



Medical Specialty Choice, Career Plans, and Intrinsic Motivation Among Medical Residents: A Cross-Sectional Study

Asistan Hekimlerde Tıpta Uzmanlık Alanı Seçimi, Kariyer Planları ve İçsel Motivasyon: Kesitsel Bir Çalışma

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Özet: Bu çalışma, bir üniversite hastanesinde görev yapan asistan hekimlerin çalışma koşulları, uzmanlık seçimini etkileyen faktörler, kariyer planları ve içsel motivasyon düzeylerini değerlendirmek amacıyla yapılmıştır. Kesitsel ve tanımlayıcı tipte tasarlanan bu çalışma, 1 Şubat-30 Nisan 2026 tarihleri arasında yürütülmüştür. Çalışmaya 152 asistan hekim dahil edilmiştir. Veriler, araştırmacılar tarafından hazırlanan sosyodemografik veri formu ve Türkçe geçerlik-güvenirliliği yapılmış İçsel Motivasyon Ölçeği ile toplanmıştır. İstatistiksel analizlerde ki-kare testi, Kruskal-Wallis testi, tek yönlü ANOVA ve Spearman korelasyon analizi kullanılmıştır. Katılımcıların çoğunluğu kadın (%62.5) ve dahili bilimlerde görevli asistanlar idi (%68.4). Haftalık çalışma süresi 60 saatin üzerinde olanların oranı %27.0 idi. Çalışma koşullarından memnuniyetin, hem uzmanlık alanına ($p<0.001$) hem de haftalık çalışma süresine ($p<0.001$) göre anlamlı farklılık gösterdiği saptandı. Cerrahi bilimlerde çalışanlarda memnuniyet düzeyi daha düşükken, temel bilimlerde en yüksek olduğu belirlendi. Haftalık çalışma süresi arttıkça memnuniyetin azaldığı görüldü. İçsel motivasyon puanları ile çalışma koşullarından memnuniyet arasında zayıf düzeyde anlamlı pozitif korelasyon saptandı ($p=0.197$, $p=0.015$). Asistan hekimlerde çalışma koşulları ve iş yükü, mesleki memnuniyet üzerinde belirleyici faktörlerdir. Çalışma saatlerinin azaltılması ve çalışma ortamının iyileştirilmesi, memnuniyet ve içsel motivasyonun artırılmasına katkı sağlayabilir.

Anahtar Kelimeler: Asistan hekimler, Çalışma koşulları, İçsel motivasyon, Kariyer seçimi, İş yükü

Abstract: Resident physicians are exposed to demanding working conditions that may influence their satisfaction, motivation, and career intentions. This study aimed to evaluate working conditions, factors affecting specialty choice, career plans, and intrinsic motivation among resident physicians. This cross-sectional descriptive study was conducted between February 1 and April 30, 2026, among 152 resident physicians working at a university hospital. Data were collected using a researcher-developed sociodemographic questionnaire and the Turkish version of the Intrinsic Motivation Scale. Statistical analyses included chi-square test, Kruskal-Wallis test, one-way ANOVA, and Spearman correlation analysis. The majority of participants were female (62.5%) and working in internal medicine departments (68.4%). A total of 27.0% reported working more than 60 hours per week. Satisfaction with working conditions differed significantly according to specialty ($p<0.001$) and weekly working hours ($p<0.001$), with lower satisfaction observed among surgical residents and those with higher workloads. A weak but statistically significant positive correlation was found between intrinsic motivation and satisfaction with working conditions ($p=0.197$, $p=0.015$). No significant differences were observed in intrinsic motivation scores according to academic career intention or working hours. Working conditions and workload are key determinants of satisfaction among resident physicians. Improving working hours and working environments may contribute to enhanced satisfaction and intrinsic motivation, potentially supporting physician retention and career development.

Keywords: Resident physicians, Working conditions, Intrinsic motivation, Career choice, Workload

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1. Introduction

The choice of specialty and career orientation among resident physicians working in medical faculties is of great importance both for their individual professional development and for the human resource planning of the healthcare system. The residency training process is a physically and psychologically demanding period due to heavy workload, long working hours, academic expectations, and clinical responsibilities. During this process, residents' motivation levels toward the profession directly affect their attitudes toward their specialty and their career plans (1).

