SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2022
ORGANIZATION AND MANAGEMENT SERIES NO. 166

THE DEMAND FOR COMPETENCE AND QUALIFICATION OF MEDICAL PERSONNEL IN THE LIGHT OF THE RESULTS OF EMPIRICAL STUDIES

Marcin HABERLA

Wroclaw University of Economics and Business; marcin.haberla@ue.wroc.pl, ORCID: 0000-0003-0599-4182

Purpose: The article's primary purpose is to present issues related to the demand for competence and qualification of medical personnel. The specific goal is to identify gaps in healthcare professionals' qualifications and competencies and prepare recommendations/ positions for system changes.
Design/methodology/approach: The author based his considerations on Polish and foreign literature on the subject, studying scientific articles and electronic sources. The author used the following professional databases to collect scientific literature: the Library of Science and Google Scholar. The author then performed qualitative (qualitative research – individual in-depth interview) and quantitative (statistical – online survey) analysis based on extracting as much knowledge as possible from the collected quantitative data. Qualitative research is a qualitative technique for obtaining data in which an interview is conducted based on a previously prepared interview scenario. The IDI technique makes it possible to get – in direct interaction with the respondent - data of a qualitative nature, which, although it does not allow (due to lack of representativeness) to generalize it to the entire population under study, provides in-depth information within the framework of a specific research question.
On the other hand, the statistical analysis made it possible to determine the extent to which a given phenomenon occurs, and then indicate the main trends observed in a specific area and environment. As part of the research, more than 1,000 CAWI interviews were conducted with owners of medical facilities (POZ), and medical and non-medical personnel.
Findings: The level of competence of healthcare workers concerns all citizens. The Polish education system is mainly oriented towards professional skills training. Social competencies are acquired by medical graduates only when they begin their professional work. On the other hand, employers require documents confirming professional qualifications when looking for employees. Increasing the competencies and qualifications of the staff of medical institutions will contribute to the continuous development of POZ. It will be the foundation of the entire, efficiently operating healthcare system. Therefore, special attention should be paid to management, finance, personnel development, and the comprehensiveness of care.
Social implications: The market for medical services is developing rapidly in Poland. According to a report by research firm PMR titled: „Private healthcare market in Poland 2022. Market analysis and development forecasts for 2022-2027" (EMIS, 2022), price increases are one of the main challenges for the private healthcare sector. According to PMR, for the whole of 2022, prices for outpatient and other health-related services will increase by about 14 percent compared to 2021, which will, on the one hand, affect the nominal increase in the value of this

market, but will also reduce its fundamental dynamics. On the other hand, the provision of primary healthcare services is carried out by various healthcare providers (entrepreneurs: individuals or legal entities, NGOs, SPZOZs) and professional practices (individuals and groups; doctors, nurses, or midwives). Among healthcare providers, entrepreneurs are the most numerous (83%). Providers contract with the National Health Service for a physician, nurse, and midwife care. According to the Human Capital Balance survey (PARP, 2022), medium and large enterprises continue to invest in developing their employees' competencies, despite the organizational and financial difficulties caused by the COVID-19 pandemic. Work-based learning has remained a widely used means of developing competencies, used particularly frequently in the education, healthcare and social assistance, and industry and mining sectors.
Among the most critical problems in the health, the sector is the shortage of personnel, resulting from generational changes, an ineffective system of pre- and postgraduate education, changes in work styles, migration, obstruction of access to certain specialties by interest groups, and an insufficiently effective system of supporting deficit specialties (residencies). A shortage of doctors and nurses has been evident in Poland for years. According to Eurostat data, Poland has the lowest number of practicing physicians per 1,000 residents in the EU (2.4), and the number of nurses (5.1 per 1,000 residents) is also among the lowest in the EU (Figure 10). However, official national estimates are higher - between 3.4 and 4.4 doctors per 1,000 residents (Kowalska-Bobko et al., 2021).
Originality/value: The author addressed the article to health policy and legislation makers on the desired qualifications and competencies in the medical services labor market. Indirect recipients are market entrepreneurs involved in identifying and forecasting qualifications and professional needs in the labor market (Primary Healthcare (PHC) medical facilities - PHC owners, medical and non-medical staff). Parallel audiences are stakeholders involved in the formation of the qualification system of the healthcare sector, including institutions responsible for defining education standards and awarding titles, administrative units running education and qualification institutions, and formal education entities (universities, schools, training institutions). The article’s value is to identify gaps in the competencies and qualifications of medical personnel to shape health policy so that these gaps are minimized.

