

# Geriatric Rehabilitation Education for Residents in the Physical Medicine and Rehabilitation Training Programs

## Fiziksel Tıp ve Rehabilitasyon Uzmanlık Programlarındaki Araştırma Görevlilerinin Geriatrik Rehabilitasyon Eğitimi

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### ABSTRACT

**Objective:** The aim of the research is to evaluate the experiences and satisfaction of physical medicine and rehabilitation residents in geriatric rehabilitation education during their residency training.

**Methods:** In this cross-sectional survey, the study group consisted of 54 residents (n=29 female, n=25 male) from 12 centers. The mean±SD age was 28,83±2,02 years for females and 30,50±4,03 years for males. Data on demographic characteristics, duration of training, number of elderly subjects treated in inpatient or outpatient clinics, and experience and satisfaction in geriatric rehabilitation education were collected. SPSS v.15.0 (evaluation copy) was used for statistical analyses.

**Results:** Elderly patients consisted of 44,4% of the patients seen in outpatient clinics and 45,2% of the patients treated in inpatient services. Regarding the overall satisfaction of residents with their geriatric rehabilitation training, 76% stated that they found the medical knowledge satisfactory and 71,4 was satisfied with the clinical practice. 70,6% of the participants reported that they achieved their goals for geriatric rehabilitation training. Participants expressing partial achievement for their goals consisted of 29,4% of the group. 79,6% of the residents stated that they would recommend their colleagues to work in geriatrics.

**Conclusion:** Most of the residents were satisfied with their geriatric rehabilitation training during the physical medicine and rehabilitation residency.

**Keywords:** Geriatric rehabilitation, residency training, satisfaction

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## ÖZET

**Amaç:** Çalışmanın amacı Fiziksel Tıp ve Rehabilitasyon uzmanlık eğitimi alan araştırma görevlilerinin, geriatrik rehabilitasyon eğitimleri ile ilgili deneyim ve memnuniyet düzeylerini araştırmaktır.

**Yöntemler:** Bu kesitsel incelemede, çalışma grubunu 12 merkezden katılan 54 araştırma görevlisi (29 kadın, 25 erkek) oluşturuyordu. Ort±SD yaş kadınlar için 28,83±2,02 yıl, erkekler için 30,50±4,03 yıl idi. Katılımcıların demografik özellikleri, eğitim süreleri, ayakta ve yatarak tedavi alan yaşlı hastaların sayısı, araştırma görevlilerinin geriatrik rehabilitasyon eğitimi deneyimi ve memnuniyet düzeyleri ile ilgili veriler toplandı. İstatistiksel analizde SPSS v15.0 kullanıldı.

**Bulgular:** Yaşlı hastalar ayakta tedavi alan hastaların %44,4'ünü, yatarak tedavi alan hastaların %45,2'sini oluşturuyordu. Araştırma görevlilerinin geriatrik rehabilitasyon eğitimi konusundaki genel memnuniyeti değerlendirildiğinde, tıbbi bilgiyi memnuniyet verici bulanlar %76 ve klinik uygulamaları memnuniyet verici bulanlar %71,4 idi. Katılımcıların %70,6'sı geriatrik rehabilitasyon konusundaki hedeflerine ulaştıklarını bildirdi. Hedeflerine kısmen ulaştıklarını bildiren katılımcılar grubun %29,4'ünü oluşturuyordu. Araştırma görevlilerinin %79,6'sı meslektaşlarına geriatri alanında çalışmayı önereceklerini ifade etti.

**Sonuçlar:** Araştırma görevlilerinin çoğunluğu, Fiziksel Tıp ve Rehabilitasyon uzmanlık programlarındaki geriatrik rehabilitasyon eğitimini memnuniyet verici bulmuştur.