Specialty training is a critical transitional period that shapes physicians' professional identities and largely determines their career choices in subsequent years. Studies conducted worldwide reveal that, in addition to personal interests and intellectual curiosity, multidimensional factors such as working conditions, income expectations, perceived social status, and role-model influence are determinants in residents' specialty selection (2). Indeed, it is well established that multidimensional factors such as role-model influence, academic career opportunities, working conditions, income expectations, and work-life balance play a role in specialty preference. The unique dynamics of the medical specialty training system in Türkiye (placement based on the Specialty Training Examination score, rotation workload, and differences among training institutions) further complicate this process.

Intrinsic motivation refers to an individual's sustained engagement in an activity for internal reasons such as interest, curiosity, and personal satisfaction, independent of external rewards (3). When evaluated within the framework of Deci and Ryan's Self-Determination Theory, intrinsic motivation is understood to be grounded in the fulfillment of the needs for competence, autonomy, and relatedness (4). This theory has become one of the frequently applied theoretical frameworks in medical education and stands out as an important tool for explaining residents' adaptation to the training environment.

Studies conducted in medical education and the healthcare field show that residents with higher intrinsic motivation exhibit greater professional commitment and job satisfaction,

along with lower levels of burnout (5). On the other hand, residents may have difficulty sustaining their intrinsic motivation due to factors encountered during training such as hierarchical pressure, inadequate feedback, and limited autonomy. A decline in intrinsic motivation can lead to negative outcomes such as a desire to change specialty, professional disillusionment, and career uncertainty (2). Indeed, some studies indicate that a certain proportion of residents experience decreased satisfaction with their chosen specialty or consider changing careers as their training progresses (6,7).

Career planning is not merely a matter of individual preference but also holds strategic importance for the sustainability of the healthcare system. Physician shortages or surpluses in certain specialties directly threaten the effective delivery of healthcare services. Therefore, addressing the factors influencing residents' career orientations from a holistic perspective will lay the groundwork for more qualified structuring of both educational policies and health workforce planning.

The aim of this study is to evaluate the career plans of medical faculty residents regarding specialty selection and the individual and professional determinants affecting this process. In this context, it is aimed to examine the relationship between residents' specialty preferences and their intrinsic motivation levels, as well as to reveal the effects of demographic characteristics and working conditions on career orientations. The findings obtained are expected to contribute to a better understanding of residents' career planning processes and to potential policy development efforts in this field.

2. Materials and Methods

2.1. Study Design and Participants

This single-center, cross-sectional descriptive study was conducted to evaluate the experiences and perspectives of resident physicians regarding their residency training at Eskişehir Osmangazi University Faculty of Medicine. The study was carried out between February 1 and April 30, 2026. Data

collection was performed by trained medical students.

The study population consisted of all resident physicians actively working at Eskişehir Osmangazi University Faculty of Medicine during the study period. No sample size calculation was performed, and it was aimed to include all eligible resident physicians who met the inclusion and exclusion criteria using a total population sampling approach. Resident physicians who were actively employed during the study period, voluntarily agreed to participate, and provided written informed consent were included in the study. Physicians who had completed their residency training (specialists), general practitioners, those who were not actively working during the data collection period due to leave or medical reasons, and those who declined to participate were excluded. A total of 152 resident physicians were enrolled, and all statistical analyses were performed using data obtained from these participants.

All participants were informed about the purpose and procedures of the study. Participation was entirely voluntary, and confidentiality and anonymity of the collected data were ensured. Written informed consent was obtained from all participants before data collection.

Ethical approval was obtained from the Eskişehir Osmangazi University Non-Interventional Clinical Research Ethics Committee (Approval Date: January 6, 2026; Approval No: 60). The study was conducted in accordance with the ethical principles of the Declaration of Helsinki.

