

ANALYSIS OF THE RESULTS OF GP-FM QUESTIONNAIRE REGARDING TRAINING IN THE SPECIALIZATION «OTOLARYNGOLOGY» BOTH AT THE UNDERGRADUATE AND POSTGRADUATE LEVELS

DOI: 10.36740/WLek202310106

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ABSTRACT

The aim: To research the degree of satisfaction with the training of general practitioners-family medicine (GP-FM) in the specialization "Otorhinolaryngology" in the leading higher educational institutions (HEIs) of Ukraine at undergraduate and postgraduate levels.

Materials and methods: A questionnaire was conducted of 51 GP-FM doctors.

Results: The duration of otorhinolaryngology training at a medical HEI was indicated by: 49% of respondents about weeks of training, 19.6% - about months. 31.37% received separate training on ENT examination. 56.9% of people were trained in ENT departments. 76.5% of people were not satisfied with the quality of theoretical knowledge, 52.9% of respondents of practical skills at the undergraduate level. 72.6% of doctors not satisfied with the quality of theoretical knowledge, 56.8% of respondents of practical skills at the post-graduate level. 41.2% of respondents received post-graduate training in otorhinolaryngology at the GP-FM specialization cycle, 72.55% of them in a lecture format. 86.3% of people want to deepen their knowledge of otolaryngology and need to understand the etiopathogenetic mechanisms of ENT pathology.

Conclusions. The dissonance with the dissatisfaction of the doctors of the GP-FM with the quality of the received theoretical knowledge in ENT pathology and the availability of their practical skills was revealed. It is important for GP-FM doctors to undergo separate training in ENT examination and pathology with mandatory study and conscious use of etiopathogenetic mechanisms of ENT pathology, especially in inflammatory diseases.

KEY WORDS: general practice-family medicine, otolaryngology, ENT- pathology, postgraduate training

Wiad Lek. 2023;76(10):2169-2175

INTRODUCTION

Over the past decades, the enhancement of quality and the coverage of primary health care have provided important public health improvements around the whole world [1-7]. The most vulnerable area of general practice is the provision of the same high quality of care by doctors of general practice - family medicine (GP-FM) to patients with various pathology [8]. The main goal of medical education is to provide that each doctor develops and continues improving the basic clinical skills necessary to provide competent medical care throughout their professional life [9,-11]. Otorhinolaryngological problems form a significant part of primary health care visits [12]. Approximately 20% to 40% of consultations of adult general practice are related to otolaryngological complaints [13, 14]. While general practice physician successfully evaluate and treat the majority of ENT diseases, the third largest group of patients referred to clinics for

specialized care, has ENT-organs pathology [15, 16]. In order to confidently manage with ENT diseases, general practitioners have to have a sufficient level of knowledge, gained in the process of training specialists [17-20].

Less than half of general practitioners receive high-quality postgraduate training in otorhinolaryngology, and most of whom would welcome further training in this specialization at the postgraduate level [21-25]. Taking into account the problem of insufficient training in the specialization "Otolaryngology" in medical universities of a number of leading countries, a questionnaire, for those who graduated from medical universities in Ukraine, completed an internship in the specialization of general practice - family medicine (GP-FM) and work as a GP-FM doctor, was offered by us, on the subject of specialization training "Otorhinolaryngology" as at the university and as after the postgraduate level.

THE AIM

The aim of the research was to study the degree of satisfaction with the training in the specialization "Otorhinolaryngology" in the leading higher educational institutions (HEIs) of Ukraine, as at the undergraduate and as the postgraduate levels, of GP-FM doctors.

MATERIALS AND METHODS

The questionnaire was conducted of 51 GP-FM doctors, who graduated from various medical higher educational institutions of Ukraine, completed internships in the specialization of GP-FM, and work in primary health care centers in Kyiv.

The questionnaire was distributed using Google Forms and processed using the Excel program. The principles of bioethics were followed, as the survey was conducted voluntarily through Google Forms and anonymously.

