

Original Research

Assessment of Diagnoses and Demographic Attributes of Patients Treated at the Outpatient Treatment Unit of Gaziantep City Hospital's Physical Medicine and Rehabilitation Clinic Since Its Inception

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E-mail(s): gunaymuzeyyen@gmail.com**ABSTRACT**

Objective: Our aim in this study is to retrospectively examine the diagnostic distribution and demographic characteristics of patients who applied to the Gaziantep City Hospital Physical Medicine and Rehabilitation outpatient clinic and were admitted to the outpatient treatment program.

Methods: The files of patients who applied to the Gaziantep City Hospital Physical Medicine and Rehabilitation clinic and were admitted to the outpatient treatment program between 06.10.2023 and 31.01.2025 were retrospectively reviewed from the hospital system. Patients' ages, genders, diagnosis codes and the number of treatment sessions they received were recorded. Diseases were divided into seven main groups according to diagnosis codes: inflammatory diseases, degenerative joint diseases, soft tissue diseases, spine diseases, orthopedic diseases, neurological diseases and others

Results: 12,636 patients were included in the study. Of the patients, 8220 were female (65.1%) and 4416 were male (34.9%). When the distribution by age groups was examined, it was found that most of the patients were between the ages of 40-64. Among the treatment groups, the largest disease group was spinal diseases, followed by soft tissue diseases and orthopedic diseases. Inflammatory diseases constituted the smallest disease group. The average number of sessions was highest for neurological diseases (18.5±10.1) and lowest for soft tissue diseases (10.6±6.2).

Conclusion: In this study, it was determined that the majority of patients who applied to the Physical Medicine and Rehabilitation Clinic (PMR) and were included in the outpatient treatment program were treated for spinal diseases. This rate represents a significant portion of the disease groups treated. The findings provide important data for understanding the region's disease profile and planning PMR services.

Keywords: physiatry, demographic characteristics, age distribution, chronic pain syndromes

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INTRODUCTION

Musculoskeletal system diseases are among the most common diseases that cause pain in society and constitute an important reason for admission to hospitals. Pain originating from the musculoskeletal system, such as waist-back pain and lower extremity pain, is frequently observed in patients presenting with pain complaints [1,2].

The Physical Medicine and Rehabilitation (PMR) clinic is the department that many people with musculoskeletal problems apply to. Physiatrists provide comprehensive assessments of numerous ailments, especially neurological problems, musculoskeletal issues, and amputations. They design treatment programs by using certain diagnostic methods and using drugs, physical therapy, technical help, and education [3,4].

To improve service quality and use resources effectively, it is important to understand the patient profile of PMR clinics. Regional variations, demographic traits, and disease prevalence significantly influence treatment methodologies.

The aim of this study is to retrospectively examine the diagnostic distribution and demographic characteristics of patients who applied to the Gaziantep City Hospital PMR outpatient clinic since the hospital opened and were admitted to the outpatient treatment program. Since Gaziantep City Hospital is a regional hospital, it is thought that the findings obtained will contribute to the PMR expertise in terms of diseases and age-gender distributions seen in the region.

Main Points

- This study aims to retrospectively analyse the diagnostic distribution and demographic characteristics of patients who visited the Gaziantep City Hospital Physical Medicine and Rehabilitation outpatient clinic and were enrolled in the outpatient treatment program.
- The records of patients who sought therapy in the outpatient unit of our clinic from October 6, 2023, to January 31, 2025, were examined retrospectively
- Patients' age, gender, diagnosis, and the number of sessions administered were documented
- Since Gaziantep City Hospital is a regional hospital, it is thought that the findings obtained will contribute to the PMR expertise in terms of diseases and age-gender distributions seen in the region

MATERIALS AND METHODS

Approval for the study was obtained from the Gaziantep City Hospital Non-Interventional Clinical Research Ethics Committee (Decision No: 144/2025, Date: 19.02.2025). Due to the retrospective study design, patient consent was not obtained. All patient data were anonymized and processed in accordance with the principles of the Declaration of Helsinki.

This study was planned as a retrospective descriptive study. The records of patients treated in the outpatient unit of Gaziantep City Hospital PMR Clinic since its opening (October 6, 2023 - January 31, 2025) were retrospectively reviewed.

