

Educational and skill development needs of early-career rheumatologists in Türkiye

Türkiye’de çalışmakta olan kariyerinin başındaki romatologların eğitim ve beceri geliştirme ihtiyaçları

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Abstract

Objective: Several previous reports from Europe have disclosed the educational needs of early-career rheumatologists on an international scale. We aimed to identify and characterize the current clinical and academic educational needs of early-career rheumatologists in Türkiye.

Methods: This cross-sectional study was conducted via an online survey distributed to rheumatology fellows in training and consultants working in Türkiye. The survey, distributed by SurveyMonkey, was sent to all Turkish Society of Rheumatology (TSR) member trainees and consultants. The questionnaire included sections on demographics, current professional status, academic interests, and awareness of various TSR programs. Clinical and academic domains were assessed separately using a 7-point scale, with 1 indicating the highest need.

Results: The survey was sent to all rheumatology trainees and consultants who are members of the TSR (n=190), and data from 113 participants (59.4%) were analyzed. Most of the respondents (68.1%) were rheumatology trainees, while the remaining were consultant rheumatologists. In the clinical domain, the most needed skill for both trainees (2.6±1.7) and consultants (2.9±1.8) was musculoskeletal ultrasonography. This was followed by X-ray interpretation among trainees (4±1.6) and magnetic resonance imaging interpretation (3.6±1.3) among consultants. In the academic domain, trainees primarily expressed a need for training in scientific writing (2.8±1.6), while consultants prioritized statistical education (2.7±1.4). Research methodology was the second most frequently requested topic in both groups. Awareness of the educational and academic opportunities provided by the TSR varied greatly among participants.

Conclusion: Musculoskeletal ultrasound emerged as the most reported clinical skill need, emphasizing its relevance and the necessity of incorporating it into routine clinical practice. While the educational programs offered by the TSR are relatively well-known and widely attended, awareness and utilization of academic support mechanisms remain limited.

Keywords: Rheumatology, education, survey, Turkish Society of Rheumatology

Özet

Amaç: Kariyerinin başındaki romatologların eğitim ihtiyaçlarını uluslararası ölçekte gösteren çalışmalar mevcuttur. Bu çalışmada, Türkiye’deki genç romatologların mevcut klinik ve akademik eğitim ihtiyaçlarını belirlemeyi amaçladık.

Yöntem: Bu kesitsel çalışma, Türkiye’de çalışan romatoloji yan dal asistanları ve uzmanlarına yönelik çevrim içi bir anket yoluyla gerçekleştirildi. SurveyMonkey ile dağıtılan anket, Türk Romatoloji Derneği (TRD) üyesi tüm asistan ve uzman hekimlere gönderildi. Anket; demografik bilgiler, mevcut mesleki durum, akademik ilgi alanları ve TRD’nin çeşitli programlarına dair farkındalığı içeren bölümlerden oluşmaktaydı. Klinik ve akademik alanlar ayrı ayrı değerlendirilmiş olup, 1 en yüksek ihtiyacı gösterecek şekilde 7 puanlık bir ölçek kullanılmıştır.

Bulgular: Anket TRD üyesi tüm asistan ve uzmanlara (n=190) gönderildi, 113 kişinin (%59,4) verisi analiz edildi. Katılımcıların çoğunluğu (%68,1) romatoloji asistanı iken, kalanlar uzman romatologlardı. Klinik alanda en fazla ihtiyaç duyulan beceri hem asistan (2,6±1,7) hem de uzman hekimlerde (2,9±1,8) kas-iskelet ultrasonografisiydi bunu asistanlarda grafi okuma becerisi (4±1,6) izlerken asistanlarda manyetik rezonans görüntüleme okuma becerisi (3,6±1,3) izledi. Akademik alanda ise asistanların ilk tercihi makale yazma becerileri (2,8±1,6) iken uzmanlar istatistik eğitimi (2,7±1,4) tercih etmişlerdi. Araştırma metodolojisi her iki grupta da ikinci en sık talep edilen konuydu. TRD’nin sunduğu eğitim ve akademik olanaklara dair farkındalık ise oldukça değişkendi.