The following questions were presented in the questionnaire:

1. Year of graduation from medical Higher Educational Institution (HEI)?
2. Name of the medical Higher Educational Institution?
3. What is your work experience?
4. The time allotted for otorhinolaryngology at a medical Higher Educational Institution?
5. Did you undergo separate training in ENT examination?
6. Did you undergo training in ENT departments?
7. If you were trained in the ENT department, how long was it?
8. Are you satisfied with the quality of theoretical knowledge obtained at the undergraduate level, related to otorhinolaryngology training?
9. Are you satisfied with the quality of practical skills obtained at the undergraduate level, related to otorhinolaryngology training?
10. Did you undergo post-graduate training in otorhinolaryngology during the specialization cycle of GP-FM?
11. In which format was the post-graduate study conducted?
12. Are you satisfied with the quality of theoretical knowledge obtained at the post-graduate, related to otorhinolaryngology training?
13. Are you satisfied with the quality of practical skills obtained at the postgraduate level, related to otorhinolaryngology training?
14. Would you like to deepen your knowledge of otorhinolaryngology?
15. In which area of ENT-pathology with the quality of practical skills obtained at the undergraduate level, related to otorhinolaryngology training?

15. In which area of ENT-pathology would you like to improve your knowledge?

16. Which etiopathogenetic mechanisms of ENT-pathology should be given more attention in the process of training otorhinolaryngology in an internship?

Statistical processing of data was carried out using the method of non-parametric statistics to establish differences between unrelated groups (Pearson's χ^2). The differences were considered to be statistically significant at $p < 0,05$.

RESULTS

Doctors who graduated from university in 1978 were the most trained, and the youngest graduated from university in 2020. The interviewed studied at various higher educational institutions in Ukraine and out of its border: (60.78%) 31 - people graduated from O.O. Bogomolets National Medical University, (3.92%) 2 - people graduated from M.I. Pirogov National Medical University, (9.8%) 5 persons - D. Halytsky National Medical University, (5.9%) 3 doctors - Donetsk NMU, (11.76%) 6 people - Dnipro SMU, (3.92%) 2 - Leninhrad SMU, (1.96%) 1 - Stavropol SMU, and (1.96%) 1 - Nizhnygorodsk SMU.

The distribution of respondents by work experience is shown in Table I.

Regarding the question of the allotted time for otorhinolaryngology at the medical university, 49% (25) of the respondents indicated weeks of studies, 19.6% (10) of the respondents - about months, 31.4% (16) did not remember.

For the 5th question related to separate training in ENT-examination, 68.63% (35) answered that they did not have such study. 31.37% (16) confirmed about separate study of ENT-examination.

Regarding the question about undergoing of training in ENT-departments, 29 (56.9%) persons had such training, 20 (39.2%) did not confirm, and 2 (3.9%) did not remember.

