the self employed and the difference was statistically significant ( $P=0.010$ ).

We found that the total pain score averages of elderly individuals increased as the duration of

residence in the nursing home increased and the difference was statistically significant ( $X^2=6.2$ ,  $P=0.045$ ).

One of the interesting findings obtained in this study was the determination of a higher total pain score average for those using analgesic medication regularly than those who did not use analgesic medication regularly and this difference was statistically significant ( $Z=431.0$ ,  $P=0.007$ ). Furthermore it was determined that in comparison with those who do not regularly use analgesics, regular analgesic users had a higher sensation of pain, expressed their pains better by using more words when identifying their pain, and felt pain more intensely (Table 3).

**Table 1. Distribution of the McGill Pain Scale**

Scale and Subscales	$\bar{X}\pm SD$	Min-Max
Sensory	8.14±7.02	0-29
Affective	2.62±3.43	0-11
Evaluative	1.91±1.61	0-5
Miscellaneous	3.88±3.82	0-14
PRI* (Pain Rating Index)	16.57±13.25	1-57
PPI** (Present Pain Intensity)	2.68±1.25	1-5
PRI+PPI	19.25±14.06	2-61
NWC*** (Number of Words Chosen)	10.94±9.04	1-40
Total score (PRI+PPI+NWC)	30.20±22.92	3-101
Pattern of pain -1	2.20±0.96	1-3
Pattern of pain -2	2.80±0.406	1-3
Pattern of pain -3	1.97±0.29	1-3
Location of pain	3.26±1.06	1-5
Depth/ Surface extent of pain	1.34±0.48	1-2

\*Pain Rating Index, \*\*Present Pain Intensity, \*\*\*Number of Words Chosen

**Table 2. Distribution of pain characteristics (N=75)**

Characteristics of Pain	N	%*
<b>Location</b>		
Head and neck	6	8.0
Trunk	19	25.3
Upper extremity	8	10.7
Lower extremity	39	52.0
Perineum	3	4.0
<b>Depth</b>		
Internal	54	72.0
External	21	28.0
<b>Intensity</b>		
Mild	9	12.0
Discomforting	15	20.0
Distressing	29	38.7
Horrible	7	9.3
Excruciating	15	20.0
<b>Pattern of pain-1 (n=46)*</b>		
Brief	19	41.3
Momentary	3	6.5
Transient	24	52.2
<b>Pattern of pain-2 (n=56)*</b>		
Rhythmic	3	5.4
Periodic	10	17.8
Intermittent	43	76.8
<b>Pattern of pain-3 (n=108)*</b>		
Continuous	27	25
Steady	59	55.0
Constant	22	20.3

\* Percentages are taken out of "n".

