RESEARCH ARTICLE

Evaluation of Chronic Pain Management in the Elderly Living in a Nursing Home Assessment of Age and Chronic Pain

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Abstract

Objective: There is a decrease in sensitivity to painful stimuli in the elderly. This study was conducted to determine the pain management status of the elderly living in nursing homes.

Methods: This descriptive study was conducted in the Nursing Home Elderly Care and Rehabilitation Center Directorate. Elderly Information Form, Mini-Mental Scale, and McGill Pain Scale were used. . Data were considered statistically significant at the $p < 0.05$ level. Parametric methods were used for normally distributed data.

Results: 82.9% of the elderly had a chronic disease and were using drugs continuously, and the number of drugs used by 42.9% was between 1-3. According to McGill's Pain severity assessment, 34.3% of them experienced mild pain. Between the gender of the elderly and the McGill Melzeck pain severity averages they experienced, the average pain score of the female gender was found to be significantly higher than the pain average of the male gender ($t(68)=-1.99$, $p=0.05$). When the behaviors of the elderly against pain were examined, 62.9% reported that they preferred to talk, 72.9% to rest, 52.9% to plan rest periods, and 55.7% to get support from their religious belief

Conclusion: In this study, the severity of pain and behaviors of the elderly against pain were evaluated.

Keywords: Nursing Home, Aging, Pain, Pain Management, Evaluation

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INTRODUCTION

The World Health Organization (WHO) defines individuals aged 65 and over as "elderly". Age periods according to the course of aging and changes in body functions; It is classified as "late adulthood" between the ages of 65-74, "old age" between the ages of 75-84, and "advanced old age" between the ages of 85 and over(1). According to the 2018 data from the Turkish Statistical Institute (TUIK), the proportion of the population aged 65 and over, defined as the elderly population in our country, is 8.7% in 2018, 10.2% in 2023, 16.3% in 2040, 22.6% in 2060. and it is predicted that it will be 25.6% in 2080 and it is estimated that our country will be among the countries with a "very old" population (2).

Aging is a process that includes biological, physiological, emotional-psychological, and functional dimensions. While biological aging expresses the changes in the structure and functions of the human body with chronological age; Physiological aging includes changes in organs due to biological aging, and emotional-psychological aging includes the change of human adaptation capacity as chronological age progresses in terms of perception, learning, psychomotor problem solving and personality traits. Functional old age, on the other hand, is the inability to maintain functions in society when compared to individuals of the same age (3). Changes in physiological processes in the elderly bring pain along with them. It is called chronic geriatric pain in the elderly when it occurs for more than three months. The resulting pain can affect the daily life activities of elderly individuals and cause depression. Pain in the elderly can cause multiple drug use, cognitive decline, gait

disturbances, and accidents. For all these reasons, pain is one of the factors that should be evaluated in elderly individuals (4).

Diseases related to muscles, bones, and joints are the leading causes of pain in the elderly. These include osteoarthritis, spondylosis, osteoporosis, low back and leg pain, rheumatoid arthritis, fibromyalgia, myofascial pain, tenosynovitis, inactivity-related contractures, unhealed fractures, Paget's disease, and secondary myopathies. Other causes of chronic pain in the elderly are malignancy, neurological diseases (nerve root pain, peripheral neuropathy, etc.), vascular diseases (Angina Pectoris, arthritis, etc.), and visceral pain (peptic ulcer, constipation, etc.) (1,5).

There is a decrease in sensitivity to painful stimuli in the elderly. However, decreased pain sensitivity does not mean that the elderly feel less pain. The fact that the elderly express their pain may mean that the condition causing the pain is more serious than the younger individuals reporting the same pain (6,7). To effectively and successfully control pain in the elderly, pain should be adequately and accurately evaluated and diagnosed (8) and should be brought under control with appropriate interventions with a multidisciplinary approach (9). As with every symptom, the first step in pain assessment includes taking the patient's history. During the history taking, the time of onset and location of the pain, how the patient describes the pain (burning, discomfort, pain, etc.), factors that increase and decrease the pain, its severity, quality, changes according to time and situations, worst pain experienced in the last week, effect on daily life, the use of traditional pain relief methods and the drugs used for pain relief or other

disease/diseases should be learned. In addition, the pain behaviors of the elderly (grimacing, restlessness, withdrawing, etc.) should be evaluated (10). For the nurse, who has important responsibilities in the care of the painful patient, to help in the control and relief of the pain, it is necessary to know the pain behaviors of the patients and how the nurses define the patient with pain. For older patients, self-management of pain or treatments should improve health and reduce healthcare expenditure. Pain management of the elderly can be achieved with realistic and accurate goals and a plan that can be made together (11). Based on all of these, this study was planned to determine the level of pain experienced by the elderly living in nursing homes and what behaviors they resort to in pain management.