The gender, age, disease diagnosis, and number of sessions received by the patients were recorded. Diseases were classified under seven main headings, based on the diagnosis records in the patient file: inflammatory diseases, degenerative joint diseases, soft tissue diseases and nonspecific joint pain, spine diseases, orthopedic diseases, neurological diseases, and others. Patients with more than one diagnosis were included in the disease group with the most prominent complaints and findings.

Cervical discopathies, lumbar discopathies, scoliosis, kyphosis, and spondylolisthesis were included in the spine diseases group; rotator cuff syndrome, tendinitis, myalgias, synovitis, and tenosynovitis were included in the soft tissue diseases and nonspecific joint pain group; gonarthrosis, coxarthrosis, polyarthrosis, and other joint arthrosis were included in the degenerative joint diseases group; fracture sequelae, meniscopathy, algoneurodystrophies, joint contractures, muscle and tendon injury sequelae were included in the orthopedic diseases group; cerebral palsy, hemiplegia, paraplegia, polyneuropathy, mononeuropathy, hand nerve injuries, parkinson's disease, myopathy, etc. were included in the neurological diseases group.

The study did not include patients who were able to complete 10 treatment sessions because of unforeseen circumstances.

Statistical Analysis

The data were analysed using descriptive statistics. We expressed categorical variables as counts and percentages and continuous variables as mean \pm standard deviation. We used the Chi-square test and one-way ANOVA to compare groups. The Tukey's HSD test was used for post-hoc analysis. $p < 0.05$ was considered statistically significant.

RESULTS

The study involved 12,636 patients. 65.1% (n=8220) of the patients were female, whereas 34.9% (n=4416) were male (female/male ratio: 1.86/1).

According to the age group distribution analysis, the vast majority of patients were individuals aged between 40 and 64 years. There were statistically significant differences observed in the gender distribution across various age categories ($p < 0.001$). In the 0-19 age demographic, males accounted for 60.6%, whereas females comprised 39.4%. Within the 20-39 age demographic, women represented a slight majority at 58.1%, whereas males accounted for 41.9%. In the 40-64 age group, there was a significant majority of women, comprising 71.8% compared to 28.2% of men. Among individuals aged 65 and older, women represented a significant majority, accounting for 60.2%, while males comprised 39.8% (Table 1).

The distribution by disease groups is shown in Table 2. The majority of the patient group consisted of individuals with spinal disorders (n=5558, 44.0%). This was followed by soft tissue illnesses and nonspecific joint pain (n=2796, 22.1%), orthopedic disorders (n=2316, 18.3%), degenerative joint diseases (n=977, 7.7%), neurological diseases (n=941, 7.4%), other (n=42, 0.3%), and inflammatory diseases (n=6, 0.05%).

The distribution of the most common diagnoses among the treatment groups is shown in Table 3 below.

The three most common diagnoses in each age group were evaluated according to age groups. Meniscus tears were found to be the most common disease in individuals aged 0-19 years. Meniscus tears were diagnosed both by clinical evaluation and magnetic resonance imaging. Intervertebral disc disorders were also found to be the most common in the other three age ranges (Table 4).

A total of 157,880 sessions were conducted for 12,636 patients (mean: 12.5 ± 7.8 sessions per patient). A statistically significant difference was observed between the groups concerning the mean number of sessions ($p < 0.001$).

Post-hoc analysis revealed that the neurological disease groups received significantly more sessions than the spine diseases and soft tissue disease groups ($p < 0.001$).

Table 1. Gender distribution by age groups

Age (years)	Male	Female	Total	p value
0-19	485 (60.6%)	315 (39.4%)	800	< 0.001*
20-39	1235 (41.9%)	1713 (58.1%)	2948	< 0.001*
40-64	2048 (28.2%)	5210 (71.8%)	7258	< 0.001*
65+	648 (39.8%)	982 (60.2%)	1630	< 0.001*
Total	4416 (34.9%)	8220 (65.1%)	12636	< 0.001*

* $p < 0.05$: Statistically significant

Table 2. Distribution of the number of patients by treatment group

Treatment Group	Patients	%
Spine diseases	5558	44.0
Soft tissue diseases and nonspecific joint pain	2796	22.1
Orthopedic diseases	2316	18.3
Degenerative joint diseases	977	7.7
Neurological diseases	941	7.4
Other	42	0.3
Inflammatory diseases	6	0.0

DISCUSSION

This study provided important data revealing the patient profile and regional disease distribution of the Gaziantep City Hospital PMR clinic.

The proportion of female patients in our study (65.1%) was consistent with the gender distribution of patients applying to PMR clinics in the literature [5,6]. Musculoskeletal disorders in women have increased due to hormonal influences, anatomical differences, and lifestyle variables [7].