**Table 3. Distribution of factors affecting pain**

MPQ Characteristic	Sensory (X̄±SD)	Affective (X̄±SD)	Evaluative (X̄±SD)	Miscellaneous (X̄±SD)	PRI (X̄±SD)	PPI (X̄±SD)	PRI+PPI (X̄±SD)	NWC (X̄±SD)	PRI+PPI+NWC (Total Score)
<b>Gender</b>									
Female	7.28±6.8	2.14±2.82	1.77±1.48	3.23±3.04	14.40±2.86	2.86±1.26	17.26±12.17	9.79±7.84	27.05±19.79
Male	11.66±8.57	5.28±3.83	2.75±1.68	5.22±4.41	24.91±15.66	3.31±1.23	28.16±16.43	17.28±13.22	45.44±29.37
Z	412.0	347.5	463.0	509.0	366.0	552.0	377.0	402.0	376.5
p	<b>0.003*</b>	<b>0.000*</b>	<b>0.010*</b>	<b>0.053*</b>	<b>0.001*</b>	0.130	<b>0.001*</b>	<b>0.002*</b>	<b>0.001*</b>
<b>Previous Occupation</b>									
Employee	6.20±6.06	3.40±3.21	3.40±1.52	3.60±1.67	16.60±8.26	3.60±1.34	20.20±9.44	9.80±3.70	30.00±12.37
Government	9.27±5.41	2.45±2.38	1.73±0.90	3.36±1.69	16.82±5.29	2.82±1.08	19.64±5.55	9.64±3.41	29.27±8.44
Self-employed	7.94±8.78	2.24±3.13	1.55±1.54	3.36±3.83	15.06±15.35	2.91±1.33	17.91±16.05	11.00±11.54	28.91±27.45
Home-maker	11.19±7.76	5.50±3.95	2.96±1.61	5.38±4.41	25.04±14.76	3.23±1.24	28.27±15.76	17.54±12.25	45.81±27.72
X <sup>2</sup>	7.9	12.5	15.5	4.8	12.3	2.1	11.1	10.2	11.2
p	<b>0.046*</b>	<b>0.006*</b>	<b>0.001*</b>	0.185	<b>0.006*</b>	0.536	<b>0.011*</b>	<b>0.017*</b>	<b>0.010*</b>
<b>Year(s) in Nursing Home</b>									
< 1 year	6.82±6.80	3.05±3.68	2.09±1.66	3.91±3.96	15.86±13.63	2.91±1.41	18.77±14.64	11.23±10.99	30.00±25.36
1-5 year	9.35±8.15	2.86±3.33	1.78±1.38	3.81±3.38	17.81±13.49	2.86±1.16	20.62±14.10	12.11±10.73	32.73±24.58
> 5 year	11.88±8.21	5.50±3.69	3.25±1.77	4.94±4.52	25.50±15.66	3.69±1.14	29.19±16.30	17.44±11.35	46.63±27.37
X <sup>2</sup>	5.0	6.7	8.5	0.5	5.3	5.9	5.8	5.7	6.2
p	0.081	<b>0.034*</b>	<b>0.014*</b>	0.752	0.070	0.051	0.053	0.055	<b>0.045*</b>
<b>Using Analgesic Medication Regularly</b>									
Used	11.97±7.78	4.19±4.00	2.42±1.82	4.61±3.95	23.19±14.01	3.42±1.18	26.61±14.66	15.42±11.51	42.03±25.85
Disused	7.16±7.43	2.98±3.28	2.02±1.49	3.70±3.68	15.84±13.81	2.80±1.27	18.59±14.58	11.27±10.50	29.86±24.90
Z	382.5	569.0	595.5	557.5	422.5	495.0	418.5	467.5	431.0
p	<b>0.0001*</b>	0.215	0.319	0.257	<b>0.005*</b>	<b>0.036*</b>	<b>0.005*</b>	<b>0.021*</b>	<b>0.007*</b>
<b>Using Non-Pharmacological Interventions</b>									
Used	8.75±7.68	3.50±3.34	2.28±1.65	4.16±3.69	18.66±14.10	3.03±1.28	21.63±14.79	13.03±11.61	34.66±26.25
Disused	9.44±8.12	3.47±3.86	2.12±1.64	4.02±3.91	19.05±14.57	3.07±1.26	22.12±15.42	12.95±10.74	35.07±25.83
Z	16.0	22.5	33.5	24.0	12.5	37.5	16.0	11.5	12.5
p	0.059	0.182	0.680	0.231	<b>0.029*</b>	1.000	0.060	<b>0.022*</b>	<b>0.029*</b>
<b>Activities of Daily Living Addiction Level</b>									
Dependent	16.67±10.09	6.67±4.37	2.83±1.94	8.67±5.05	34.83±17.28	4.33±1.03	39.17±17.71	26.00±17.54	65.17±35.11
Sometimes dependent	8.18±5.11	4.00±3.22	2.29±1.31	3.65±2.85	18.12±9.08	2.71±0.92	20.82±9.58	12.24±5.96	33.06±14.98
Independent	8.60±8.06	2.94±3.51	2.08±1.70	3.69±3.62	17.29±14.41	3.02±1.31	20.27±15.20	11.73±10.68	32.00±25.69
X <sup>2</sup>	5.0	6.7	1.7	5.8	8.0	7.0	8.0	7.0	8.3
p	0.079	<b>0.034*</b>	0.418	0.054	<b>0.018*</b>	<b>0.029*</b>	<b>0.018*</b>	<b>0.029*</b>	<b>0.016*</b>

\*p<0.05, X<sup>2</sup>= Kuruskal Wallis, Z= Mann-Whitney U

**Table 4. Pain characteristics of elderly people (N =75)**

Characteristics	N	%*
<b>Factors that trigger pain (n=42)*</b>		
Mobilization	16	38.1
Stress, anger and sadness	8	19.1
Cold weather	5	11.9
Fatigue	3	7.1
Resting	3	7.1
Smoking	2	4.8
*Others(rainy weather, fried foods, travelling, nights, the period of menstrual periods, hunger)	5	11.9
<b>Factors that increase pain (n=61)*</b>		
Mobilization	18	29.5
Stress, anger and sadness	13	21.4
Cold weather	10	16.4
Hot weather	7	11.5
Poor nutrition	4	6.5
Resting	3	4.9
Others(fatigue, smoking, rainy weather, noise, putting on uncomfortable shoes, wind, gaining weight)	6	9.8
<b>Factors that reduce pain (n=82)*</b>		
Use of medications	29	35.4
Resting	12	14.7
Mobilization	11	13.4
Heat application, hot weather	10	12.2
The activities of distributing attention	6	7.3
Cold weather, cold application	4	4.8
Avoiding of stress and grief	4	4.8
Good nutrition	3	3.7
Others(not smoking, using herbal medicines, gel application )	3	3.7
<b>Use of analgesic drugs</b>		
Yes	55	73.3
No	20	26.7