METHODS

This descriptive study was carried out between February and May 2019 by the Martyr Kara Pilot Captain Serhat Sığnak Nursing Home Elderly Care and Rehabilitation Center Directorate and Seyhan Nursing Home Elderly Care and Rehabilitation Center Directorate. The population of the study consisted of a total of 183 elderly people living in both nursing homes, and the sample of the study consisted of 70 elderly people who voluntarily agreed to participate in the study and met the study criteria (with chronic pain lasting for more than 3 months, without cognitive and mental problems, who could be contacted).

Data Collecting

Elderly Information Form, Mini-Mental Scale, Pain Management Inventory and McGill Pain Scale were used as data collection tools. The elderly living in a nursing home who agreed to participate in the

study voluntarily had chronic pain lasting more than 3 months and scored between 24 and 30 on the Mini-Mental Scale were included in the study. The population of the study consisted of the elderly who met the sample selection criteria (the elderly who could be contacted, had chronic pain for more than 3 months, and had no cognitive and mental problems) and agreed to participate in the research.

Elderly Information Form: A 14-question survey form prepared by the researchers in light of the literature on the subject will be used. The questionnaire includes questions related to socio-demographics, the health status of the elderly, and the nursing home (10,11).

Mini-Mental Scale: The scale, which consists of eleven items gathered under five main headings as orientation, recording memory, attention and calculation, recall, and language, is evaluated out of a total score of 30, and between 24-30 points are considered normal. The Mini-Mental Test (MMT) was first used in 1975 by Folstein and Posted by friends (12).

McGill Pain Scale (MPS): McGill Pain Scale was developed by Melzack in 1975. It includes sensory, sensation, and evaluation dimensions of pain (13). Different scores can be obtained from the MAS. In the simplest scoring, the number of words selected in the second part of the questionnaire is between 0-78 and the current pain intensity in the fourth part is between 1 (mild) and -5 (unbearable). Many studies have shown that the MAS is a valid, objective, and reliable tool. It has been determined that the McGill Pain Scale is a valid and reliable tool for Turkish society (11).

Pain Management Inventory (PMI): It was developed to examine pain management methods

and the effect of these methods. The PMI is a 22-item Likert-type (0-6) scale. The individual completing the PMI will mark the appropriate option if he or she does not use a method, mark the appropriate option if he has used any method in the last week, and mark the option/number that best describes how useful the method is three different results emerge from the scale: (a) the list of recently used methods, (b) the total number of methods used, and (c) the usefulness rate of each method. The internal consistency of the PMI was found to be Cronbach alpha 0,76) (14). When the literature is examined, it has been reported that there is no need to conduct validity and reliability studies because the PMI is an inventory and only includes method questioning (15). For these reasons, validity and reliability studies of the inventory for our country have not been conducted. In our study, Cronbach's Alpha value was not calculated because we only used the list of recently used methods section of the inventory.

The study was approved by the Çukurova University Faculty of Medicine Ethics Committee (No. 85-35). All procedures were carried out by the principles of the 1964 Declaration of Helsinki and its subsequent amendments or comparable ethical standards. The elderly were informed in detail about the study protocols and their written consent was perceived.

Statistical Analysis

Data were analyzed using the IBM SPSS Statistics 24 program using descriptive statistics (frequency, percentage, and mean) and frequency tables. Data were considered statistically significant at the $p < 0.05$ level. Parametric methods were used for normally distributed data. As parametric

methods, the "Independent Samples t-test" (t-table value) test was performed to compare the means of two independent groups.

RESULTS

Findings were obtained from the study conducted to determine the pain management status of the elderly living in nursing homes.

When we examine the variables related to the elderly, it is seen that 40% of the elderly living in nursing homes are in young old age. 70% of women stay in nursing homes, 62.9% of them are married, and 45.7% of them are illiterate, It was concluded that 72.9% of them had children. 82.9% of the elderly had a chronic disease and were using drugs continuously, and the number of drugs used by 42.9% was between 1-3 (Table 1).