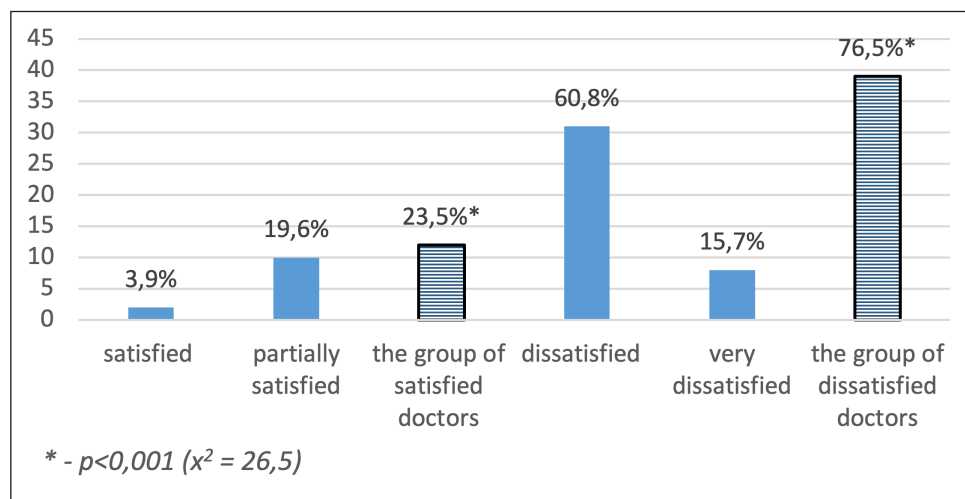
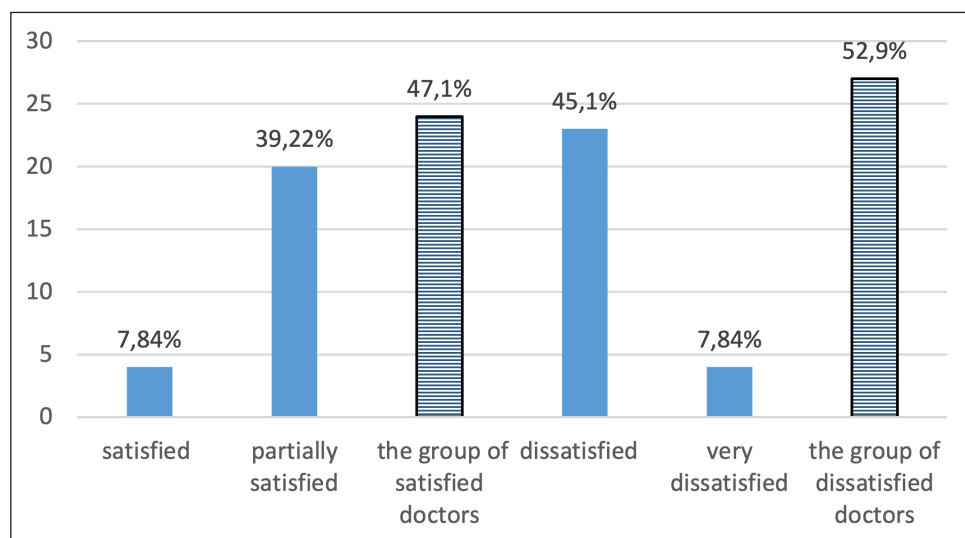
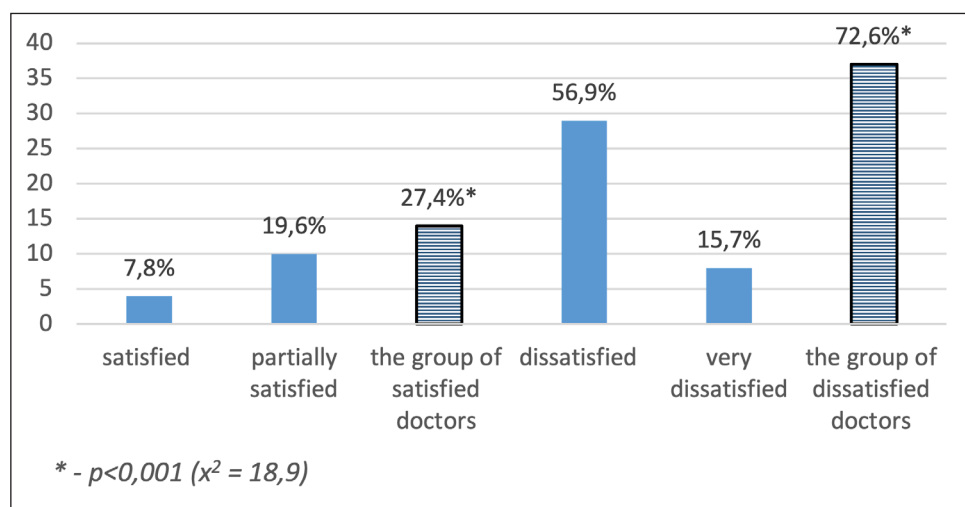
Regarding the duration of training in the ENT-department, only 40 respondents answered. Among them, 16 (40%) did not remember, 8 (20%) persons indicated a few days, 12 (30%) answered weeks of study and 4 (10%) respondents answered as months of studying.

