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Exploring the perspectives and challenges of general surgery residents in Türkiye: Insights from a survey on surgical training

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ABSTRACT

Objective: This study aimed to assess the perspectives of general surgery residents in Türkiye regarding the conditions and methods of their training, as well as the methods and circumstances under which their training is conducted

Material and Methods: The study involved 426 resident physicians undergoing training in general surgery at various institutions, including university hospitals, education and research hospitals, and foundation university hospitals, from January to March 2024. A web-based survey was distributed to the residents via email, containing 18 multiple-choice questions. The results were analyzed using the SPSS statistical software.

Results: The study revealed that 21.36% of the resident physicians had been in training for 0 to 1 year, while 20.19% had been in training for 2 to 3 years. A significant portion, 62.44%, was receiving their training in education and research hospitals, 36.38% in university hospitals, and only 1.17% in foundation university hospitals. In terms of training adequacy, 48.36% of the residents felt they did not receive enough practical training, and 81.22% believed they lacked sufficient theoretical training. Furthermore, 66.10% reported insufficient support for conducting academic research, and only 47.65% were aware of the core training program. Regarding work hours, 35.45% of residents were on duty every other day, 7.28% worked more than eight shifts per month, and 68.08% reported working 60 hours or more per week. Additionally, 91.31% of the residents deemed their salaries inadequate, and 71.36% experienced delays in receiving their on-call pay. Notably, only 55.63% expressed satisfaction with their experience as general surgery residents.

Conclusion: The findings of this research indicate that there is a lack of standardization in general surgery specialization training in Türkiye. The report reveals that both theoretical and practical training are insufficiently provided and not delivered in a systematic manner. Additionally, general surgery residents expressed low levels of satisfaction with the training they receive. It is evident that improvements are necessary in several areas concerning the training and working conditions of resident physicians

Keywords: General surgery, resident, education

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INTRODUCTION

In Türkiye, as in many other locations of the world, rapid technological advancements and innovations are driving change and transformation in the healthcare sector, paralleling trends in various other industries (1). The health sector is one of the areas where scientific knowledge is evolving most intensively (2,3). Increasing financial constraints within the healthcare system, alongside new medical developments and shifting expectations regarding service delivery, are the primary factors fueling this change. As this transformation unfolds, modifications in working environments, conditions, and relationships are occurring, which significantly affect the health and safety of employees (4,5).

Medical specialization training is a structured program designed for research assistants and residents, conducted under guidance and supervision. This organized training

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not only fosters the personal and professional development of the residents but also ensures the delivery of safe and effective healthcare to patients (6). In Türkiye, the Turkish Surgical Society (TSS) established the Assistant Commission in 2009 to identify and address issues related to the professional and personal rights of resident physicians during their specialization training. This commission aims to enhance communication between residents and their peers, as well as with other official bodies within the TSS. Moreover, the education and personal rights of resident doctors are governed by the "Regulation on Specialization Training in Medicine and Dentistry", initially issued on April 26, 2014, and later amended on October 7, 2023. Additionally, initiatives and efforts to structure residency training programs in Türkiye have gained considerable momentum, with each specialty association developing a standardized curriculum for residency training within the framework of the Specialization Training Framework Program. Institutions offering specialization training educate resident doctors based on the established framework program. In Türkiye, authority and responsibility for specialty training are coordinated among the Ministry of Health (SB), the Council of Higher Education (YÖK), medical faculties, the Turkish Medical Association, and specialist associations (7). Specialist trainees, often working in isolation within their departments during their training, connect with the faculty administration twice a year through the "Assistant Orientation Program" for those newly entering specialty training. In this program, alongside faculty information advanced training is provided on topics such as ethical guidelines, professionalism, effective communication, stress management, health law, forensic medicine, malpractice, and effective consultation (8). According to the 2022 Health Statistics Yearbook Newsletter by the Ministry of Health in Türkiye, 45,391 of the total 194,688 physicians are resident physicians (9).