Keywords: competencies, qualifications, healthcare system, medical personnel.

Category of the paper: Research paper.

1. Introduction

Poland's healthcare system has been evaluated negatively for many years, as indicated by periodic surveys. More than half of Poles are dissatisfied with how healthcare is functioning. In turn, just under 50% of those surveyed believe that problems with the availability and quality of benefits obtained through universal health insurance stem from too little spending on healthcare, and the amount allocated for this purpose being used inefficiently.

Poland has taken measuresoland to improve access to healthcare services, primarily by increahealthcare care expenditures. Contributing to the change in this state of affairs is the 2018 amendment to the law on publicly funded healthcare services, which introduces a gradual increase in healthcare spending, which is expected to reach 6 percent of GDP. There is now

a further increase planned to match 7 percent of GDP by 2027, as announced in the "Polish Deal" policy document. Despite attempts to reform the healthcare system in the 2015-2019 period, significant improvements in the availability of health services are still unnoticed. The shortfall is due not only to inadequate healthcare financing, but also to demographic processes (the inevitable aging of the population). In addition, growing staff shortages and aging healthcare personnel are noticeable. Growing inefficiencies have exacerbated problems in the primary healthcare sector and overextended the most expensive form of care, i.e., hospitalization (Ministry of Health, 2022). Significant imbalances characterize Poland's healthcare system in terms of service provision (infrastructure is mainly concentrated in the hospital sector), inadequate provision of outpatient care, diagnostics, and long-term care, and poor coordination of inpatient care with other types of care.

Poland still has an old and rigid division of healthcare professionals and social roles in care. Many new professions or skills are not described and require new knowledge and work organization. The system lacks intersecting-combining skills/competencies of certain groups of occupations, and undertake activities within the same organization. It is necessary to periodically monitor and modify the existing qualifications and competencies of medical and auxiliary personnel to the current conditions of the health sector. The increasing age of physicians (over 50) hinders the implementation of innovation primarily related to electronic medical records (e-health), and technological, and IT exclusion is a common reason for retirement.

In Polish literature, the concepts of qualification or competence are often used interchangeably, even though the scopes of the two concepts differ to a large extent. In a nutshell, qualifications are entitlements to perform professional tasks; as a rule, they are formal; they can be in the form of school diplomas, qualification courses, certificates, authorizations, and so on. On the other hand, competencies are the knowledge, skills, and attitudes that make it possible to perform tasks in a given field and carry out professional activities.

Also, the emergence of human capital theory contributed to the spread of concepts such as qualifications and competencies, which are indirectly reflected in the text of T.W. Schulz (1987) and J. Orczyk (2009):

- human capital is individual in nature, meaning that it cannot be sold or given to another person; consequently, it is tied to a person regardless of where that person is located,
- the benefits from the use of capital are received personally by the specific individual who owns it, and the life span of human capital does not exceed the life span of the individual,
- the acquisition of human capital is considered to be an investment in oneself, primarily the sacrifice of one's own time and other resources,

- the most effective due to the extension of the period of its use, as well as the lower economic value of time in the years of youth (then you receive a lower salary, and the efficiency of education is also usually higher) is the acquisition of human capital at a younger age is
- human capital is subject to devaluation like other forms of capital.

Matching the competencies and qualifications of potential and current employees with real needs is becoming one of the critical problems of the modern labor market.

2. The concept of competence and qualification

The term "competence" is closely related to the Latin word "competentia," which means "has the right to judge" or "has the right to speak" (Caupin et al., 2006). The term was of great interest to psychologists in the first half of the 20th century, as reflected in a large amount of empirical research in psychology (Shippmann et al., 2000). In contrast, it wasn't until the 1970s that David C. McClelland, a professor of psychology at Harvard University, published a study titled “Testing for Competence Rather Than for Intelligence", which led to widespread application in human resource management (HRM), among other fields.