The interviewed doctors conducted a self-assessment of the received theoretical and practical ENT knowledge at the undergraduate level. The respondents' answers on the 8th question were distributed as shown in Fig. 1.

The group of dissatisfied doctors unite people who are dissatisfied and very dissatisfied with the quality of the received theoretical knowledge regarding the

Table I. Distribution of respondents by length of service.

Nº	Work experience	amount	Percentage
1.	1 – 5 years	10	19.6%
2.	6 – 10 years	6	11.8%
3.	11 – 20 years	12	23.5%
4.	21 – 30 years	4	7.8%
5.	More than 30 years	19	37.3%

**Fig. 1.** The level of satisfaction with the quality of received theoretical knowledge regarding the study of otolaryngology at the undergraduate level.**Fig. 2.** The level of satisfaction with the quality of received practical skills regarding the study of otolaryngology at the undergraduate level.**Fig. 3.** Respondents' level of satisfaction with the quality of the obtained theoretical knowledge of otolaryngology education at the post-diploma level.

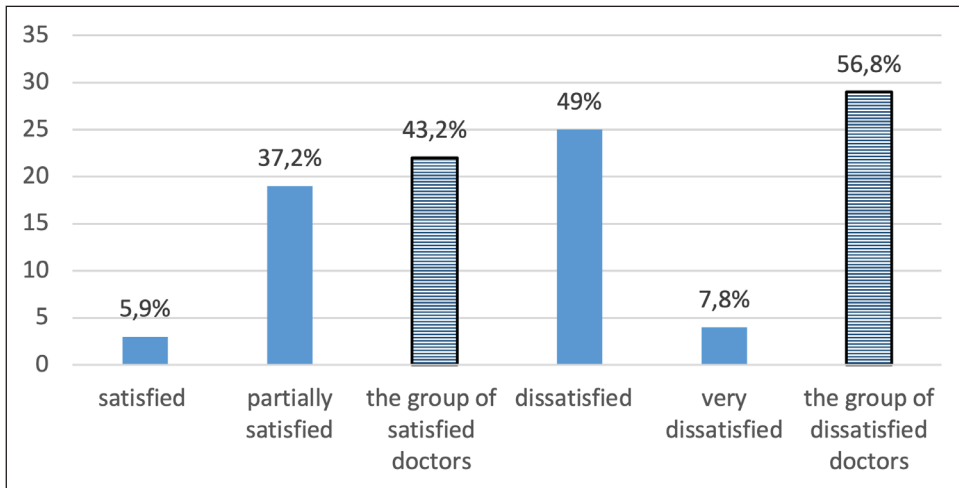


Fig. 4. The level of respondents' satisfaction with the quality of the acquired practical skills regarding the training of otolaryngology at the postgraduate level.