Today, many resident physicians, particularly those in surgical specialties, face challenging working conditions, limited educational resources, and a complex web of professional relationships. Establishing standardized guidelines for residency training across specialties is essential for both trainees and trainers. General Surgery Clinics, in particular, stand out as the most affected units in Türkiye, often struggling to complete training programs under especially difficult conditions. As of 2017, Türkiye has 123 institutions providing general surgery training, with 768 general surgery residents in training. These institutions include 9 city hospitals, 26 training and research hospitals, and 78 medical schools (13 of which are foundation institutions) (10). The primary goal of general surgery residency training is to equip residents with the professional competence, knowledge, and skills necessary for their practice, while also fostering lifelong learning and the ability to maintain their skills. General surgery residency training spans five years, with the Ministry of Health serving as the legal authority overseeing this specialist training (11).

General surgery residency today encompasses training in the treatment of the digestive system -including the esophagus, stomach, small and large intestines, liver, pancreas, and gallbladder- as well as diseases of the thyroid gland, parathyroid glands, adrenal glands, peripheral vascular diseases, hernias, skin, breast, and trauma care. General surgeons are trained to handle nearly all emergency surgical situations. Additionally, minimally invasive surgery and endoscopic procedures fall within the scope of general surgery (12).

Since the early 21st century, numerous developments have prompted changes in the nature and structure of general surgery training. In general surgery clinics, as in other surgical fields, challenges such as internal harassment (both horizontal and vertical), pressures on resident physicians, and the departure of trainers from educational institutions due to difficult working conditions are significant issues. The limited opportunities for career progression and the presence of incompetent or unqualified administrators hinder professional growth, creating a sense of a limited professional future. These conditions have contributed to increased migration out of the field and a growing sense of alienation among practitioners (13).

This survey study sought to assess the perspectives of residents working in general surgery clinics at university hospitals, foundation university hospitals, and training and research hospitals providing general surgery specialization training in Türkiye. The goal was to identify the conditions under which these residents train, understand the nature of their training, and develop a general approach for improvement. To achieve this, a survey was conducted among general surgery residents, aiming to create a more contemporary perspective, and enable a more thorough and accurate audit and evaluation process.

MATERIAL and METHODS

An online survey consisting of 18 multiple-choice questions was created for web-based completion, and the survey was distributed via email to 874 general surgery residents in 63 surgical clinics. Participants were informed that the average time required to complete the survey would be approximately 30 minutes. Four hundredt twenty-six resident physicians in general surgery training at university hospitals, education and research hospitals, and foundation university hospitals, responded to the survey and were involved in the study conducted between January and March 2024. The CROSS checklist has been completed for this study. Ethics committee approval was received from Ege University Ethics Committee Commission (decision no: 25-1.1T/40).

Statistical Analysis

The data collected in the study were analyzed using the SPSS 22 statistical software package (Statistical Package for the Social Sciences-IBM®). Descriptive statistics for the distribution of responses to the independent variables were presented as counts and percentages for categorical variables. The Kolmogorov-Smirnov test was employed to assess the normality of continuous variables. The chi-square test was used to examine relationships between categorical variables in both pairwise and multiple comparisons. For comparisons of quantitative variables across more than two groups, the Bonferroni test in post-hoc analyses was applied. Results were evaluated at a 95% confidence interval, with a significance level set at $p<0.05$.

RESULTS

The descriptive characteristics of the 426 general surgery residents participating in the study are presented in Table 1. Among the residents, 91 (21.36%) had been in training for 0-1 year, 98 (23.00%) for 1-2 years, and 86 (20.19%) for 2-3 years (Figure 1). Additionally, 265 residents (62.44%) were based in training and research hospitals, 155 (36.38%) in university hospitals, and 5 (1.17%) in foundation university hospitals (Figure 2).