**Anahtar sözcükler:** Geriatrik rehabilitasyon, uzmanlık eğitimi, memnuniyet düzeyi

## Introduction

Global aging is the result of health policies adopted throughout the world aimed at increasing life expectancy. Maintaining the health and quality of life in an aging population is often accompanied by significant social and economic difficulties. Hence the growing need to create new policies and strategies aimed at increasing the level of welfare (1, 2). One major requirement for the elderly people is to provide universal health care system without any discrimination. Additionally, primary, secondary and tertiary prevention methods should have been key approaches with the guidance of health promotion concern. The recommendations specifically to increase quality of life are; organization of training programs on healthy aging in order to prepare individuals for old age, provision of service units for those older persons who have difficulties in carrying out the activities of daily living, provision of consultancy services with regard to the use of health and social service units for the older persons who are not covered by any form of social security, and formation of models of domiciliary healthcare for older persons in order to provide them with the needed service at their own homes. Considering the increases in health care costs, it becomes more important to prevent or delay disease and disability for older adults.

As it is well known, rehabilitation of geriatric patients is imperative for the patients' well-being and for society and specialists need to receive specific training in geriatric principles, strategies, and tactics during residency or through continuing education. Improving the amount and quality of geriatrics education that Physical Medicine and Rehabilitation (PMR) specialty residents receive, seems mandatory.

Students' satisfaction is a key aspect of quality improvement in higher education. The primary customers of the universities are students and higher education

is recognized as a service industry. Greater emphasis is placed on meeting the expectations and needs of students (3). Focusing on student satisfaction not only enables universities to re-engineer their organizations to adapt to student needs, but also allows them to develop a system for continuous monitoring of how effectively they meet or exceed student needs (4). Satisfaction is based on the discrepancy between prior expectation and the performance perceived after passing through the educational cycle. The closer that performance comes to meeting or exceeding expectations, the more satisfied the customers.

The factors that relate to student satisfaction included peer interaction, social life, faculty-student interaction, intellectual development, academic performance, gender, age, social class etc. (5). There is also a need to understand the factors that impact student satisfaction at a local level. In this exploratory study, we aimed to evaluate the experiences and satisfaction of PMR residents about geriatric rehabilitation during their residency training.

## Material and Methods

This study was conducted by the Geriatric Rehabilitation Working Group of the Turkish Physical Medicine and Rehabilitation Society. In a cross-sectional survey, residents were questioned about their experiences and satisfaction in geriatric rehabilitation during their PMR residency training. To our knowledge, there is no published study on satisfaction of the PM&R residents with their geriatric rehabilitation training. Items in the questionnaire were generated following a literature review on satisfaction of the students in different residency programs with their training program. Final version of the questionnaire was composed by consensus. Responses were provided on the 5-point Likert scale. Open-ended questions will be used to

improve the training programs. Residents who did not have any training in geriatric rehabilitation were excluded. 54 residents from 12 centers completed the survey. They were invited to participate in the study in January 2012 and were asked to return the questionnaire anonymously. Data on demographic characteristics, duration of training, and number of elderly subjects treated in inpatient or outpatient clinics, and experience and satisfaction in geriatric rehabilitation education were collected. SPSS v.15.0 (evaluation copy) was used for statistical analyses. In addition to descriptive statistics, nonparametric tests were performed to compare residents working in University Hospitals and Training and Research Hospitals of the Ministry of Health.

## Results

The study group consisted of 54 residents (n=29 female, n=25 male). The mean±SD age was 28,83±2,02 years for females and 30,50±4,03 years for males. The difference for age was statistically not significant (p=0,149). 51,9% (n= 28) of the study group was working in University Hospitals, whereas 48,1% (n=26) was having their residency training in Training and Research Hospitals of the Ministry of Health. 18,5% (n=10) had former residency training in another specialty (urology, anatomy, ear-nose-throat, biochemistry, radiation oncology (n=2), pharmacology, gynecology, surgery and internal medicine). The mean±SD for duration of training was 41,31±15,24 months for females (minimum: 23, maximum: 84) and 38,48±13,18 months for males (minimum: 18, maximum: 72) (p=0,519). 33,3% of the participants was grown up in the same house with an elderly member of the family. Elderly patients consisted of 44,4% of the patients seen in outpatient clinics and 45,2% of the patients treated in inpatient services.