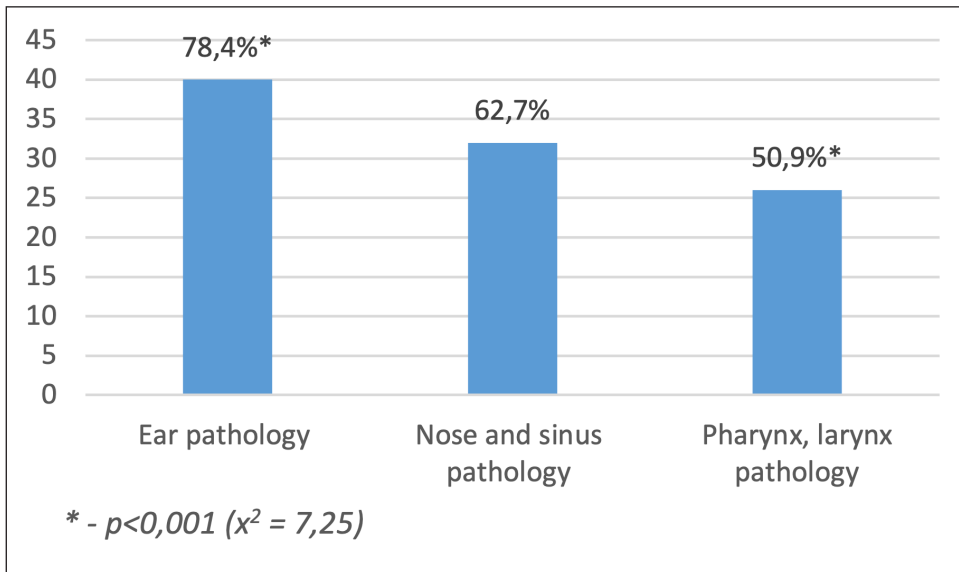


Fig. 5. List of pathological conditions of ENT pathology in which respondents need additional knowledge and skills.

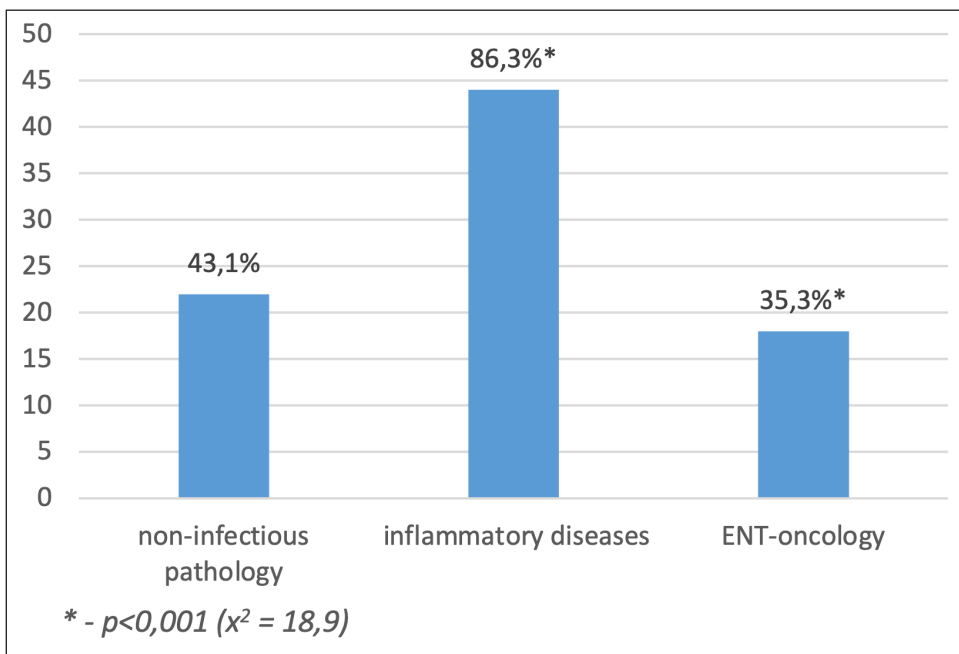


Fig. 6. List of etiopathogenetic mechanisms of ENT pathology, in which respondents need additional knowledge and skills during internship.

study of otolaryngology at the undergraduate and postgraduate levels. The group of satisfied doctors unite people who are satisfied and partially satisfied with the

quality of the received theoretical knowledge regarding the study of otolaryngology at the undergraduate and postgraduate levels.

Doctors' answers to the 9th question were distributed as shown in Fig. 2.

For the question related to undergoing of post-graduate training in otorhinolaryngology at the specialization cycle of GP-F, 30 (58.8%) answered that they did have such training. (41.2%) people confirmed about undergoing of training in otorhinolaryngology.

On the question related to the format of post-graduate study, 37 (72.55%) responded as lectures 14 (27.45%) respondents informed about practical classes.

The respondents were also evaluated of the received theoretical and practical ENT knowledge at the postgraduate level. Respondents' answers to the 12th question were distributed as shown in Fig. 3.