As J. Orczyk (2009) notes, initially, competencies were formal, indicating the scope of authority to make decisions, to perform specific tasks (Butkiewicz, 1995). Their implementation was often linked to a particular procedure.

Generalizing, competence can be defined as the broadly understood ability to take specific actions, which is conditioned to a large extent by the knowledge, skills, and social competencies acquired in the process of learning (i.e., specific learning outcomes). Thus, competence is more than just a smaller, more extensive set of learning outcomes, because a person's competencies also consist of already acquired experience, predispositions, and aptitudes (Slawinski, 2017).

Commonly, competencies are divided into hard and soft competencies, i.e., professional and psychosocial competencies. However, the Future Competencies Observatory Team proposed a division into three interdependent competency areas according to the typology used by the European Center for the Development of Vocational Training (CEDEFOP) competencies consist of (Strojny et al., 2021):

- cognitive competencies, i.e., theoretical knowledge related to a given professional specialty,
- functional competencies, i.e., practical skills related to a given professional specialty, necessary for the performance of tasks,
- social competence, i.e., attitudes and behavior in interactions and the ability to assimilate knowledge, acquire new competencies, and self-development.

The definition of social competence is defined in the Law of December 22, 2015, on the Integrated Qualification System (Ministry of Education and Science, 2022): *(...) the abilities developed in the course of learning to shape one's development and to participate autonomously and responsibly in professional and social life, taking into account the ethical context of one's conduct.*

On the other hand, S. Slawinski (2017) believes that *in the perspective of personal development and professional career, the so-called key competencies are of great importance. Their importance for success in life is emphasized in the Recommendation of the European Parliament and of the Council of December 18, 2006, on key competencies for lifelong learning. The recommendation lists eight key competencies: communication in the mother tongue, communication in foreign languages, mathematical and basic scientific and technical competence, digital competence, learning to learn, social and civic competence, initiative and entrepreneurship, and cultural awareness and expression.*

Similar to social competencies, qualifications are also defined in the Law of December 22, 2015, on the Integrated Qualifications System. According to the Act, *a qualification is a set of learning outcomes in terms of knowledge, skills and social competencies, acquired in formal education, non-formal education or through informal learning, by the requirements established for a given qualification, the achievement of which has been verified in validation and formally confirmed by an authorized certifier.* In addition, the law categorizes different types/categories of qualifications (Table 1). It is also worth noting that the discrepancy between the colloquial meaning of the word qualifications and its statutory definition is because, according to the Act on the ZSK, qualifications will be, among others, a certificate of completion of elementary school, a certificate of completion of junior high school and a high school diploma. In contrast, in the tradition, certificates of this kind were not associated with qualifications by anyone.

Table 1.
Categories of qualifications

Qualifications	Definition	Example
Full qualification	Qualifications that are awarded exclusively within the educational system upon completion of specific stages of education, as well as first, second-, and third-level qualifications within the meaning of the Act of July 27, 2005. - Law on Higher Education. (Article 2, item 10 of the Act on the ZSK)	• Completed elementary school • Completed high school • With passed high school diploma • Bachelor's degree • Master's degree
Partial qualifications (regulated, awarded In the educational and higher education system, from the field of crafts, marketable)	qualifications established by separate regulations, the awarding of which is carried out under the rules outlined in those regulations, excluding qualifications awarded in the educational and higher education systems. (Article 2, item 12 of the Act on the ZSK)	• Driver's license cat. A, B, etc. • Operator's license • of machinery and working equipment • Ex: backhoe loaders, loaders, road rollers • Authorizations of the Office of Technical Inspection, e.g.: Lift trucks, HDS, overhead cranes

Cont. table 1.