According to McGill's pain severity assessment, 15.7% of the elderly did not experience pain, 34.3% had mild pain, 27.1% had disturbing pain, 15.7% had severe pain, and 5.7% had very severe pain. severe pain and 1.4% experienced excruciating pain (Table 2)

According to the results of the t-test performed to test the difference between the gender of the elderly and the McGill Melzeck pain severity averages they experience, the mean pain score of the female gender (1.83±1.08) was significantly higher than the pain average of the male gender (1.23±1.30) found (t=-.99, p=0.05) (Table 3)

A statistically significant relationship was found between the satisfaction levels of the elderly in the nursing home and the McGill Melzeck mean pain intensity averages. The mean pain score of the less satisfied elders was 2.50±1.50, the mean pain score of the moderately satisfied patients was 1.37±0.90,

and the mean pain score of the delighted patients was 1.64 ±1.19 (t=3.62, p<0.05). (Table 3)

Table 1. Examination of Variables Related to the Elderly

Variable (n=70)	n	%
Age [$\bar{X} \pm S.S. \rightarrow 77,70 \pm 1,00$ year)]		
Young Old Age (65-74 years)	28	40
Middle Age (75-84 years)	23	32.9
Late Old Age (85 years and above)	19	27.1
Gender		
Woman	49	70
Male	21	30
Marital status		
Married	44	62.9
Single	26	37.1
Educational Status		
Illiterate	32	45.7
literate	4	5.7
Primary education	21	30
High school	13	18.6
Status of Having a Child		
Yes	51	72.9
No	19	27.1
Presence of Chronic Disease		
Yes	58	82.9
No	1	17.1
Continuous Medication Status		
Yes	58	82.9
No	12	17.1
Number of Drugs Used		
Doesn't Use Medication	10	14.3
1-3 drugs	30	42.9
4-6 drugs	18	25.7
7-9 drugs	4	5.7
10 or more drugs	8	11.4

Table 2. Evaluation of McGill Melzeck Pain Severity

McGill Melzack Score	n	%
No pain	11	15.7
Mild Pain	24	34.3
Disturbing Pain	19	27.1
Severe pain	11	15.7
Very Severe	4	5.7
Unbearable	1	1.4

When the behaviors of the elderly in the face of pain are examined, 42.9% of the massage, 51.4% to control their stress, 62.9% to talk, 72.9% to rest, and 20% to apply hot/cold. 35.7% avoid diverting attention, 15% avoid biological feedback, 18.6%

take a shower, 17.1% use over-the-counter pain relievers, 45.7% avoid foods that cause pain, 7.1% exercise, 12.9% use TENS, 12.9% support the painful area, 65.7% use painkillers according to doctor's prescription, 65.7% physical activity that will increase pain reported that they preferred avoiding, 38.6% using positive suggestions, 52.9% planning rest periods, 55.7% preferring to receive support from their religious belief (Table.4).

Table 3. Examination of the Relationship between the Characteristics of the Elderly and McGill Melzeck Pain Severity

Variables	McGill Pain Level		t-test			
Gender	N	X	SS	F	Sd	p
Woman	49	1,83	1,08	-1.99	68	0.05
Male	21	1,23	1,30			
Level of Satisfaction with the Nursing Home						
A lot	31	1,64	1,19	3.62	67	0.03
Middle	29	1,37	0,90			
Little	10	2,50	1,50			

DISCUSSION

Although pain is one of the most common findings in the elderly, elderly individuals may accept pain as a natural consequence of the aging process and may find it unnecessary to express their discomfort (15). When the literature is examined, it has been reported that the prevalence of pain in the elderly is 88.5%-99.7% and the rate of chronic pain is 31-64.7% (16). Usta and Karadakovan as a result of their studies on the elderly living in nursing homes; elderly individuals they reported that 85.3% of them had a chronic disease (17). Research made; It reveals that gender, socioeconomic status, chronic diseases and the number of drugs used, working status, length of care, relations with other individuals, and participation in

indoor and outdoor activities affect the pain status and the life of the individual (18,19).

In the study by Miro et al. reported that the state of experiencing pain in the elderly ranged from 1.5% to 65.3% (20). Similarly, in the study of Saka et al. and in another study in which a total of 1059 elderly people living in 5 countries including the United States were evaluated, it was reported that the elderly experienced moderate pain (21). In this study, approximately one-fourth (27.1%) of the elderly experience severe pain, which confirms the frequency of severe pain in studies conducted in different areas where the elderly was present (20,22). Ferrell et al. also expressed the average pain intensity of elderly individuals is uncomfortable (24).

