

# Why don't young doctors want to be surgeons?

## Authors' Contribution:

A – Study Design  
B – Data Collection  
C – Statistical Analysis  
D – Manuscript Preparation  
E – Literature Search  
F – Funds Collection

Piotr Czopek<sup>ABCDEF</sup>, Daria Dranka-Bojarowska<sup>CDEF</sup>, Sławomir Mrowiec<sup>EF</sup>

Department of Digestive Tract Surgery, Medical University of Silesia in Katowice, Poland; Head: Sławomir Mrowiec MD PhD

Article history: Received: 09.08.2020 Accepted: 28.09.2020 Published: 29.09.2020

## ABSTRACT:

**Aim:** The increasing staff shortages in Polish surgery incline towards posing the following questions: What are the reasons for the reluctance of Polish doctors in training and residents to specialize in this field of medicine? What measures could be pursued to raise the interest of students and trainees in specializing in general surgery? The aim of this paper is to attempt to answer these questions.

**Material and methods:** From August 5 to December 30, 2019, an online survey of doctors in training and resident doctors was conducted. The study covered 2,498 people.

**Results:** The key reason indicated by young doctors of both sexes was the disproportion between the level of remuneration and professional responsibility. Other most commonly reported reasons include: high overtime, physical and mental strain at work, and fear of not being allowed by senior colleagues to perform surgery.

**Conclusions:** In view of the aging Polish surgical staff and a decreasing number of young doctors interested in this field of medicine, it is necessary to introduce changes into their mode of education.

## KEYWORDS:

doctor, healthcare, specialization, surgeon

## INTRODUCTION

The training of a new generation of specialists is becoming a challenge for contemporary Polish surgery. The average age of a Polish specialist in this field is 55.2 years [1]. Many of those specialists will be eligible for retirement in the next 10 years and withdraw from their profession. Despite defining surgery as a priority specialization, the number of young doctors interested in this field of medicine is still declining.

What are the reasons for this? What could be done to attract the interest of students and doctors in training specializing in general surgery? The aim of this paper is to provide the answer to the above questions.

The main source of information presented in the publication are the results of statistical surveys conducted in accordance with the Program of Statistical Research of Public Statistics, both by the Central Statistical Office and within the framework of departmental statistics 1 (Ministry of Health, Ministry of Interior and Administration). A supplementary source is represented by administrative data and collective studies obtained from institutions operating in the field of health care and statistical data published by the European Commission.

## MATERIAL AND METHODS

In the period from August 5 to December 30, 2019, we conducted an online survey among doctors in training and residents. The study included 2,498 people.

The questionnaire consisted of 10 arguments which, according to the author, may be the reason behind young doctors' lack of interest in general surgery as a potential specialization. The respondents could

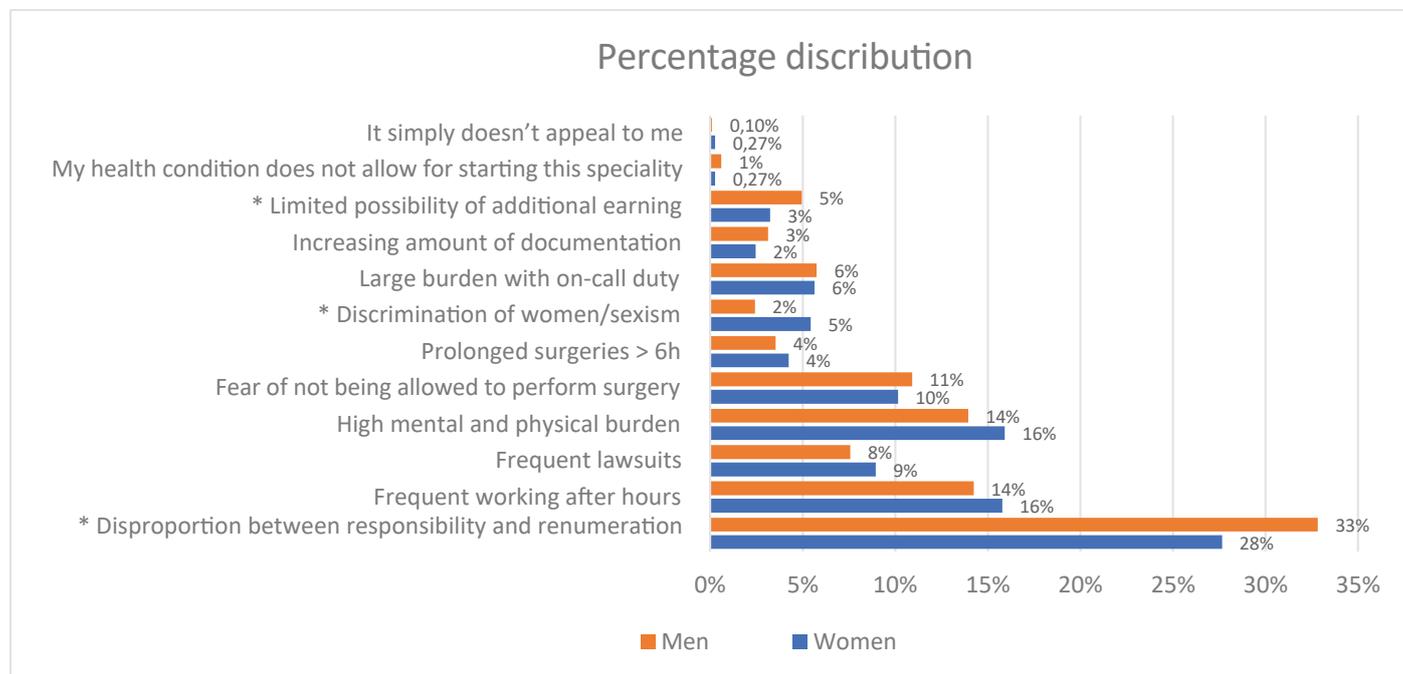
also propose their own answers. Thus, 12 arguments contributing to the choice of a different specialization were obtained. We verified the correctness and understandability of the questionnaire on a randomly selected group of 20 doctors. The results of the pilot trial were not taken into account. The obtained outcomes were processed using the Chi-square test, assuming a significance level of  $\alpha = 0.05$ .