Regarding the overall satisfaction of residents with their geriatric rehabilitation training, 76% (n= 38, 4 participants did not answer this question) stated that they found the medical knowledge satisfactory and 71,4% (n= 35, 5 participants did not answer this question) was satisfied with the clinical practice. There was no

difference between residents having their education in University Hospitals or Training and Research Hospitals of the Ministry of Health ( $\chi^2= 0,295$  p=0.587 and  $\chi^2= 0,877$  p=0.349 respectively). We also compared residents in last year of their training with the rest of the study group and the difference was statistically not significant. 79,6% of the residents stated that they would recommend to work in geriatrics to their colleagues.

85,2% of the residents stated that they had support or guidance of their instructors or colleagues during their education. 70,6% of the participants reported that they achieved their goals for geriatric rehabilitation training. Participants expressing partial achievement for their goals consisted of 29,4% of the group. There was no difference between residents having their education in university hospitals or Training and Research Hospitals of the Ministry of Health (p=0,514). Residents were asked in which domains their knowledge in geriatrics has been affected (Table 1). The highest improvement was reported for ethic principles.

The experience for the case volume was found adequately by 94,4% (n=51) of the residents. 85,2% (n=46) expressed adequate experience for case variety and 73,6% (n= 39) for treatment of complex cases. The differences for the experience for case volume, case variety and complexity were not significant between training center types. The results for the opinions about the quality of training were given in Table 2.

7,5% of the residents took an examination on geriatric rehabilitation. 61,1% of the residents found the theoretic teaching and practice of geriatric rehabilitation useful for their training on physical medicine and rehabilitation, 35,2% evaluated as partially useful. Participants were asked whether their training adequately prepared them to practice, 85,2% of the study group agreed. Most of the residents (86,3%) stated that they could use their geriatric rehabilitation knowledge in clinical practice. Nonclinical skills gained during residency training are given in Table 3.

**Table 1. Domains affected during the geriatric rehabilitation education.**

	Subjects reporting marked improvement	
	n	%
Concept of geriatric rehabilitation	25	46,3
Pain management	37	68,5
Ethic principles	41	75,9
Communication skills (with the elderly subjects, family members or caregivers)	39	72,2
Work and communication with multi-disciplinary team	36	66,7

**Table 2. Quality of training.**

	Adequate		Partially adequate		Inadequate		N/A
	n	%	n	%	n	%	
Theoretic teaching	25	48,1	18	34,6	9	17,3	2
Outpatient clinic	37	71,2	15	28,8	-	-	2
Inpatient service	43	81,1	9	17,0	1	1,9	1
Seminar	42	79,2	10	18,9	1	1,9	1
Journal club	42	79,2	9	17,0	2	3,7	1

N/A: not answered

**Table 3. Non-clinical skills.**

	n	%
Professionalism	27	50,0
Administration skills	24	44,4
Ethics	42	77,8
Relationships with other physicians	35	64,8
Relationships with allied health professionals	32	59,3
Information management and technology	24	44,4

## Discussion

The American Geriatrics Society (AGS) established the Geriatrics for Specialists Project in 1994 (6). This project aimed expanding geriatric expertise by: improving the amount and quality of geriatrics education; developing faculty leaders who promote geriatrics training and research within their disciplines; and enabling professional certifying bodies and societies to build the capacity of their constituencies to provide better care of older adults (6). PMR is one of specialties participating in this project. By teaching the principles of geriatric care, it could be possible to improve the quality of care for older patients by reducing complications and length of stay, improving outcomes, and providing better care for the terminally ill (7). Principles of good geriatric care overlap with good rehabilitation care (8). Functional assessment, identification and treatment of multiple coexisting problems, aggressive rehabilitation, interdisciplinary team care, careful attention to social support status, and understanding the effect of varying degrees of dementia on the clinical setting are critical issues (6).

We evaluated the residents' experiences and satisfaction in geriatric rehabilitation during their physical medicine and rehabilitation training. This is an exploratory type of research aimed to gain insight into a situation, phenomenon, community or person. The need for such a study could arise from a lack of basic

information on a new field of interest. Qualitative research is fundamentally interpretive (9). The use of qualitative methods provides the background to the quantitative data. Qualitative research makes it possible to study a subject in depth; however, it has some weaknesses. The generalization of results is usually questionable in the qualitative study. Designing a qualitative research, one has to keep in mind, that generalization of results has to be rather theoretical than numeric (10).