While 220 residents (51.64%) believed they had received sufficient practical training, only 80 (18.78%) felt their theoretical training was adequate. The proportion of residents working in clinics that encourage academic activities was 33.90% (n=144). Conversely, 221 residents (66.10%) indicated that they did not receive adequate support for academic work.

Furthermore, 203 residents (47.65%) thought the education they received was sufficient for their specialization.

In the study, 203 residents (47.65%) reported being aware of the core education program, while 237 residents (55.63%) indicated that the resident report card application was implemented in their clinics. Additionally, 149 residents (34.98%) stated that they completed their other clinical rotations as officially specified. Furthermore, only 317 residents (74.41%) expressed that they were considering taking the proficiency exam administered by the TSS.

When examining the on-call status of the residents, 332 (77.93%) reported that they were able to use their leave rights after on-call duty. Additionally, 151 residents (35.45%) indicated that they were on-call every other day, while 31 residents (7.28%) stated they were on-call more than eight times a month. The majority of residents (68.08%; n=290) reported working 60 hours or more per week. Despite this demanding schedule, 389 residents (91.31%) felt their salaries were insufficient, and 304 (71.36%) noted delays in the payment of on-call fees. Furthermore, 262 residents (61.50%) expressed concerns about safety, while 237

Table 1. Descriptive characteristics of general surgery residents

		n	%
Do you think you received enough practical training during your residency?	Yes	220	51.64
	No	206	48.36
Do you think you received enough theoretical training during your residency?	Yes	80	18.78
	No	346	81.22
Are resident physicians encouraged to study academically in your clinic and are they provided with the necessary support in this regard?	Yes	144	33.90
	No	281	66.10
Do you consider your education sufficient for specialization?	Yes	203	47.65
	No	223	52.35
Do you have information about the core education program?	Yes	203	47.65
	No	223	52.35
Is there an assistant report card application in your clinic?	Yes	237	55.63
	No	189	44.37
Do you do your clinical rotations in the officially specified manner?	Yes	149	34.98
	No	277	65.02
Do you plan to take the Turkish Surgery Association proficiency exam?	Yes	317	74.41
	No	109	25.59
Do you use your leave right after duty?	Yes	332	77.93
	No	94	22.07
How many hours do you work per week?	40-50 hours	36	8.45
	50-60 hours	100	23.47
	60 hours and above	290	68.08
Do you work shifts every other day?	Yes	151	35.45
	No	275	64.55
Do you work more than 8 hours per month?	Yes	31	7.28
	No	395	92.72
Do you find resident physician salaries sufficient?	Yes	36	8.45
	No	389	91.31
Are there any delays in the payment of your duty fees?	Yes	304	71.36
	No	122	28.64
Do you have concerns about your life safety while serving in your clinic?	Yes	262	61.50
	No	164	38.50
Do you think you received enough practical training during your residency?	Yes	237	55.63
	No	54	12.68
	Undecided	135	31.69

residents (55.63%) reported being happy with their status as general surgery residents. Overall, these findings highlight the need for improvements in various aspects of the education and working conditions of resident physicians.

According to the results of the Bonferroni multiple comparison test, significant differences were identified between the groups regarding their perceptions of practical training adequacy. Specifically, it was found that 43.02% (n=114) of residents working in education and research hospitals felt they did not receive enough practical training during their residency, while this rate was slightly lower at 42.58% (n=66) among residents working in university hospitals. These findings indicate that both groups express similar levels of dissatisfaction regarding their practical training, highlighting a need for improvement in training programs across these hospital types. Additionally statistically significant differences were found regarding the question, "Do you think you received enough theoretical training during your residency?" based on the type of hospital where the resident physicians worked ($p<0.05$). The Bonferroni multiple comparison test revealed differences between residents in education and research hospitals and those in university hospitals. Specifically, 80.38% (n=213) of assistant doctors in education and research hospitals felt they did not receive adequate theoretical training, while this percentage was slightly higher at 83.23% (n=129) among those in university hospitals. In contrast, the study found no statistically significant differences regarding the question, "Do you have information about the Core Education Program?" among the different hospitals where the residents worked ($p>0.05$). This indicates that awareness of the Core Education Program was consistent across hospital types, despite the differences in perceptions of theoretical training adequacy.