Doctors' answers to the 13th question were distributed as shown in Fig. 4.

The 86.3% (44) of doctors expressed a desire to undergo further training in otolaryngology, 13.7% (7) of respondents had no desire to deepen their knowledge.

Information on areas of ENT pathology in which doctors would like to improve their knowledge is shown in Fig. 5. This indicates that the number of doctors who need knowledge and skills to examine ear pathology is significantly ($p < 0.001$; $\chi^2 = 7.25$) higher than the number of doctors who indicated a lack of knowledge and skills to examine the throat.

Figure 6 shows the identification of the need for doctors to understand the etiopathogenetic mechanisms of ENT pathology in the process of studying otolaryngology at the intership. The number of doctors (86.3%) who need additional knowledge about the causes and pathogenesis of inflammatory pathological processes at various stages of development significantly ($p < 0.001$; $\chi^2 = 18.9$) outnumbers the number of respondents (35.3%) who wished for more knowledge of ENT oncology.

DISCUSSION

Summarizing the data of questionnaire, we come to the following: the interviewed doctors had a work experience from 2 to 45 years. The respondents studied at higher educational institutions in different regions of Ukraine, which indicates a similarity in the style of professional qualification. The term of study of otorhinolaryngology at the undergraduate level was not clearly recorded in the memory of the respondents. Among the interviewed of 56.9% underwent this study in ENT departments, the duration of training in ENT Department lasted one week for 30% of people, 40% of the interviewed doctors did not remember the term of study in ENT department. Along with that, 68.6% of

respondents indicated that they had not have a separate training related to the examination of ENT organs. This may indicate insufficient professional training in otorhinolaryngology, taking into account the practical needs of doctors of the GP-FM.

The results of the self-assessment of the interviewed doctors regarding the satisfaction with the quality of the theoretical and practical skills received at the undergraduate and postgraduate levels in the examination and pathology of the ENT organs showed: the quality of the theoretical knowledge received at the undergraduate level did not reliably satisfy ($p < 0.001$) a larger number of the interviewed doctors (76.5%), while the number of doctors satisfied with the quality of acquired practical skills (47.1%) did not reliably differ from the number of respondents dissatisfied with the quality of practical training at the undergraduate level (Fig. 1, 2). The quality of the received theoretical knowledge at the post-graduate level also did not reliably satisfy ($p < 0.001$) a larger number of interviewed doctors (72.6%), regarding the quality of practical skills of the group of satisfied (56.8%) and satisfied doctors (43.2%) reliably not differed (Fig. 3, 4).

Concerning the post-graduate training in otorhinolaryngology in the cycle of specialization in GP-FM, 58.8% of respondents indicated that they did not undergo such training. Among the respondents (41.2%), who were trained in otorhinolaryngology at the postgraduate level, the most doctors (72.55%) indicated that they studied in a lecture format, and only 27.45% of respondents had practical classes. This shows the insufficiently effective level and quality of practical training of doctors of the GP – FM in ENT pathology. The same trends are also found in other countries, 70% of interviewed general practitioners in the south-west of England have undergone some form of post-graduate training in otorhinolaryngology, either in the form of stationary otorhinolaryngology positions, or post-graduate training, it is significantly higher than the previous results in Trento in 1992, only 39% of general practitioners received similar training [24, 26].

The insufficient level of training in otolaryngology is confirmed by the desire of 86.3% of respondents to undergo further training. Which correlates with the data of a number of researchers, who also cite research data, and indicate that three-quarters of general practitioners would like to continue their education [24]. Respondents want to improve their knowledge in fact, in all areas of ENT pathology, it was found that doctors who need to deepen their knowledge of ear pathology (78.4%) significantly ($p < 0.001$) exceed the number of doctors who would like to improve their knowledge and skills regarding pharynx and larynx pathology

(50.9%). Also, 62.7% of doctors need to deepen their knowledge of the pathology of the nose and paranasal sinuses. A large group of interviewed doctors (86.3%) expressed the need to deepen their knowledge of the etiopathogenetic mechanisms of ENT pathology, with a significant advantage ($p < 0.001$ ($\chi^2 = 18.9$)) of inflammatory diseases as the most frequent pathology encountered in the primary health care system. It can be researching the pathology of several specialists at the same time. This intersects with the data of a number of researchers that ENT pathology is the third largest group of patients referred to specialized clinics at hospitals [24, 27].