## RESULTS

The survey included 2,498 people, of whom 1,508 (60.37%) were women and 990 men (39.63%). All respondents were doctors during their postgraduate internship or undergoing specialized training. The most common reason for abandoning surgery was the disproportion between the level of responsibility and the amount of remuneration ( $p < 0.05$ ). This criterion was considered the most important in the gender-specific groups. Men (32.83%) pay more attention to the amount of remuneration than women (27.65%). Of equal importance for both groups was frequent staying at work after hours ( $n = 379$ ), unrelated with on-call duty, and high mental and physical strain ( $n = 378$ ). Frequent civil or criminal cases were mentioned to a lesser extent (8.4%). Young doctors were also concerned about being allowed to perform surgeries as operators and about discrimination against women in the surgical profession (9.7% women vs. 13.3% men). Factors with a low impact included frequent criminal or civil cases and the growing amount of documentation that must be completed by the doctor. The health condition did not allow 10 people to start this specialization, while only 5 doctors replied that it was not of interest to them. The respondents also pointed to an unrealistic specialization plan. Many residents who are trained in small municipal hospitals are unable to perform some of the procedures that are mainly carried out in large, high-reference academic centers. In these cases, treatments

Tab. I. Summary of survey results.

ARGUMENTS	WOMEN	MEN
Too much responsibility in relation to salary	417	325
Often working after hours	238	141
Frequent civil/criminal cases	135	75
High physical and mental strain	240	138
Fear of not being allowed to perform surgery by senior colleagues	153	108
Prolonged surgeries > 6h	64	35
Discrimination against women/sexism	82	24
Lack of private life due to burden with on-call time	85	57
An increasing amount of medical documentation	37	31
Little possibility of additional earning	49	49
Health condition that does not allow to start specialization	4	6
I simply resent the idea	4	1

Fig. 1. Percentage distribution of individual arguments. Values with the highest impact factor ( $p < 0.05$ ) are marked with an asterisk.

in the pancreas, liver, esophagus, and vascular surgery and neurosurgery were indicated. Statistically significant differences between the group of women and men relate to the low possibility of additional earning and the disproportion between responsibility and remuneration, which are more often indicated by men and gender discrimination, which was mostly mentioned by women.

## DISCUSSION

According to periodic demographic reports conducted by the Supreme Medical Chamber, as of March 3, 2020 there are 9,639 surgeons in Poland, 8,983 of whom have declared being professionally active [1]. The average age of a surgeon in Poland is 55.2 years.

This means that in the next 10 years, many of those surgeons will reach the retirement age, which is currently 65, and will withdraw from their profession. According to the information obtained at the Centre for Postgraduate Medical Education, responsible for the process of educating specialists, as of on March 9, 2020 specialization training in the field of surgery was performed by 912 doctors, which is 71 less than on June 30, 2017 [2]. This observation is interesting because in 2018, general surgery was placed on the list of priority specializations. It seems that even a higher salary has not contributed to an increased interest in this field.

The specialization training program in general surgery provides for the improvement of practical and theoretical skills for 6 years. Assuming the sustained trend in the preferences of choosing a specialization and reaching the retirement age by an increasing number of current specialists, over the next 10 years we could observe a reduction in the number of professionally active surgeons by 10%, and in the next 10 years by as much as 30%. According to the statistical data published by the National Centre for Health Information Systems, in 2019 there were 1.6 surgeons per 10,000 citizens, of which only 0.8 were second-degree specialists [3]. These numbers are difficult to relate to other European countries, as such comparative data are not published. On December 17, 2019, the World Health Organization published a report which includes all surgical specialties [4]. Unfortunately, it cannot be used to evaluate Poland against the background of Europe due to the difference in the methodology of conducted research.