Partial qualifications regulated	established by law, awarded outside the education and higher education systems. They are necessary from the point of view of the labor market to complement the more basic qualifications acquired in the educational and higher education systems. The requirements for learning outcomes required for regulated qualifications are related to defined types of activities	• Driver's license cat. A, B, etc.
Partial qualifications awarded in the education and higher education system	Partial qualifications awarded in the educational system include, among others, qualifications in a profession (confirmed by a certificate) obtained as part of post-secondary schools, and higher education - qualifications awarded after completing postgraduate studies	• Licenses of the operator of machinery and working equipment Ex: backhoe loaders, loaders, road rollers
Sub-qualifications from the crafts area	Qualifications confirmed by a journeyman's certificate or master's diploma after their inclusion in the MCC	• Gunsmith - master certificate • Gunsmith - journeyman's certificate • Eyeglass optician - master certificate • Eyeglass optician - journeyman certificate
Market sub-qualifications	Qualifications not regulated by law, the granting of which is carried out based on freedom of economic activity	• Implementing and coordinating business processes (Lean Office) • Conducting mediation in criminal and misdemeanor cases

Source: own compilation based on: Law of December 22, 2015, on the Integrated Qualifications System.

The types of qualifications operating in Poland, as presented in the table above, make it possible to successfully develop one's career path also outside the formal education system.

Poland has a rich heritage and long tradition in the field of qualifications. Currently, qualifications are awarded within and outside the education and higher education systems. For example, in education, in addition to certificates of completion from various public schools, one can obtain certificates confirming qualification in a profession and different kinds of diplomas confirming professional qualifications. In higher education, on the other hand, examples of qualifications obtained include certificates of completion of first- or second-level studies (bachelor's or master's degree) (Slawinski, 2017).

3. Rationale and methodology of the study

Negative phenomena in the labor market make it a primary and keeptizens' employability, i.e., the ability to g and keep a job that satisfies them, and the opportunity for career development. The goal is to make the most of one's qualifications and competence potential, not just to find a job. These types of phenomena also occur in the health sector. With that said,

competencies and qualifications should increase the value. This study aimed quality of services provided.

This study aims to increase knowledge of qualifications and professional needs in the healthcare industry in the sphere of Primary Healthcare (hereafter PHC) entities, and to align the education system with the requirements of employers and the market. The analysis provided knowledge of the competence and critical qualification gaps of medical personnel employed in the healthcare system.

The author used the desk research method. The desk research analysis technique consisted of collecting and analyzing secondary data that already existed and had been prepared by others. Thus, they were not produced by the researcher and did not require fieldwork and, hence the presence of interviewers or moderators. It was an analysis of information obtained from publicly available sources that already existed, requiring only the consolidation and or The collected material was checked for quality and reliability in the first stages of the analysis material was checked for quality and reliability. Only after selecting reliable data was the actual desk research analysis carried out. Among the main advantages of Desk Research are easy to access to materials, the abandonment of t the consequent reduction of survey time, and subsequent reduction of survey time, as well as the relatively low cost due to the lack of need to hire people to collect data. Among the main disadvantages of this motor is that it only allows the use of available data, which is not always sufficient to answer all the research questions posed. For this reason, it serves more often as a supplement to the data collection and exploration of research questions. It is usually combined with other techniques to collect all the necessary research material. In this case, the phased approach to the desk research analysis technique limited the time commitment to analyzing documents and data, which were very often characterized by a large volume. In practice, only selected parts of the paper were helpful to the study's objectives.

The next stage of the research was qualitative research (individual in-depth interview - IDI), which, unlike the questionnaire interview, allowed dynamic modification of the shape of the scenario depending on the specifics of the respondethemture of the answers given by them, or the introduction of threads into the conversation that wasn’t taken into account at the stage of designing the interview scenario. This significantly reduced the risk of omission during the interview of issues the respondent’s point of view of the respondent, the specifics of the situation of the organization they represented, etc.

The final stage of the primary research was quantitative research (CAWI online interview). The CAWI technique, in this case, consisted of the respondent filling out an online version of the questionnaire himself, which was provided to him in the form of an online link, redirecting him to the prepared questions. The respondent answered the questions one by one, and the correctness of the completion was supervised by software. After answering all the questions, the data were sent to the database immediately in coded form.

The territorial scope of the survey covered the entire country, divided into 16 provinces. In each province, the survey covered the following:

- Regional associations of health employers.
- Medical establishments are operating in a given province.

Thanks to this, the results received a diversified sample in terms of the place of activity/ function of medical establishments, which contributed to increasing the representativeness of the results of the conducted analysis.