Sonuç: Kas-iskelet ultrasonografisi en çok ihtiyaç duyulan klinik beceri olarak ön plana çıkmakta olup, bu alanın rutin klinik uygulamalara entegrasyonunun önemini vurgulamaktadır. TRD’nin sunduğu eğitim programları genel olarak bilinir ve katılım görece yüksek olsa da, akademik destek mekanizmalarına dair farkındalık ve kullanım halen sınırlıdır.

Anahtar Kelimeler: Romatoloji, eğitim, anket, Türkiye Romatoloji Derneği

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Introduction

Training early-career rheumatologists is essential for advancing rheumatology, a field evolving with developments in immunology, imaging, and targeted therapies. As clinical care becomes more complex, the need for well-structured, competency-based education has become more obvious.^[1,2]

National and international rheumatology societies provide a range of educational and academic resources to support the development of young professionals including workshops, digital platforms, research grants, and mentorship programs.^[2-5] Despite the increasing number of these programs, it is not fully known to what extent they meet the needs of early rheumatologists. Understanding the educational needs of early-career rheumatologists is important for optimizing national and international training programs.

Several previous reports from Europe disclosed the educational needs of early-career rheumatologists on an international scale.^[6-8] There is still a lack of country-specific evidence, and no similar studies have been conducted from Türkiye to date.

We aimed to identify and characterize the current clinical and academic educational needs of early-career rheumatologists in Türkiye.

Materials and Methods

This cross-sectional study was conducted via an online survey distributed to rheumatology trainees and consultants working in Türkiye. The survey, distributed by SurveyMonkey, was sent to all Turkish Society of Rheumatology (TSR) member trainees and consultants. Consultants working as assistant professors were excluded from the present study. The questionnaire included sections on demographics, current professional status, academic interests, and awareness of various TSR programs. We evaluated current clinical and academic knowledge and skill needs of young rheumatologists, based on a 7-point scale where 1 indicates the highest level of need. Data were collected between May 2022 and November 2022. The study was approved by the Ethical Committee of the İstanbul Research and Training Hospital (approval number: 154, date: 20.05.2022).

Statistical Analysis

Statistical analyses were performed using SPSS 20.0 software (IBM Corp., Armonk, NY, USA). Continuous variables are presented as mean \pm standard deviation (SD) and categorical variables are presented as percentages.

Results

The survey was sent to all TSR member trainees and consultants (n=190), and 116 (61%) completed the questionnaire. Three consultants who were holding assistant professor positions were excluded from the study and 113 (59.4%) were included for the data analysis.

Demographics

Of the 113 participants, 66.3% were between the ages of 30-35, and a slightly over half of the respondents were female (53.1%). Most of the respondents (68.1%) were rheumatology trainees, while the remaining were consultant rheumatologists. The majority were working in university hospitals (57.5%). The most represented geographic region was Central Anatolia (36.3%), followed by the Marmara Region (20.4%). Internal Medicine was the primary specialty of origin for 88.5% of participants. Slightly less than a quarter (23.9%) had been working as rheumatologists for over four years, while nearly half (46.9%) had not yet completed two years in the rheumatology field. Participants indicated the mean \pm SD hours per week for their clinical and academic work was 40.1 \pm 8.9 and 5.8 \pm 6 respectively. Thirteen (11.5%) participants stated that they could not dedicate any time to academic activities. While 40.7% had not yet chosen an academic focus, the most reported interests included connective tissue disorders (19.5%) and spondylarthritis (14.2%). Demographics of the participants were depicted at Table 1.

Current Clinical and Academic Knowledge and Skill Needs

In the clinical domain, the most prominent skill need for both trainees (2.6 \pm 1.7) and consultants (2.9 \pm 1.8) was musculoskeletal ultrasound. Among trainees, this was followed by a need for improvement in X-ray interpretation (4 \pm 1.6), whereas consultants expressed a greater need for improvement in MR interpretation (3.6 \pm 1.3). The remaining clinical skill needs -physical examination skills, interventional approaches, laboratory evaluation and capillaroscopy- were similar in both groups.