CONCLUSIONS

The dissonance with the dissatisfaction of the doctors of the GPFM with the quality of the received theoretical knowledge in ENT pathology and the availability of their practical skills was revealed.

It is important for GPFM doctors to undergo separate training in ENT examination and pathology with mandatory study and conscious use of etiopathogenetic mechanisms of ENT pathology, especially in inflammatory diseases.

There is a need to develop a program for post-graduate training in ENT pathology specifically for GPFM doctors in the form of training that will combine theoretical knowledge and practical skills.

REFERENCES

1. Allen N, Barkley S, Maeseneer J et al. Unfulfilled potential of primary care in Europe BMJ. 2018. doi: 10.1136/bmj.k4469.
2. Caley M. Remember Barbara Starfield: primary care is the health system's bedrock. BMJ. 2013;347:f4627. doi: 10.1136/bmj.f4627-23900532.
3. Lember M, Cartier T, Bourgueil Y, Dedeu T. Structure and organization of primary care. Building primary care in a changing Europe. (Observatory Studies Series 38). Eur Obs Heal Syst Policies. 2015,p.172. <http://apps.who.int/iris/bitstream/handle/10665/154350/9789289050319-eng.pdf> [date access 03.04.2023]
4. Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and Development (OECD) countries, 1970-1998. Health Serv Res. 2003;38:831-65. doi: 10.1111/1475-6773.00149 12822915.
5. Rohde J, Cousens S, Chopra M et al. 30 years after Alma-Ata: has primary health care worked in countries? Lancet. 2008;372:950-61. doi: 10.1016/S0140-6736(08)61405-1 18790318.
6. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Q. 2005;83:457-502. doi: 10.1111/j.1468-0009.2005.00409.x 16202000.
7. van Weel C, Kassai R, Qidwai W et al. Primary healthcare policy implementation in South Asia. BMJ Glob Health. 2016;1:e000057. doi:10.1136/bmjgh-2016-000057 28588938.
8. Richard B. King's Fund report on improving the quality of care in general practice. BMJ. 2011; 342. doi: 10.1136/bmj.d1932.
9. Fung K. ENT--head and neck surgery in undergraduate medical education: advances and innovations. Laryngoscope. 2015;125(2):S1-14. doi: 10.1002/lary.24875.
10. Margaret CM, Arielle T, Andrew DS, Philip EZ. Using Computer-Assisted Instruction to Increase Otolaryngology Education During Medical School. MedEdPORTAL. 2021;17:11065. doi: 10.15766/mep_2374-8265.11065.
11. Luke JP, Daniel B, Philip Z et al. Assessing Medical Student Basic Otolaryngology Knowledge: A Multi-Institutional Study. Ear Nose Throat J. 2019;98(1):44-49. doi: 10.1177/0145561318823369.
12. Hu A, Sardesai MG, Meyer TK. A need for ENT education among primary care providers. Med Educ Online. 2012;17(1). doi: 10.3402/meo.v17i0.17350.
13. Campisi P, Asaria J, Brown D. Undergraduate ENT education in Canadian medical schools. Laryngoscope. 2008;118(11):1941-50. doi: 10.1097/MLG.0b013e31818208e7.
14. Donnelly MJ, Quraishi MS, McShane DP. ENT and general practice: a study of paediatric ENT problems seen in general practice and recommendations for general practitioner training in ENT in Ireland. Ir J Med Sci. 1995;164:209-211. doi:10.1007/BF02967831.
15. Kristine AS, Ashley VH, James B et al An Evaluation of On-Call Otolaryngology Consultations: Assessing an Increasing Workload. Ann Otol Rhinol Laryngol. 2018;127(7):450-455. doi: 10.1177/0003489418776670.
16. Ellen T, Adam RS, John TL et al. Gaps in Training: Misunderstandings of Airway Management in Medical Students and Internal Medicine Residents. Otolaryngol Head Neck Surg. 2021;164(5):938-943. doi: 10.1177/0194599820949528.
17. Zachary S, Kevin F, Elaine L et al. Interprofessional education day - an evaluation of an introductory experience for first-year students. J Interprof Care. 2018;32(3):399-402. doi: 10.1080/13561820.2018.1433641.
18. Matt M, Colin B, Michael F et al. Consultation Intervention Rates for the Otolaryngology Service: A Large Metropolitan Hospital Experience. Spartan Med Res J. 2020;4(2):11596. doi: 10.51894/001c.11596.
19. Abdullah NA, Ashokkumar T, Abdulhakeem A et al. Knowledge and Attitude towards Obstructive Sleep Apnea among Primary Care Physicians in Northern Regions of Saudi Arabia: A Multicenter Study. Healthcare (Basel). 2022;10(12):2369. doi: 10.3390/healthcare10122369.