2.2. Data Collection Instruments

Data were collected using a structured questionnaire developed by the researchers and the Turkish version of the Intrinsic Motivation Scale. The researcher-developed questionnaire included items assessing participants' sociodemographic characteristics, working conditions, factors influencing specialty choice, and career plans.

The intrinsic motivation levels of the participants were assessed using the Intrinsic Motivation Scale, which was originally developed by Kuvaas and Dysvik (2009) and culturally adapted into Turkish by Deva et al.

(2022) (8). The scale consists of four items rated on a five-point Likert scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"). Total scores range from 4 to 20, with higher scores indicating higher levels of intrinsic motivation.

In the Turkish validation study, factor loadings ranged from 0.72 to 0.90, and the scale demonstrated good internal consistency with a Cronbach's alpha coefficient of 0.85 (10). Owing to its established validity, reliability, and cultural adaptation, the Turkish version of the Intrinsic Motivation Scale was considered an appropriate instrument for assessing the intrinsic motivation levels of resident physicians in the present study.

2.3. Statistical Analysis

Statistical analyses were performed using SPSS Statistics version 23.0. Descriptive data were presented as mean $\pm$ standard deviation for continuous variables and as frequency (n) and percentage (%) for categorical variables. Comparisons of intrinsic motivation scores according to academic career intention and weekly working hours were performed using one-way analysis of variance (ANOVA), followed by Tukey's honestly significant difference (HSD) test for post hoc comparisons. The Kruskal–Wallis test was used to compare satisfaction with working conditions across departments, years of residency, and weekly working hours. Associations between categorical variables were evaluated using the chi-square test, while the relationship between intrinsic motivation scores and satisfaction with working conditions was assessed using Spearman's rank correlation analysis. A two-sided p-value <0.05 was considered statistically significant.

3. Results

3.1. Participant Characteristics

The study included 152 medical residents with a mean age of 29.40 ± 3.99 years (range: 21–55). The majority of participants were female (62.5%) and single (58.6%). In terms of departmental distribution, 68.4% of residents were affiliated with internal medicine sciences, 25.7% with surgical sciences, and

5.9% with basic sciences. Regarding year of residency, second-year residents constituted the largest group (36.8%), followed by third-year (21.1%), fourth-year (18.4%), first-year (17.1%), and fifth-year or above (6.6%). With respect to weekly working hours, 38.2% of residents worked 40 hours or less per week, 34.9% worked between 41 and 60 hours, and

27.0% worked more than 60 hours. A total of 61.8% of participants reported taking on-call duty, with a mean of 4.38 ± 2.68 on-call shifts per month (range: 0–8). The sociodemographic and occupational characteristics of the participants are presented in detail in Table 1.

Table 1. Sociodemographic and Occupational Characteristics of the Participants

Variable	Category	n	%
Gender	Female	95	62.5
	Male	57	37.5
Marital Status	Married	63	41.4
	Single	89	58.6
Department	Internal Medicine Sciences	104	68.4
	Surgical Sciences	39	25.7
	Basic Sciences	9	5.9
Year of Residency	1st Year	26	17.1
	2nd Year	56	36.8
	3rd Year	32	21.1
	4th Year	28	18.4
	5th Year or Above	10	6.6
Mean Weekly Working Hours	40 Hours or Less	58	38.2
	41–60 Hours	53	34.9
	More than 60 Hours	41	27.0
Satisfaction with Working Conditions	Not Satisfied at All	10	6.6
	Not Satisfied	18	11.8
	Undecided	35	23.0
	Satisfied	48	31.6
	Very Satisfied	41	27.0
On-Call Status	No	58	38.2
	Yes	94	61.8

3.2. Factors Influencing Specialty Selection, Academic Career Motivation, and Reasons for Wanting to Work Abroad

When examining the factors influencing specialty selection, Specialty Training Examination score and ranking emerged as the most decisive determinant (56.6%), followed by on-call intensity (50.0%), academic career opportunities (30.9%),

private sector employment prospects (27.0%), financial expectations (23.0%), international opportunities (11.2%), and residency duration (8.6%).