In the academic domain, trainees' top preference was writing skills (2.8 \pm 1.6), whereas consultants prioritized statistics (2.7 \pm 1.4). Research methodology was the second most frequently requested topic in both groups. The remaining academic skill needs were similar between the two groups, including presentation skills, poster preparation, and ethics committee application processes. Current clinical and academic knowledge and skill needs were depicted in Table 2.

Awareness and Participation in Current Educational and Academic Programs

Participation in recent conferences was relatively high, with 63.7% had attended the National Rheumatology Congress in 2021 and 54.8% attended the 2022 Fellows' Congress. Awareness and participation levels in the TSR's educational and academic programs were comparable. Among digital educational initiatives, Romatoscope is the most well recognized, with more than 70% of the

respondents reported active participation. Furthermore, TSR-digital and RODY had quite similar participation rates with slightly less than 60%. Awareness is notably lower for the academic opportunities. More than half of the respondents were unaware of the publication support program and research funding opportunities. Less than 5% of the respondents were applied for them previously. The bursary for research abroad was better known, 63.8% of the participants had heard the program while less than 10% had previously applied. Awareness and participation in current educational and academic programs are depicted in Table 3.

Table 1. Demographics of the participants

Characteristics	n (%)	Total response (%)
Age, years		
30-35	75 (66.3)	113 (100)
35-40	38 (33.7)	
Gender, n (%)		
Female	60 (53.1)	113 (100)
Male	53 (46.9)	
Region of residence		
Aegean	22 (19)	113 (100)
Black sea	4 (3.5)	
Central Anatolian	41 (36.3)	
Eastern Anatolia	7 (6)	
Marmara	23 (20.4)	
Mediterranean	12 (10.5)	
Southeastern Anatolia	4 (3.5)	
Current position		
Trainee in rheumatology	77 (68.1)	113 (100)
Consultant physician	36 (31.9)	
Current workplace		
University hospital	65 (57.5)	113 (100)
Research and training hospital	30 (25.9)	
Public hospital	7 (6)	
City hospital	6 (5.2)	
Private hospital	5 (4.3)	
Years in rheumatology		
1 st	27 (23.3)	113 (100)
2 nd	26 (22.5)	
3 rd	18 (15.5)	
4 th	15 (12.9)	
>4 years	37 (23.9)	
Primary specialty		
Internal Medicine	100 (88.5)	113 (100)
Physical therapy and rehabilitation	13 (11.5)	
Academic subject of interest		
Autoinflammatory disorders	4 (3.5)	113 (100)
Behçet's syndrome	9 (8)	
Connective tissue disorders	22 (19.5)	
Spondylarthritis	16 (14.2)	
Vasculitis	11 (9.7)	
Has not yet been decided	46 (40.7)	
Other	5 (4.4)	

Discussion

Most of the survey respondents (68,1%) were young clinicians currently in rheumatology training. The most frequently reported clinical training need was musculoskeletal ultrasound in both trainees and consultants, which was followed by X-ray interpretation among trainees and magnetic resonance interpretation among consultants. These findings are in line with previous European surveys.^[6,7] In terms of academic development, trainees highlighted academic writing while consultants preferred statistics. Research methodology was also a key area where both groups needed support. This pattern is also consistent with an earlier study.^[6] These findings disclose that early-career rheumatologists in different countries share similar educational and skill needs.

More than half of the participants were aware of the digital educational offers of TSR. This finding was also consistent with the general awareness of European League Against Rheumatism educational offerings among the same target audience in a previous report,^[9] reflecting that such resources have become an integral part of rheumatology education in the post-COVID era.^[10,11]

Despite high awareness of the educational offers, awareness of academic support programs was quite low. Nearly one third of the participants had never heard of TSR bursary for research abroad and more than half have never heard of the research funding and publication support program. Fewer than 10% of the participants had applied for such opportunities before. This points to the need for better visibility and promotion of these academic resources.