When gender distribution was examined by age groups, it was seen that the highest prevalence of both women and men was in the 40-64 age range. These data confirm the view that musculoskeletal disorders are quite common in middle age [6]. The increase in degenerative processes with age, physical load in work life and anatomical changes explain this situation [8].

Interestingly, the proportion of male patients was significantly higher in the 0-19 age group (60.6%). This can be explained by the fact that boys are more exposed to sports injuries and traumatic diseases during childhood and adolescence.

Table 3. Diagnosis distribution among treatment groups

Treatment Group	Main Diagnosis	n	% Within Group	General %	Chi-square p value
Inflammatory diseases (n=6)	Ankylosing spondylitis	5	83.3	0.04	<0.001*
	Behcet's disease	1	16.7	0.01	
Degenerative joint diseases (n=977)	Gonarthrosis	815	83.4	6.45	<0.001*
	Arthrosis	123	12.6	0.97	
	Coxarthrosis	32	3.3	0.25	
	Other	7	0.7	0.06	
Spine diseases (n=5558)	Lumbar discopathy	3211	57.8	25.4	<0.001*
	Cervical discopathy	2207	39.7	17.5	
	Scoliosis	79	1.4	0.63	
	Other	61	1.1	0.48	
Orthopedic diseases (n=2316)	Meniscopathy	804	34.7	6.36	<0.001*
	Fracture sequelae	686	29.6	5.43	
	Knee ligament damage	237	10.2	1.88	
	Hand tendon injuries	193	8.3	1.53	
	Other	396	17.1	3.13	
Soft tissue diseases and nonspecific joint pain (n=2796)	Shoulder lesions	1195	42.7	9.46	<0.001*
	Calcaneal spur	747	26.7	5.91	
	Epicondylitis	358	12.8	2.83	
	Other	496	17.7	3.92	
Neurological diseases (n=941)	Cerebral palsy	321	34.1	2.54	<0.001*
	Entrapment neuropathies	157	16.7	1.24	
	Hemiplegia	137	14.6	1.08	
	Gait and movement abnormalities	135	14.3	1.07	
	Spinal cord injury	77	8.2	0.61	
	Bell palsy	70	7.4	0.55	
	Other	44	4.7	0.35	
Other (n=42)	Lymphedema	29	69.0	0.23	<0.001*
	Other	8	19.0	0.06	
	Burn sequelae	5	11.9	0.04	
Total		12636	100.0	100.0	-

* $p < 0.05$: Statistically significant

Table 4. The three most common diagnoses in patients, categorized by age group.

Age (years)	Diagnosis	n	%	Total number of patients
0-19	Meniscus dislocation due to old tear or injury	60	%7.5	800
	Cerebral palsy	59	%7.4	
	Scoliosis	51	%6.4	
20-39	Intervertebral disc disorders, other	561	%19.0	2948
	Cervical disc disorders	516	%17.5	
	Meniscus dislocation due to old tear or injury	296	%10.0	
40-64	Intervertebral disc disorders, other	1375	%18.9	7258
	Cervical disc disorders	1114	%15.3	
	Impingement syndrome of the shoulder	574	%7.9	
65+	Intervertebral disc disorders, other	348	%21.3	1630
	Gonarthrosis	240	%14.7	
	Cervical disc disorders	177	%10.9	
n		5371	%42.5	12636

Table 5. Session distribution and statistical comparison according to treatment groups

Treatment Group	Number of Patients n (%)	Total Session	Average Session \pm SS*	ANOVA p value	Post-hoc Significant Differences**
Neurological diseases	941 (7.4)	17414	18.5 \pm 10.1	<0.001	a
Orthopedic diseases	2316 (18.3)	35474	15.3 \pm 8.8		b
Degenerative joint diseases	977 (7.7)	14455	14.8 \pm 8.2		b
Other	42 (0.3)	610	14.5 \pm 8.1		ab
Inflammatory diseases	6 (0.05)	74	12.3 \pm 7.4		ab
Spine diseases	5558 (44.0)	60348	10.9 \pm 6.5		c
Soft tissue diseases	2796 (22.1)	29505	10.6 \pm 6.2		c
Total	12636 (100.0)	157880	12.5 \pm 7.8	-	-

Statistical Test: One-way analysis of variance (ANOVA) and Tukey post-hoc test

SD: Standard deviation

* Standard deviations are calculated based on mean values.