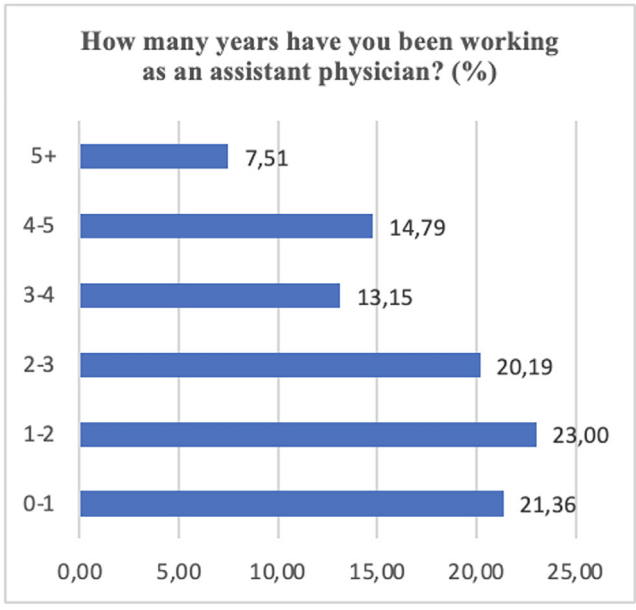

Figure 1. How many years have you been working as an assistant physician?

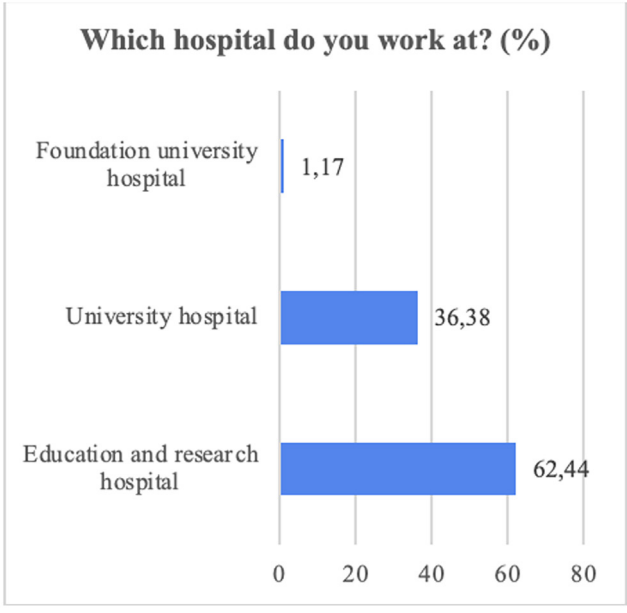

Figure 2. Which hospital do you work at?

DISCUSSION

The analysis of the survey results from 426 general surgery residents revealed a lack of standardization in the residency training process. It was found that both theoretical and practical training were insufficient and not delivered in an organized and structured manner. Furthermore, more than half of the residents reported dissatisfaction with the general surgery training they were receiving.

The role of hospitals affiliated with the Ministry of Health is crucial in general surgery employment. In our study, it was found that 62.44% of the residents were working in training and research hospitals 36.38% in university hospitals, and only 1.17% in foundation university hospitals. These findings contrast with the results of the "General Surgery Residents 2010 National Survey" conducted by the TSS Residents Commission, which indicated that, as of 2009, among the 1,005 physicians receiving specialization training in general surgery, approximately 58.4% were employed in university hospitals, 36.8% in training and research hospitals, and 4.9% in foundation university hospitals highlights the evolving landscape of general surgery training settings in Türkiye over the years (14). This discrepancy emphasizes a shift in the preference and distribution of general surgery residents across hospital types over the years, suggesting a growing emphasis on training and research hospitals rather than university hospitals in the existing training context.