Regarding academic career motivation, the university environment was the most

frequently cited reason (53.6%), followed by interest in scientific research (49.1%), the desire to reduce clinical workload (42.9%), international academic opportunities (24.1%), and the pursuit of an academic title (23.2%). Among the 49 participants who expressed a desire to work abroad, quality of life was

identified as the primary motivating factor (44.9%), followed by access to an advanced healthcare system (38.8%), financial benefits (34.7%), and improved working conditions (34.7%). Findings related to all three domains are presented in Figure 1.

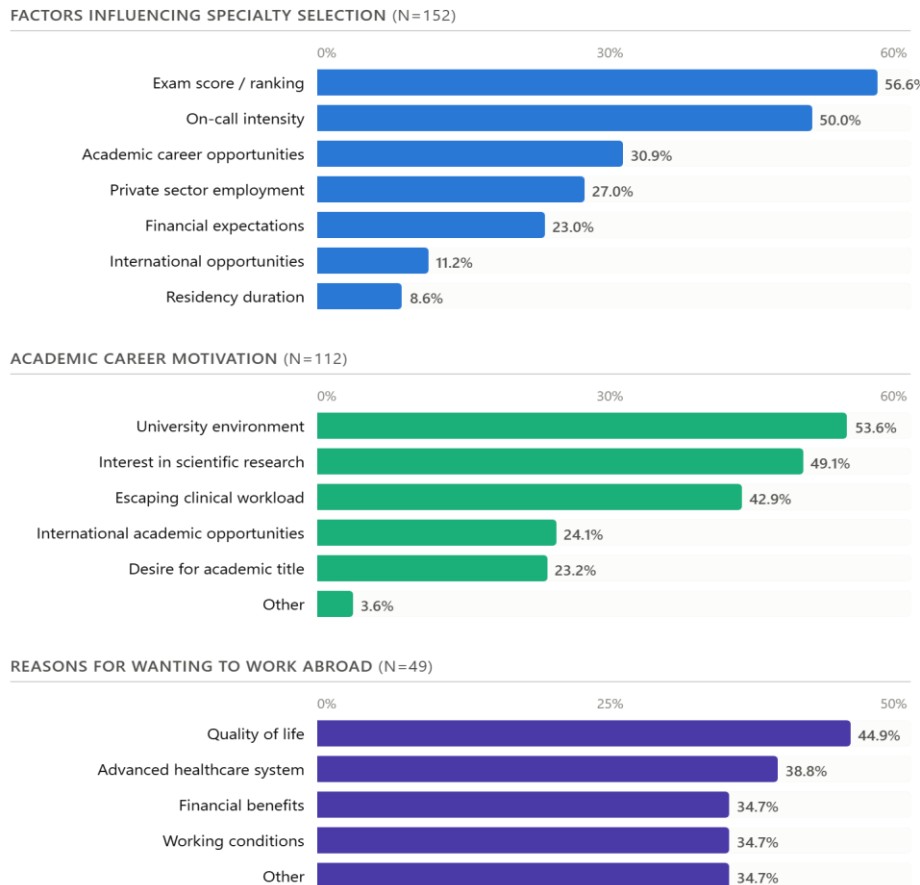


Figure 1. Factors influencing specialty selection, academic career motivation, and reasons for wanting to work abroad among medical specialty residents. Percentages exceed 100% as participants could select multiple options.

3.3. Satisfaction with Working Conditions: Comparison by Department and Weekly Working Hours

Satisfaction with working conditions varied across departments. Internal medicine residents reported 36.5% satisfaction and 31.7% high satisfaction, whereas these proportions were lower among surgical sciences residents (17.9% and 7.7%, respectively). In basic sciences, 55.6% of

residents reported being very satisfied, with no participants reporting dissatisfaction or uncertainty.

These differences were statistically confirmed by the Kruskal-Wallis test ($\chi^2=24.711$, $df=2$, $p<0.001$). Mean rank values indicated that basic sciences residents scored highest

(104.67), followed by internal medicine (84.60) and surgical sciences (48.4). A significant association was also found between weekly working hours and satisfaction ($\chi^2=41.018$, $df=2$, $p<0.001$). Residents working 40 hours or less per week had the highest mean rank (103.03), which declined to 68.41 among those working 41–60 hours and further to 49.44 among those working more than 60 hours, suggesting an

inverse relationship between longer working hours and satisfaction levels.