Conclusion

Musculoskeletal ultrasound emerged as the most reported clinical skill need, emphasizing its relevance and the necessity of incorporating it into routine clinical practice. While the educational programs offered by the TSR are relatively well-known and widely attended, awareness and

Table 2. Current clinical and academic knowledge and skill needs

Domains*			
Clinical	Trainees, mean \pm SD	Consultants, mean \pm SD	Total, mean \pm SD
Ultrasound	2.6 \pm 1.7	2.9 \pm 1.8	2.8 \pm 1.8
X-ray interpretation	4 \pm 1.6	3.9 \pm 1.7	3.9 \pm 1.7
Physical exam	4 \pm 2.6	4.1 \pm 2.7	4 \pm 2.6
MR interpretation	4.4 \pm 1.7	3.6 \pm 1.3	4.1 \pm 1.6
Interventional approaches	4.1 \pm 1.9	4.3 \pm 2.2	4.1 \pm 2
Laboratory evaluation	4.2 \pm 1.9	4.4 \pm 2	4.2 \pm 2
Capillaroscopy	4.7 \pm 1.7	4.7 \pm 1.7	4.7 \pm 1.7
Academic			
Writing skills	2.8 \pm 1.6	2.9 \pm 1.6	2.8 \pm 1.6
Research methodology	2.8 \pm 1.6	3 \pm 1.7	2.9 \pm 1.6
Statistics	3.1 \pm 1.7	2.7 \pm 1.4	3 \pm 1.6
Literature research	3.1 \pm 1.7	3.3 \pm 1.8	3.2 \pm 1.7
Presentation skills	4.8 \pm 1.3	4.6 \pm 1.7	4.7 \pm 1.4
Poster presentation skills	5.4 \pm 1.5	5.5 \pm 1.2	5.4 \pm 1.4
Ethical committee application	6 \pm 1.6	5.9 \pm 1.7	6 \pm 1.6

*Participants were asked to rate their needs for clinical and academic knowledge and skills on a 1 to 7 scale. 1 indicates the highest level of need and 7 indicates the lowest, MR: Magnetic resonance, SD: Standard deviation

Table 3. Awareness of the existing educational and academic offers of the Turkish Society of Rheumatology

Characteristic			
Educational	Have never heard of it n (%)	Heard but did not participate n (%)	Participated n (%)
TRD-Digital	15 (13.2)	31 (27.4)	67 (59.4)
Romatoscope	3 (2.7)	26 (23)	84 (74.3)
RODY	5 (4.4)	39 (34.5)	69 (56.6)
Academic	Have never heard of it	Heard but did not apply	Applied
Bursary for research abroad	41 (36.2)	63 (55.8)	9 (8)
Research funding	59 (52.2)	51 (45.1)	3 (2.7)
Publication support	76 (67.3)	33 (29.2)	4 (3.5)

utilization of academic support mechanisms remain limited. The Turkish Young Rheumatologists Group could help close this gap by connecting early-career rheumatologists with the TSR.

Ethics

Ethics Committee Approval: The study was approved by the Ethical Committee of the İstanbul Research and Training Hospital (approval number: 154, date: 20.05.2022).

Informed Consent: Not necessary.

Footnotes

Authorship Contributions

Surgical and Medical Practices: M.Ö., G.A., E.B., E.Ç.B., U.İ., Concept: M.Ö., G.A., E.B., E.Ç.B., U.İ., Design: M.Ö., G.A., E.B., E.Ç.B., U.İ., Data Collection and Processing: M.Ö., G.A., E.B., E.Ç.B., U.İ., Analysis or

Interpretation: M.Ö., G.A., E.B., E.Ç.B., U.İ., Literature Search: M.Ö., G.A., E.B., E.Ç.B., U.İ., Writing: M.Ö., G.A., E.B., E.Ç.B., U.İ.

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