In 2010, residents primarily favored university hospitals for their specialization, but in recent years, there has been a noticeable

shift towards training and research hospitals. One contributing factor to residents' dissatisfaction with general surgery training is low income. Training and research hospitals affiliated with the Ministry of Health typically generate higher revolving fund income, which may explain the increased preference for these facilities among residents. In our study, 48.36% of residents felt they did not receive adequate practical training, while 81.22% believed their theoretical training was insufficient. Additionally, only 33.90% of residents reported working in clinics that promote academic work, and 66.10% expressed that they do not receive enough support in this area. To improve these rates, an effective educational approach that addresses the learning needs of residents should be implemented in all general surgery clinics offering training. The first step is to standardize the general

Table 2. Comparison of resident physicians' opinions about their tenure and the practical, theoretical and core training they received during their residency

		How many years have you been working as a physician assistant?												Test
		0-1		1-2		2-3		3-4		4-5		5+		
		n	%	n	%	n	%	n	%	n	%	n	%	
Do you think you received enough practical training during your residency?	Yes	51	56.04	38	38.78	42	48.84	34	60.71	37	58.73	18	56.25	X^2: 10,86; **p=0.07**
	No	40	43.96	60	61.22	44	51.16	22	39.29	26	41.27	14	43.75	
Do you think you received enough theoretical training during your residency?	Yes	27_a	29.67	$14_{a,b}$	14.29	8_b	9.30	$15_{a,b}$	26.79	$9_{a,b}$	14.29	$7_{a,b}$	21.88	X^2: 16.83; **p=0.01***
	No	64_a	70.33	$84_{a,b}$	85.71	78_b	90.70	$41_{a,b}$	73.21	$54_{a,b}$	85.71	$25_{a,b}$	78.13	
Do you have information about the Core Education Program?	Yes	36	39.56	47	47.96	42	48.84	31	55.36	27	42.86	20	62.50	X^2: 7.18; **p=0.21**
	No	55	60.44	51	52.04	44	51.16	25	44.64	36	57.14	12	37.50	

Statistical significance, X^2: Chi-square test, note: There is a significant difference between different letters in the same row. Table 2 illustrates the comparison of resident physicians' perceptions regarding their tenure and the practical, theoretical, and core training received during their residency. The analysis revealed statistically significant differences regarding the question, "Do you think you received enough theoretical training during your residency?" in relation to the duration of their work as assistant physicians ($p<0.05$). The Bonferroni multiple comparison test indicated that the difference was between those who had worked for 0-1 year and those who had worked for 2-3 years. Specifically, 70.33% (n=64) of residents with 0-1 year of experience felt they did not receive sufficient theoretical training, whereas this rate increased to 90.70% (n=78) among those with 2-3 years of experience. In contrast, the study found no statistically significant differences regarding the questions, "Do you think you received enough practical training during your residency?" and "Do you have information about the Core Training Program?" in relation to the duration of their work as resident physicians ($p>0.05$) *:Significant p-value, a and b: It shows the results of the Bonferroni multiple comparison test.

Table 3. Comparison of residents' thoughts on their hospitals and the training received during their residency

		Education and research hospitals (n=265)		University hospitals (n=155)		Foundation university hospitals (n=5)		Test
		n	%	n	%	n	%	
Do you think you received enough practical training during your residency?	**Yes**	151_a	56.98	66_b	42.58	$2_{a,b}$	40	X^2: 221.88; **p=0.002***
	No	114_a	43.02	89_b	57.42	$3_{a,b}$	60	
Do you think you received enough theoretical training during your residency?	**Yes**	52_a	19.62	26_b	16.77	$2_{a,b}$	40	X^2: 215.12; **p=0.001***
	No	213_a	80.38	129_b	83.23	$3_{a,b}$	60	
Do you have information about the Core Education Program?	**Yes**	133_a	50.19	67_b	43.23	$3_{a,b}$	60	X^2: 16.67; **p=0.061***
	No	132_a	49.81	88_b	56.77	$2_{a,b}$	40	