20. Brendan DS, Julie P. et al. High frequency of otolaryngology/ENT encounters in Canadian primary care despite low medical undergraduate experiences. *Canadian medical education journal*. 2022; 13(1): 86–89. doi: 10.36834/cmej.72328.
21. Daniel CO, Lane DS, Aaron DR et al. A Multicenter, Cross-Sectional Assessment of Otolaryngology Knowledge Among Primary Care Trainees. *Ann Otol Rhinol Laryngol*. 2018;127(9):631-636. doi: 10.1177/0003489418784615.
22. Kastley M, Paige B, Matthew WK, Art AA. Effectiveness of an Advanced Airway Training “Boot Camp” for Family Medicine Physician Trainees. *Otolaryngol Head Neck Surg*. 2020;163(2):204-208. doi: 10.1177/0194599820902065.
23. Ambreen AU, Muhammad HD, Muhammad SA et al. Otorhinolaryngology consultations in a multidisciplinary hospital - their effects on residents training on floor. *J Pak Med Assoc*. 2022;72(1)(2):S44-S48. doi: 10.47391/JPMA.AKU-20.
24. Clamp PJ, Gunasekaran S, Pothier DD et al. ENT in general practice: Training, experience and referral rates. *J Laryngol Otol*. 2007;121(6):580–3. doi: 10.1017/S0022215106003495.
25. Vikas A, Matthew H, Naomi K et al. Does focused and dedicated teaching improve the confidence of GP trainees to diagnose and manage common acute ENT pathologies in primary care? *Adv Med Educ Pract*. 2018;9:335-343. doi: 10.2147/AMEP.S155424.
26. Veitch D, Lewis M, Gibbin K. General practitioner training in the Trent Region. *Journal of the Royal Society of Medicine*. 1992; 85: 156-158.
27. Coulter A, Noone A, Goldacre M. General practitioners’ referrals to specialist outpatient clinics. I. Why general practitioners refer patients to specialist outpatient clinics. *BMJ*. 1989; 299:304–6. doi: 10.1136/bmj.299.6694.304.

The study is performed on the topic of scientific research work of the multidisciplinary Department of Family Medicine and Outpatient Care, with a dedicated fragment: «Optimization of early diagnosis ways and prevention of the ENT organs diseases in patients with comorbid pathology» (registration number: 0122U002416; term: 2022-2026).

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Conflict of interest

The Authors declare no conflict of interest.

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Received: 10.04.2023

Accepted: 01.09.2023

A - Work concept and design, **B** – Data collection and analysis, **C** – Responsibility for statistical analysis, **D** – Writing the article, **E** – Critical review, **F** – Final approval of the article

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