<b>Use of non-pharmacological strategies</b>		
Yes	32	42.7
No	43	57.3
<b>Types of non-pharmacological strategies</b>		
Mobilization	18	56.2
Cold applications	6	18.7
Hot applications	4	12.5
Nutrition regulation	3	9.3
Resting	3	9.3
Moxa and foot care	3	9.3
<b>Activities of daily living affected by pain</b>		
Maintaining a safe environment	50	66.7
Mobilization	50	66.7
Sleeping	49	65.3
Controlling temperature	40	53.3
Elimination	38	50.7
Working and playing	37	49.3
Communication	36	48.0
Washing and dressing	36	48.0
Death and dying	32	42.7
Eating and drinking	26	34.7
Breathing	26	34.7
Sexualit activity	12	16.0

\*Percentages are taken out of "n".

A proportion of 42.7% of elderly individuals in our study were using non-pharmacological interventions. Among the elderly individuals, 56.2% practiced mobilization, 18.7% used cold application, and 12.5% used hot application, and they were found to be effective. Also the factors initiating, increasing and decreasing pain, were determined in a similar manner with mobilization, stress, anger and sadness being at the top of the list. Together with this, we found that PRI, NWC and the total pain score averages in those who did not use non-pharmacological applications was higher than those using them

and this difference was statistically significant ( $Z=12.5$ ,  $P=0.029$ ) (Table 3, 4).

As the level of dependency in ADL's increased, being affected by PPI, PRI, NWC and the total pain score averages also increased proportionately. This finding was found to be significant in the statistical evaluation ( $X^2=8.3$ ,  $P=0.016$ ). In the study, for elderly individuals maintaining a safe environment and mobilization were determined as first (66.7%), sleeping as second (65.3%), and controlling temperature as third (53.3%) among the most affected ADL's

and expressing sexuality was found to be the least affected (16%) (Table 4). PRI, PPI, NWC and total pain score average for elderly persons, whose ADL's of maintaining a safe environment, mobilization, sleeping, controlling temperature, elimination, working and playing, communication, washing and dressing, death and dying, and eating and drinking were found to be affected by pain, much higher than those who were not affected ( $p < 0.05$ ).

Although it is not specified in the table, there was no statistically significant difference between pain and age, education level, marital status, income level, smoking and alcohol use.

More than half of elderly people ( $n=43$ ) do not convey the pain because of coping with his/her pain ( $n=17$ ) and perceptions of pain as a natural thing ( $n=7$ ), not working for pain-relief methods ( $n=6$ ), difficulties in expressing the feeling of pain ( $n=6$ ), being health care personnel irrelevant ( $n=5$ ), inaccessibility of health care personnel at all times ( $n=3$ ), difficulty in walking ( $n=3$ ).

### Discussion

Pain is one of the most frequently encountered problems at old age (Knopp-Sihota et al., 2019; Tang et al., 2019). In many studies, the prevalence of pain was found to be 45-80% (AGS, 2002; Hutt et al., 2006; Dirk et al. 2019). In our study, the prevalence of pain was found to be 65.8% (VAS). In this sense, it is similar to the literature.

The total average point of the pain is  $30.20 \pm 22.92$  (3-101) of this study which was done to find out the severity of the pain in the old people, the factors affecting of the pain, and the effects on the individuals. In our study, participants mostly used the word 'troublesome' to describe pain, and they used an average of 9 words. In addition, while the total pain index was found as 13, our results related to other subdimensions of MPQ were in agreement with those reported by Wernner (1998) and Fuentes et al. (2007).

The MPQ results showed that 52% of the participants felt pain in the lower extremities and 30.9% had constant pain. While the most common pain areas in elderly individuals were reported to be lower extremities, joints, head, neck and back (Tse et al., 2010; Tang, 2019), Hutt et al. (2006) reported that 70% of elderly people had constant pain, Hunnicut et al. (2017) reported 20%, and Molton and Terrill (2014) 60-75%. Musculoskeletal system diseases are thought to have effects on pain regions, as they are highly prevalent in elderly individuals (Savvakis&Kolokouras, 2019; Tang et al., 2019).

Pain is affected by several factors, such as age, sex, cultural factors, and past experiences (Karadakovan et

al., 2009; Schofield and Abdulla, 2018; Knopp-Sihota et al., 2019)

Gender difference in pain is associated with genetic, psychological, anatomical, neural, hormonal factors as well as lifestyle and arises from cultural characteristics. Studies into epidemiology, psychophysics, and prevalence indicate that pain is more common in females (Gunes et al., 2005; Sahin, 2004; Schofield and Abdulla, 2018) In our study, it was also determined that the total pain score averages for females were higher than those of males, sex is affective on the pain evaluation. Also, while describing their pain women used more words than did men, so they expressed their pain better than men. The study by Jakobsson et al(2003) and Lukas et al (2013) revealed that in elderly people women reported pain more frequently than did men.