Statistical significance, X^2: Chi-square test, note: There is a significant difference between different letters in the same row. The comparison of resident physicians' perceptions regarding the hospitals they work in and the practical, theoretical, and core training received during their residency is presented in Table 3. The analysis revealed statistically significant differences in responses to the question, "Do you think you received enough practical training during your residency?" based on the type of hospital ($p<0.05$). These findings suggest that the perceptions of practical training adequacy vary among resident physicians depending on the hospital setting in which they are training. Further analysis may help clarify the specific factors contributing to these differences in perceived training quality. *:Significant p-value, a and b: It shows the results of the Bonferroni multiple comparison test.

surgery training provided across the country and to expedite efforts for improvement. It is essential to recognize that training activities are as crucial as other professional responsibilities and should be restructured accordingly. Supporting our findings, Akçam et al. reported in their study that 57.7% of residents did not receive the theoretical course training provided by their trainers, while those who did received an average of only two hours of theoretical instruction per week. Additionally, the same study indicated that 26.9% of residents received no practical training, while those who did averaged eight hours of practical training per week (6).

In our study, 52.35% of residents reported that the education they received was insufficient for their specialization. In contrast, the "General Surgery Residents 2010 National Survey" indicated that only 32% of residents felt their specialization training was inadequate (14). Similar to our results, the study by Akçam et al. (6), which evaluated residents' perspectives on their surgical education involving 52 thoracic surgery residents across seven different hospitals, found that 39.5% of thoracic surgery clinics lacked resident education programs, 32.7% had insufficient periods for specialization training, and 78.8% reported experiencing stressful working conditions. According to a study by the Turkish Medical Association, half of the resident physicians expressed dissatisfaction with the medical specialization education they received (15). Similarly, in a study assessing the views of 204 residents training inthoracic and cardiovascular surgery in Türkiye, Çıtak and Altaş (16) reported that only 78.2% of the institutions had a resident training program, 59.1% provided adequate periods for specialization training, and 57.8% of residents considered their instructors to be sufficient. In contrast to our study, all resident physicians in basic medical sciences reported, according to Tan et al. (4), that a standard resident training curriculum was implemented in their departments, with nearly all of them indicating that the time allocated for continuing medical education was adequate. Allowing resident physicians to voice their opinions during the curriculum development process and to relay these opinions to the Medical Specialization Board or the YÖK through representatives appears to be a crucial step toward enhancing the quality of education and improving overall satisfaction rates. The TSS Qualification Board introduced the General Surgery Specialist Training Core Education Program (CEP) in 2006 to establish a standardized national curriculum (17). The TSS General Surgery CEP comprehensively outlines the purpose, goals, application principles, key measurement and evaluation points, and the concept of competence in general surgery training. It details the knowledge, skills, and attitudes required at various levels of seniority in both basic and specialized subjects. In the United States, the organization of resident training and working hours is managed separately by each specialty (18). The Accreditation Council for Graduate Medical Education (ACGME) plays a crucial role in standardizing medical specialty training by issuing periodic notifications (19). In our study, only 47.65% of residents were aware of the core education program, a figure slightly lower than the approximately 59% reported in the national survey conducted in 2010 (14). Despite the passage of 18 years, it is clear that challenges remain in both awareness and implementation of the TCD CEP, with some residents still unaware of its existence.