A similar problem is faced by the German health care system. Our western neighbors predict that by 2030, there will be a 23% deficit of specialized surgical staff [5]. One of the core reasons for such a situation is concern for the quality of specialized education, which may worsen along with the deterioration of the financial situation of the educational center. In addition, German medical students who are observing the realities of working in the profession of a surgeon fear a work-life imbalance, which contributes to a declined interest in general surgery [6]. In a publication concerning the “burnout” of residents, Yeo et al. demonstrated that despite the mandatory reduction of

working hours, 20% abandon general surgery in favor of non-surgical specializations [7]. The importance of the young resident’s personality in the selection of the surgical path is proved by the work of Baimas-George et al. In the cited paper, the main personality traits that characterize people who choose a specialization in general surgery are: assertiveness, courage and the ability to make quick decisions [8]. The following translate into the success of the resident’s work: acquired knowledge, experience, accuracy in making decisions, taking into account the operational risk, manual skills and precision of action [9]. The surgeon must not only demonstrate good manual skills, extensive theoretical knowledge but also physical endurance. Moreover, the problem of discrimination against women as surgeons still seems to be relevant. Given the above data and the opinions of young doctors, it is also worth considering updating the specialization program.

Contrary to other specializations, the training of a surgeon is lengthy and requires attention and willingness to transfer knowledge by more experienced, senior colleagues, especially by the mentor managing a given unit. Surgery residents have limited opportunity for independent learning and improving their surgical technique. It also seems relevant to change the attitude of older and more experienced doctors towards educating the young generation to a more open one, in line with the principle that behind every outstanding student stands an outstanding teacher.

On the other hand, consideration should be given to whether an experienced specialist who devotes his time and knowledge to train a young surgeon should receive additional remuneration for the performed training. Procedures performed by a surgery resident, for which their mentor is fully responsible, often take much longer than those performed by specialists. Another good alternative might be to create a training center for doctors who specialize in surgery, where they could improve their skills, for example on animals or specially designed training simulators.

The current system of specialization training in general surgery requires crucial change. Above all, the specialization program, which is unrealistic for a reliable implementation, needs updating.

## REFERENCES

1. Zestawienie liczbowe lekarzy i lekarzy dentyistów wg wieku, płci i tytułu zawodowego z uwzględnieniem podziału na lekarzy wykonujących i nie wykonujących zawodu; 2020, Online: [https://nil.org.pl/uploaded\\_files/1583227918\\_zestawienie-nr-04.pdf](https://nil.org.pl/uploaded_files/1583227918_zestawienie-nr-04.pdf)
2. Baliński P., Krajewski R.: Lekarze i lekarze dentyści w Polsce – charakterystyka demograficzna. Stan w dniu 31.12.2017 roku, 2018, Naczelna Izba Lekarska, Warszawa.
3. Centrum Systemów Informacyjnych Ochrony Zdrowia, Biuletyn Statystyczny Ministerstwa Zdrowia, 2019: 53.
4. European Commission: Healthcare personnel statistics – physicians, Eurostat, 2017; 28 : 1–13.
5. Roeth A.A., Mille M.: Was wollen die jungen Chirurgen? Moderne Anforderungen an chirurgische Chefs. Zentralblatt für Chir. – Zeitschrift für Allg. Visz. und Gefasschirurgie, 2018; 143: 50–54.
6. Braun B.J.: Young surgery and the bottleneck of finding new blood. *Innov. Surg. Sci.*, 2019; 4: 1–2.
7. Yeo H., Bucholz E., Ann Sosa J., Curry L., Lewis F.R. et al.: A national study of attrition in general surgery training: Which residents leave and where do they go? *Ann. Surg.*, 2010; 252: 529–534.
8. Baimas-George M., Vrochides D.: The Sorting Hat of Medicine: Why Hufflepuffs Wear Stethoscopes and Slytherins Carry Scalpels. *J. Surg. Educ.*, 2020; 77(4): 772–778.
9. Treatment S., Olakowski M., Seweryn M.: Opinie pacjentów o polskich chirurgach i leczeniu. Patients’ opinions about polish surgeons and surgical treatment, 2016: 420–432.

Word count: 1534      Page count: 4      Tables: 1      Figures: 1      References: 9

---

DOI: 10.5604/01.3001.0014.4209      Spis treści: <https://ppch.pl/issue/13436>

---

Copyright: Some right reserved: Fundacja Polski Przegląd Chirurgiczny. Published by Index Copernicus Sp. z o. o.

---

Competing interests: Autorzy deklarują brak konfliktu interesów.

---



The content of the journal „Polish Journal of Surgery” is circulated on the basis of the Open Access which means free and limitless access to scientific data.

---



This material is available under the Creative Commons – Attribution-NonCommercial 4.0 International (CC BY-NC 4.0). The full terms of this license are available on: <https://creativecommons.org/licenses/by-nc/4.0/legalcode>

---

Corresponding author: Piotr Czopek; Department of Digestive Tract Surgery, Medical University of Silesia in Katowice; Medyków street 14, 40-752 Katowice, Poland; E-mail: [piotrek.czopek@gmail.com](mailto:piotrek.czopek@gmail.com)

---

Cite this article as: Czopek P., Dranka-Bojarowska D., Mrowiec S.: Why don't young doctors want to be surgeons?; Pol Przegl Chir 2020: 92 (6): 28-31

---