Pain prevalence has been shown to increase until 85 years of age and then decrease (Hunnicut et al., 2017; Schofield, 2018). In our study, no significant relationship was found between pain and age. This result could be explained by the fact that the age ranges of the individuals included in our study were not the same as theirs.

Geriatric guidelines for pain control recommend the combined use of pharmacological and nonpharmacological methods (Stewart et al.,2012; Tang et al.,2014). WHO is suggesting the regular use of analgesics in pain control. The total pain average score of the old patients who regularly use the analgesic are higher than the ones who are not. This result indicates that the elderly people are aware of the effects of their pain and prefer the regular use of analgesics to relieve the pain.

Appropriate non-pharmacological methods can enable the individual to feel self-confident and create a sense of control over pain (AGS, 2002; Tang et al, 2014). Alcock et al.,(2002) it has been stated that 33% of elderly individuals practice any non-pharmacological intervention and a proportion of 21% practice mobilisation the most. Blomqvist et al.,(2002) expressed that 87% of elderly individuals used one or more non-pharmacological interventions, more than 50% practiced mobilization the most, and 78% used one or more cognitive and behavioral approach. In our study, the rate of using non-pharmacological methods among elderly individuals was 42.7%, but it was observed that they used mobilization more frequently (56.2%), as well as cold (18.7%) and hot applications (12.5%). However, it was found that 94.7% of the elderly people did not receive any information from the health personnel about the methods. When the information content is taken into account, it is considered that they do not have complete information on non-pharmacological interventions and as a result they do not use effective non-pharmacological interventions.

In addition, older individuals consider pain as a natural part of the aging process and tend not to use pharmacological and nonpharmacological methods (Tang, 2019). More than half of the elderly individuals (57.3%) in our study fail to notify their pain. The reasons why the elderly people do not communicate their pain are listed by Blomqvist (1999), Kamel et al (2001) and Veal et al (2018) as, pain is the natural result of the aging, complaining about the pain may affect their caring negatively and pain is associated with the worse phases of the illness and even death. In our study, the reason of pain as the natural result of aging is similar to the literature but other major reasons are found as non effective pain relieve methods, uninterested medical staff, unable to reach medical staff at any time they need, and movement inability.

The pain affects the old patients negatively in their daily activities, the quality of living is decreased in parallel with this (Mamhidir et al, 2017; Knopp-Shiota et al., 2019). In studies conducted by Jones et al., (2005), Smith et al. , (2016), Resnick et al. (2019) it has been determined that due to pain the eating and drinking, elimination, mobilisation, sleeping, dressing, working and playing activities of elderly individuals are affected adversely and that there is a decrease in socialization and that they frequently experience anxiety, agitation, and depression problems. In our study, however, it was found that pain had an effect on all ADLs except sexuality. This result can be interpreted as sexuality is not shared comfortably and also the importance of sexuality is ignored in the elder ages.

It is required to use the proper pain evaluation scales to manage the pain relieve in the elderly people (Schofield et al., 2008; Schoreld and Abdulla, 2018; Veal et al., 2018). In the previous studies, it was reported that no pain assessment tool was used in most nursing homes and the pain was not evaluated sufficiently in the institutions implementing written procedures. Multi-faceted research approaches are required to assess pain reliably (Allock et al. 2002; Mamhidir, 2017). The scale used in our study yielded findings about pain level, location, effects as well as its emotional impacts on the individual.

**Limitations:** This study has some limitations. One of these limitations was the fact that half of the sample in the study was born in the same region and as they had been living in this region for a long time, our results cannot be generalized to the entire population of the country. Sample groups from different regions need to be formed in order to reflect the interaction between culture and pain in a better manner.

The second limitation of our study was that the pain problem experienced by elderly individuals with no cognitive impairment or mild cognitive impairment was discussed and evaluated.

**Conclusions:** This study has revealed that the prevalence of pain is relatively high in elderly nursing home residents and that they lack information on pain and that they have a need for information on the regular use of analgesics, which are among the most common pharmacological interventions in pain control, and non-pharmacological interventions. This result demonstrates that health personnel need to identify and evaluate pain through multidimensional objective measurement tools for the purpose of determining the factors that have an impact on the pain of elderly individuals. At the same time, this study shall enable health personnel to compose and implement procedures for pain and provide elderly nursing home residents supportive, planned, and constant services for pain under a multidisciplinary approach.

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