Being on duty is regarded as an integral part of education and service. However, in practice, the working hours and shift schedules for residents in educational institutions are often dictated more by the hospital's operational demands and the volume of clinical work than by the educational needs of the residents themselves. In our study, it was noted that 35.45% of residents were on duty every other day, 7.28% worked more than eight times a month, and 68.08% reported working 60 hours or more per week. This mirrors findings from the 2010 National Survey of General Surgery Residents, which revealed that 65% of residents in their first and second years were on duty every other day, 33% experienced block shifts lasting two or more consecutive days, and 11.3% had on-call duties exceeding ten times a month (14). Çıtak and Altaş (16) found that 59.8% of residents in thoracic and cardiovascular surgery worked nine or more shifts per month, often exceeding 90 hours per week. Similarly, Akçam et al. (6) reported that thoracic surgery residents in seven different hospitals averaged eight shifts per month, with a range of three to fifteen shifts. Unfortunately, this longstanding issue has remained unresolved for years, and the problem is being inadequately addressed. It's important to remember that excessive shifts and long working hours can hinder practical performance and increase the risk of medical errors (20,21).

In the United States, following the Libby Zion case on March 4, 1984, laws were enacted to prevent residents from working more than 80 hours a week and from being on call for more than 24 consecutive hours (22). In 2011, the ACGME implemented regulations that limited the total weekly working hours for residents to 80 and restricted shifts to a maximum of 16 hours (23). In 2017, the ACGME released a statement prioritizing residents' well-being and introduced various measures to address their mental health needs. The organization recognized that residents were facing issues related to depression and burnout, mandating that medical schools take necessary steps to ensure workplace safety, provide psychological support, offer adequate rest opportunities, and ensure safe transportation home after shifts (24).

In our study, 77.93% of residents reported that they were able to utilize their leave rights after shifts. This marks a significant change from previous practices, as residents historically did not have the option to take leave after their shifts. According

to the 2010 National Survey of General Surgery Residents, 99% of residents indicated that they did not have leave rights after shifts, and this issue was consistent across various institutions (14). Similarly, Akçam et al. (6) found that thoracic surgery residents in their study who were training in seven different hospitals did not exercise leave rights after their shifts. Additionally, Yılmaz et al. (25) conducted a study with 155 resident physicians and discovered that 85% of the residents lacked leave rights after their shifts, leading them to work continuously the following day. Similar findings were reported in the study by Rahman et al. (26), highlighting the urgent need for regulations regarding resident physicians' working hours. Another notable result from our research is that 389 residents (91.31%) felt their salaries were insufficient, and 304 residents (71.36%) indicated that they experienced delays in receiving their shift payments. This aligns with the "General Surgery Residents 2010 National Survey", in which 92% of residents expressed dissatisfaction with their salaries and revolving fund income and 20% reported taking on additional work to make ends meet (14). In our research, only 55.63% of residents expressed satisfaction with being a general surgery resident, a notable increase from around 43%, reported in the national survey conducted in 2010 (14). We attribute this 13% rise in satisfaction levels over the 15-year period to the implementation of a specialization training program that aligns with national laws and regulations and is based on internationally accepted standards in the institutions offering this training. This suggests that, despite the challenges they face, general surgery residents still have a passion for surgery and a desire to pursue careers as surgeons. Considering their demanding and complex workloads, enhancing the working conditions for general surgeons and addressing their personal rights could further boost resident satisfaction. Similarly, in the research conducted by, Yılmaz et al. (25), half of the participants believed that the specialty training they received was satisfactory, while one in three felt that improvements were needed in medical specialty training (25). In our study, only 34.98% of residents reported that they completed their clinical rotations as officially specified, compared to approximately 48% in the national survey conducted in 2010 (14). The primary reason for the 13% decrease in the adherence to rotation protocols in general surgery clinics between 2010 and 2024 is that these rotations are conducted based on the clinics' workload and manpower rather than the residents' needs. This lack of standardization and the prevalence of arbitrary practices contribute to the issue. Unfortunately, the failure to comply with legally mandated rotation regulations highlights the disorganization of general surgery specialization training in our country.