No statistically significant difference was observed between year of residency and satisfaction ($\chi^2=3.807$, $df=4$, $p=0.433$), although a general declining trend in mean rank values from the first year (86.38) to the fifth year or above (60.35) was noted. Findings are presented in Table 2.

Table 2. Comparison of Satisfaction with Working Conditions by Selected Variables

Variable	Group	n (%)	Mean Rank	χ^2	df	p
Department	Internal Medicine	104 (68.4)	84.60	24.711	2	<0.001
	Surgical Sciences	39 (25.7)	48.40			
	Basic Sciences	9 (5.9)	104.67			
Year of Residency	1st Year	26 (17.1)	86.38	3.807	4	0.433
	2nd Year	56 (36.8)	77.41			
	3rd Year	32 (21.1)	78.48			
	4th Year	28 (18.4)	69.00			
	5th Year or Above	10 (6.6)	60.35			
Weekly Working Hours	≤40 hours	58 (38.2)	103.03	41.018	2	<0.001
	41–60 hours	53 (34.9)	68.41			
	>60 hours	41 (27.0)	49.44			

Kruskal-Wallis test was applied.

3.4. Career Preferences: Academic Career, Plans to Work Abroad, and Specialty Satisfaction

The desire for an academic career did not differ significantly across departments ($p=0.258$). Overall, 31.6% of participants expressed a desire to pursue an academic career, 36.8% were undecided, and 31.6% reported no such intention. Plans to work abroad likewise showed no significant departmental variation ($p=0.517$), with 28.9% of all participants indicating they intended to

work abroad. The proportion of residents who would choose the same specialty again was similarly consistent across all three departments ($p=0.948$), with approximately three quarters of participants overall (73.7%) stating they would make the same choice. Findings related to career preferences are presented in Table 3.

Table 3. Comparison of Career Preferences by Department

Variable	Category	Internal Medicine (n=104)	Surgical Sciences (n=39)	Basic Sciences (n=9)	Total (n=152)	p
Desire for Academic Career	Yes	33 (31.7%)	14 (35.9%)	1 (11.1%)	48 (31.6%)	0.258
	Undecided	34 (32.7%)	17 (43.6%)	5 (55.6%)	56 (36.8%)	
	No	37 (35.6%)	8 (20.5%)	3 (33.3%)	48 (31.6%)	
Plans to Work Abroad	Yes	28 (26.9%)	14 (35.9%)	2 (22.2%)	44 (28.9%)	0.517
	No	76 (73.1%)	25 (64.1%)	7 (77.8%)	108 (71.1%)	
Would Choose Same Specialty Again	Yes	76 (73.1%)	29 (74.4%)	7 (77.8%)	112 (73.7%)	0.948
	No	28 (26.9%)	10 (25.6%)	2 (22.2%)	40 (26.3%)	

3.5. Intrinsic Motivation Scale Score Analyses

One-way analysis of variance (ANOVA) revealed that IMQ total scores did not differ significantly according to intention to pursue an academic career ($F(2,149)=2.300$, $p=0.104$) or average weekly working hours ($F(2,149)=0.656$, $p=0.520$). Tukey's HSD post-hoc analysis likewise found no statistically significant pairwise differences for either variable (academic career intention: $p=0.105$; weekly working hours: $p=0.593$).

Spearman's correlation analysis, however, demonstrated a weak but statistically significant positive association between IMQ TOTAL scores and satisfaction with working conditions ($\rho=0.197$, $p=0.015$), suggesting that higher levels of satisfaction with working conditions are associated with higher intrinsic motivation scores. Findings are presented in Table 4.