Table 4. Examination of Behaviors of the Elderly in the Face of Pain

Variable (n=70)	n	%
Massaging the painful area(s)	30	42.9
Using methods that help control stress (talking to someone, doing breathing exercises, etc.)	36	51.4
Talking to people I think can understand me	44	62.9
Have a rest	51	72.9
Applying cold to the painful area(s)	14	20
Using distracting techniques, such as watching TV, reading, or working	25	35.7
Using biofeedback by monitoring heart rate, blood pressure, or other physiological measurements (respiration, body temperature, etc.)	11	15.7
Using a hot tub or tub or taking a hot shower	13	18.6
Using painkillers that the physician does not recommend or prescribe	12	17.1
Avoiding foods that initiate or increase pain	32	45.7
Participating in support groups (patient associations, meetings, etc.) on pain	5	7.1
To exercise	20	28.6
Applying heat to the painful area(s)	12	17.1
Taking antidepressant medication prescribed by a physician	22	31.4
Using relaxation methods such as meditation or guided daydreaming	5	7.1
Using Transcutaneous Electrical Stimulation (TENS)	9	12.9
Supporting the painful area(s) using a splint or brace	9	12.9
Taking pain medication prescribed by a physician	46	65.7
Avoiding physical activity that will increase pain	46	65.7
Using positive suggestions such as "I can……"	27	38.6
Scheduling rest periods between activities	37	52.9
Focus on support from personal religious belief	39	55.7

In the study by Sezer et al. named Chronic Pain Status and Evaluation of Affecting Factors in the Elderly, it was reported that there is a significant difference (24). The difference between pain severity and gender was significant. Severe pain is more common in women. Similarly, in a study conducted with the same scale in three centers in Europe, it was seen that women experienced pain more (25).

Şimşek et al. stated that the complaint of pain was mostly seen in women (26). This result may be related to the fact that women express their feelings and thoughts more easily than men, and that they assume some gender-specific responsibilities depending on cultural factors (27)

Considering the effect of the satisfaction level of staying in a nursing home on the pain

level of the elderly, it was seen in the study that the pain score average of those who were less satisfied with the nursing home was moderate and higher than those who were very satisfied. In the study of Kara et al., it was observed that the level of satisfaction with the nursing home was high and the pain assessment process and the state of experiencing pain were accordingly positive (28,29). The limited number of studies investigating the relationship between satisfaction with staying in a nursing home and pain status limits the comparison with the results of our study.

In this study, it was determined that the elderly used excessive painkillers (65.7%) to cope with pain. When individuals have pain, they first prefer to take painkillers because they can be applied easily and have a quick effect (15). Similar to this study, Güler et al (31) reported that 90.6% of the elderly, and Özel et al. (11) reported that 96.3% of the elderly were Hwang et al (32). determined that the rate of analgesic use in elderly individuals was 80%.

Non-drug pain management methods are simple and inexpensive methods of pain relief. Current guidelines stated that pain management is limited in elderly individuals and recommended using medicated and non-drug methods in pain management (31,32). In this study, it was seen that non-drug methods were used against pain. In the survey, resting in the face of pain and avoiding physical activity were found to be high (72.9%-65.7%). Previous studies reported that the elderly often used rest-activity restriction to relieve pain and found this method beneficial (11,33,34).

Consistent with the literature, rest and physical activity restriction is among the non-drug methods used by the elderly living in nursing homes.62.9% of the elderly individuals participating in the study reported that they coped with the pain by talking to people they thought they could understand and 55.7% of them focused on the support they received from their religious beliefs. When the literature is examined, talking with someone who understands them is defined as "somewhat helpful" (11). It can be thought that the need for speaking of elderly individuals staying in a nursing home increases this rate and thus supports each other. In the study of Özel et al., it was seen that this method was used in coping with pain based on religious belief, in parallel with our study (11). In the study of Tse et al., it was seen that praying and coping with pain were used (35).

CONCLUSION

Pain is one of the most common problems in old age and affects the quality of life negatively. Determining the health status of elderly individuals, knowing the situations that cause pain and increase the severity of pain, and knowing the practices against this situation will positively affect the quality of life and health status of elderly individuals. The increase in

studies on this subject will also contribute to the literature.

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