In 2006, the "Resident Surgery List Report Card", approved by the TSS Qualification Board Education, was implemented. This list outlines the surgeries that residents are expected to perform at least once during their training, with a requirement to complete a minimum of 350 surgeries, including 150 major procedures (27). In our study, 55.63% of residents reported that the resident report card application was used in their clinics. However, a national survey conducted in 2010 indicated that only 56% of surgical training clinics had a resident card system, and 66% of residents were unaware of the existence of the TSS resident card (14). Over the 14-year period, no significant change in application rates was observed.

Dissatisfaction among general surgery residents is prevalent across all levels of seniority. Primarily, the working hours of resident physicians should be regulated, training deficiencies should be identified, and the necessary financial support should be provided to the physicians. Mandatory weekly didactic sessions, national surgical training accreditation guidelines, periodic nationwide environment assessments, and the supervision of training centers with accreditation by competent authorities will enhance the quality of the education provided and ensure its standardization. We advocate for the establishment of a dedicated unit, along with a separate administrative support role, to oversee specialty training in general surgery departments and training clinics. This initiative could help mitigate training shortcomings, alleviate residents' workloads, and enhance the overall quality of their education.

Study Limitations

While this study offers valuable insights, it is important to acknowledge certain limitations. The validity and reliability of the survey were confirmed through factor analysis; however, there is a potential for selection bias, as residents who were more dissatisfied might have been more likely to participate. Additionally, the response rate of 48.7% raises concerns about non-response bias. Although inter-institutional comparisons were not the main focus, future studies should investigate differences in training quality and workload across various types of hospitals. Another significant point is the difference in perceptions of theoretical training among residents at different seniority levels. As surgical residents progress in their training, they gain more experience, which may lead them to identify deficiencies in their education, potentially explaining variations in their responses. Implementing structured training programs tailored to seniority levels may help address these concerns. Finally, while the study highlights the need for improvements in standardization and working conditions, future research should propose specific strategies for implementation.

CONCLUSION

Specialty training in surgical disciplines necessitates a multidisciplinary approach. This field is often chosen out of scientific curiosity, and passion, but it also demands a thorough examination of the challenges that can lead to attrition during or after residency. To restore the previous allure of surgical

specialties, it is crucial to identify the factors that diminish the quality of surgical training and to understand the expectations of resident doctors concerning their education.

When evaluating the survey results from our research, it became evident that general surgery residency training in our country suffers from significant deficiencies and lacks basic standards, leading to dissatisfaction among residents. Additionally, it was noted that residents endure long working hours with inadequate rest periods. This dissatisfaction is prevalent across all levels of seniority, particularly among final-year residents. To address these issues, it is crucial to organize working hours, identify and rectify training deficiencies, ensure the provision of necessary resources for academic pursuits, and offer financial support to resident physicians. Additionally, mandatory weekly didactic sessions, national surgical training accreditation guidelines, periodic nationwide environment assessments, and the supervision of training centers with accreditation by competent authorities will both enhance the quality of the education provided and ensure its standardization. We advocate for the establishment of a dedicated unit, along with a separate administrative support role, to oversee specialty training in general surgery departments and training clinics. This initiative could help mitigate training shortcomings, alleviate residents' workloads, and enhance the overall quality of their education.

Ethics

Ethics Committee Approval: This study was obtained from Ege University Faculty of Medicine Clinical Research Ethics Committee Decision no: 25-1.1T/40.

Informed Consent: Informed consent was obtained.

Footnotes

Author Contributions

Surgical and Medical Practices - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Concept - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Design - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Data Collection or Processing - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Analysis or Interpretation - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Literature Search - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.; Writing - H.G.K., B.Y., M.C.Ç., E.T., E.O., G.A., B.A., K.Ö., S.N.Ö., B.Y., Y.T., A.D.U., G.K.Ç., A.S.K.

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