Table 4. Comparison of IMQ TOTAL Scores by Selected Variables and Correlation with Satisfaction with Working Conditions

A) ANOVA Results

Variable	Category	N (%)	IMQ Total Mean	F	p
Academic Career Intention	Yes	48 (31.6)	15.73	2.300	0.104
	Undecided	56 (36.8)	14.55		
	No	48 (31.6)	14.81		
Weekly Working Hours	≤40 hours	58 (38.2)	14.81	0.656	0.520

Variable	Category	N (%)	IMQ Total Mean	F	p
	41–60 hours	53 (34.9)	15.38		
	>60 hours	41 (27.0)	14.80		

One-way ANOVA was applied. Tukey's HSD post-hoc analysis revealed no statistically significant pairwise differences for either variable (all $p > 0.05$).

B) Spearman Correlation Analysis

Variables	Spearman's ρ	p
IMQ Total Score — Satisfaction with Working Conditions	0.197	0.015

n=152. Spearman's rank correlation analysis was applied.

4. Discussion

This study investigated the relationship between working conditions, specialty characteristics, career preferences, and intrinsic motivation among resident physicians. The main findings demonstrate that workload and departmental differences are significantly associated with satisfaction with working conditions, while intrinsic motivation shows a weak but positive correlation with satisfaction. No significant associations were observed between intrinsic motivation and demographic or occupational variables such as academic career intention or weekly working hours.

One of the most important findings of this study is the significant inverse relationship between workload and satisfaction. Residents working longer hours reported lower satisfaction levels, consistent with previous evidence indicating that excessive working hours are associated with increased burnout risk and reduced well-being among physicians (9–11). Despite regulatory efforts in many countries to limit duty hours, recent studies continue to show that workload remains a major determinant of resident distress and job dissatisfaction (10,12). These findings highlight that structural workload reduction and workflow optimization remain critical priorities in residency training systems.

Another key finding is the significant variation in satisfaction across departments. Residents in surgical sciences reported the lowest satisfaction levels, while those in basic

sciences demonstrated the highest satisfaction. This pattern is consistent with prior research showing that surgical residents experience higher occupational strain due to intensive clinical exposure, emergency duties, and reduced perceived autonomy (13,14). Conversely, non-procedural specialties are often associated with more predictable schedules and higher perceived control over work conditions, which may contribute to higher satisfaction levels.

In terms of career preferences, approximately one-third of participants expressed an intention to pursue an academic career, while a similar proportion reported uncertainty. Nearly one-third also expressed an intention to work abroad, with quality of life and working conditions being the primary motivating factors. These findings align with recent global reports indicating increasing physician migration intentions, particularly among early-career doctors, driven by concerns regarding workload, income expectations, and career development opportunities (15,16).

Intrinsic motivation scores did not differ significantly according to academic career intention or working hours. However, a weak but statistically significant positive correlation was found between intrinsic motivation and satisfaction with working conditions. This supports self-determination theory, which suggests that intrinsic motivation is influenced by environmental conditions such as

autonomy, competence, and relatedness rather than purely demographic factors (17). Recent studies in healthcare settings similarly emphasize that organizational climate and perceived support play a more important role in motivation than workload alone (18).

The relatively high proportion of residents who would choose the same specialty again suggests overall stability in specialty satisfaction despite demanding working conditions. This may reflect the role of professional identity formation and long-term commitment during residency training.

This study has several limitations. Its cross-sectional design limits causal inference. The single-center nature restricts generalizability. Additionally, self-reported measures may introduce response bias. Despite these

limitations, the study provides meaningful insights into the interplay between workload, satisfaction, motivation, and career intentions among resident physicians.

5. Conclusions

Workload and specialty-related factors significantly influence satisfaction with working conditions among resident physicians. Improving working conditions by reducing excessive workload and strengthening institutional support may enhance physician well-being and retention. Further multicenter and longitudinal studies are needed to better understand the complex relationships between workload, motivation, and career trajectories in residency training.

Ethics Committee Approval: The study was approved by Eskişehir Osmangazi University Noninterventional Clinical Research Ethical Committee (Decision no: 60, Date: 06.01.2026).

Informed Consent: Written informed consent was obtained from all participants prior to their enrollment in the study.

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KAYNAKLAR

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