** There is no statistically significant difference between groups indicated with the same letter ($p > 0.05$). Different letters indicate significant difference ($p < 0.05$)

a: Highest average session group

b: Intermediate session groups

c: Lowest average session groups

ab: Groups that do not show significant difference with both groups

The fact that spinal diseases constitute 44% of all patients demonstrates the dominant role of this disease group in PMR practice. The density of lumbar discopathy and cervical discopathy cases reflects the effects of modern lifestyle (prolonged sitting, use of technology) on the musculoskeletal system [9].

The fact that soft tissue diseases are in second place (22.1%) and shoulder lesions are dominant in this group emphasizes the importance of upper extremity problems in PMR practice. Shoulder impingement syndrome and rotator cuff injuries are common problems, especially in the active age group [10].

The 83.4% incidence of gonarthrosis in the group of degenerative joint diseases confirms that the knee joint is the joint most affected with age. This situation is explained by the early degeneration of weight-bearing joints due to mechanical load [11].

The distribution of diagnoses by age groups clearly shows the age-related changes in diseases. While neurological diseases (cerebral palsy), scoliosis come to the fore in the childhood age group (0-19), disc diseases and traumatic injuries are dominant in the young adult age group (20-39), while disc diseases continue in the middle age group (40-64), shoulder problems increase, and degenerative joint diseases (especially gonarthrosis) come to the fore in the elderly age group (65+). This distribution underscores the necessity for rehabilitation strategies tailored to distinct age groups [12].

The neurological diseases group exhibited the largest average number of sessions (18.5), reflecting the chronic nature of these diseases and the necessity for extensive rehabilitation. A comprehensive and sustained interdisciplinary approach is essential for neurological diseases such as cerebral palsy and hemiplegia [13,14].

The fact that soft tissue diseases have the lowest average number of sessions (10.6 sessions) can be explained by the fact that these diseases are generally acute/subacute in character and respond better to conservative treatment.

The lower-than-expected rate for inflammatory diseases may be due to these patients primarily seeking treatment in rheumatology outpatient clinics. However, the contribution of rehabilitation in addition to medical treatment in this group of diseases should not be overlooked [15,16].

These findings serve as a guide for both clinical practice and effective planning of health services. The research indicated that spinal disorders constitute 44% of the total patient population. This illustrates the prevalence of spine disorders, including lumbar and cervical discopathy, in physical therapy clinics. This underscores the necessity for increased resource allocation to spinal rehabilitation within physical therapy units, the requirement for specialised physiotherapists and equipment, and the imperative to establish preventive programs addressing the impact of contemporary lifestyles (prolonged sitting, technology usage) on spinal health. The prevalence of different diseases in each age group necessitates the development of rehabilitation programs and resource planning tailored to each age group.

Limitations

Limitations of the study; Some data are missing due to the retrospective design. Having a single center experience. Lack of outcome measures of treatment effectiveness. Lack of socioeconomic and quality of life data.

CONCLUSION

Patient profile analysis of Gaziantep City Hospital's PMR clinic provided important information about regional disease distribution. The dominant role of spinal diseases, varying disease profiles across age groups, and differences in treatment session requirements provide critical data for the planning of PMR services. Differences in treatment session requirements must be taken into account in staffing planning, budget allocation, and patient capacity calculations. In the future, prospective studies evaluating treatment effectiveness and patient outcomes will contribute to further improving service quality. Revealing the regional disease profile can serve as a reference not only for the Gaziantep region but also for other regions with similar demographic characteristics. Increasing such epidemiological studies is important for the planning of national PMR services.

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Conflict of Interest: The authors declare that they have no conflicts of interest.

Informed Consent: Since our study is a retrospective study, no informed consent was obtained.

Data Availability Statement: The datasets generated during this study are not publicly available due to ethical restrictions

and participant confidentiality rights. Researchers wishing to access specific data components for legitimate academic purposes may submit their requests to the corresponding author, which will be reviewed on a case-by-case basis in accordance with institutional guidelines.

Ethics Committee Statement: Approval for this study was received from the Gaziantep City Hospital Non-Interventional Clinical Research Ethics Committee at the meeting held on 19.02.2025 (Decision number: 144/2025).

Author Contributions: Planning of the study, data collection, evaluation, interpretation and final publication BY Müzeyyen Günay Örkmez and the planning of the study, data collection and evaluation were done by Ali Güneri.

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