Adult students are generally aware of their learning strengths and weaknesses, and want relevant, useful information presented in a way that is comfortable, intellectually challenging, and time efficient. In addition, they seek a collaborative learning process with their instructors (11). Learning will improve if modes of instruction are adapted to the style that is preferred by the student. Numerous factors are known to affect students learning styles like the age, gender, culture, creative thinking and academic achievement (12).

Shah et al conducted a study to evaluate the impact of the geriatrics education for emergency medical service (EMS) providers (13). Eighty eight EMS providers participated and they were very satisfied with the course. EMS providers expressed a statistically significant increase in comfort in the following domains: 1) communicating with older adults; 2) caring for medical conditions; 3) assessing elder abuse or neglect; and 4) assessing for risk of falling. In our study, most of the participants (76%) stated that they found the medical knowledge satisfactory and 71,4% was satisfied with the clinical practice.

Raj et al evaluated the trends among postgraduate year IV physiatry residents in terms of their perceived experiences in the core clinical areas, confidence with procedural subspecialization, choice in career specialization, and desire to pursue clinical fellowship (14). Fifty-six percent of the respondents planned to pursue fellowship training, and a majority of residents intended to perform interventional procedures and

musculoskeletal medicine in their practices. Respondents were most confident and believed themselves to be most prepared in the areas of musculoskeletal medicine and electrodiagnosis. They were least confident and prepared in pediatric rehabilitation. More hospital-based positions would be opening up for physiatrists, who can cover inpatient rehabilitation beds, perform electrodiagnostics testing, and provide outpatient musculoskeletal care (15). The increasing demand for proficient musculoskeletal care presents a challenge to physical medicine and rehabilitation residency programs to provide optimal educational experiences (16).

Krabak et al. conducted a study to characterize graduating physical medicine and rehabilitation residents' perceptions of their current musculoskeletal training (17). 61% of the fourth-year residents responded after multiple contacts. According to residents, the most frequently used musculoskeletal education formats during residency were lecture series, journal clubs, and workshops. Potential barriers to improved musculoskeletal education during residency included staff, money, and time. In our study, 17,3% of the residents found the theoretic teaching inadequate, whereas seminars were found inadequate by 1,9%. Smith et al reported that the most frequently utilized musculoskeletal education formats were musculoskeletal lecture series, musculoskeletal departmental conferences, and physical examination workshops (18). Residency program directors had a strong interest in expanding resident musculoskeletal education through the use of CD-ROMs/DVDs, physical examination videos, objective structured clinical examinations, and visiting lecturer programs.

According to The Accreditation Council for Graduate Medical Education, the residency programs should train residents in the various competencies which included medical knowledge, patient care, professionalism, interpersonal skills and communication, systems-based practice and practice-based learning (19). Clinical competence in communication is important in the education of physicians. Milis et al evaluated the accuracy of resident physicians in rating their own interpersonal skills by measuring the level of agreement between physician self-rating and standardized patient rating of physician skill using the objective structured clinical evaluation (20). 25 resident physicians in physical medicine and rehabilitation participated in the study. The authors found a very low level of agreement between residents' self-rating and standardized patients' ratings of physician interpersonal skills. Faculty observers and the standardized patients had a modest but statistically significant level of concordance. Not every resident physician overrated his or her competency and some rated themselves lower than the standardized patients

and faculty observers. Rhoton's study indicated evidence that unprofessional behavior and clinical excellence rarely coexist (21). In a study, De Lisa et al suggested that physical medicine and rehabilitation residency training programs could place greater emphasis on professionalism (22). Less than half of the residents in the six training programs surveyed reported that they had received formal training in professionalism during residency, and only a third reported training in identifying and/or managing physician impairment. But in this study, the response rate was 59%. In our study, 50% of the participants reported that they had gained skills in professionalism during their training.

Our study has several limitations. These data represent self-reported evaluations by residents and therefore are subjected to recall bias. We didn't have data on opinions of the recent graduates. However, since most of the residents stated that they could use their geriatric rehabilitation knowledge in clinical practice, it seems worth investigating this issue more in detail.

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