Participants in the study included:

- representatives of the Federation of Health Employers,
- representatives of Regional Associations of Health Employers,
- owners of medical establishments (POZ),
- medical and non-medical staff.

4. Qualitative and quantitative research conclusions

According to qualitative research, employers consider such competencies as the communication skills of a particular doctor or nurse, and their approach to the patient when hiring employees. Also essential is teamwork in adapting to the work environment and problem-solving, significant experience, willingness for prudent development, and, increasingly, knowledge of a foreign language. It is crucial in the case of a registrar or medical assistant that such a person has a university degree, also related to medicine. For nurses, it is essential to have a community and family nursing course, school nursing with qualifications, an ECG course, a spirometry course, and a vaccination course. The study strongly emphasized that there are difficulties in finding well-qualified medical regist. These medical assistants would be prepared not only in soft skills/competencies, but also in triage, among others.

On the other hand, when it comes to the demand for professional qualifications of medical personnel, additional capabilities such as specialization in family medicine, permission to perform immunizations, and computer skills are essential. There were also opinions that in the case of physicians, especially their shortage in the labor market, specialization and license to practice are sufficient. In the survey, respondents also noted the high community demand and school nurses with extensive work experience.

Summarizing the findings on demand for competencies of medical personnel, it can be concluded that:

- among the most sought-after competencies is the ability to communicate with patients and build lasting relationships with them. This will help build trust in family medicine doctors with patients in the future, employers see high ambition and willingness to developers as one of the qualities that can indicate that an employee is determined to improve their qualifications and do their job better;
- in some of the surveyed establishments, the importance of competence plays a secondary role, because there is such a large generation gap and shortages in the labor market that professional qualifications are becoming the most important;
- for those working in registration, patience, and forbearance towards the patient are very important;
- assertiveness is also gaining importance, as patients have an increasingly demanding attitude and try to force many services that are not justified;
- over the next 3-5 years, as now, soft competencies, behavior towards the patient, and reacting in difficult situations in contact with the patient will gain in importance;
- leading competencies will be communicated, assertiveness, and empathy of both medical and nursing staff.

Also during the quantitative survey, respondents were asked to provide answers regarding the need for competencies and qualifications of medical personnel. Respondents were asked what types of skills/competencies they did not have or did not have sufficiently that they needed support. Respondents indicated:

- IT skills, in terms of working with computers (63.38%),
- responsibility and resistance to stress (49.24%),
- foreign language skills (46.56%),
- skills in operating internal information systems (44.26%),
- use of modern means of information and communication (42.07%),
- readiness to expand and supplement acquired knowledge and skills (41.68%).

Respondents indicated such skills as handling a patient/customer with a claim, being rude, aggressive, stress-resistant, and assertiresistantonse to others. The data is presented in Table 2.

Table 2.
Type of skills/competencies that require training support

Answer	%	Number
social competence (sensitivity, respect for others)	40,25%	421
cooperation skills	45,22%	473
communication skills and ease of establishing contacts	46,18%	483
technical skills	28,11%	294
IT skills, in terms of working with computers	63,38%	663

Cont. table 2.

Skills in operating internal information systems	44,26%	463
customer service skills	32,79%	343
knowledge of foreign languages	46,56%	487
openness to changes and innovations	38,05%	398
readiness to expand and supplement the acquired knowledge and skills	41,68%	436
guided by the principles of ethics in the implementation of professional tasks	15,77%	165
creativity	27,82%	291
personal culture and interpersonal skills	28,49%	298
responsibility and resistance to stress	49,24%	515
use of modern means of information and communication	42,07%	440
ability to cooperate in the implementation of projects	21,22%	222
other, what	1,91%	20
do not know	1,53%	16

Source: own elaboration based on quantitative research.

Respondents were also asked the question of the impact of lack of skills/competence on the quality of services provided. In their opinion, the lack of skills/competencies affects the quality of services provided by:

- poor work organization (67%),
- failure to inform the patient (58%),
- lack of satisfaction with the visit (49%),
- longer waiting time for an appointment (46%),
- poor assessment of the patient's health (18%).

In response to others, respondents indicated: staff frustration, doctor absenteeism, lack of job satisfaction, and professional burnout. The data is presented in Figure 1.

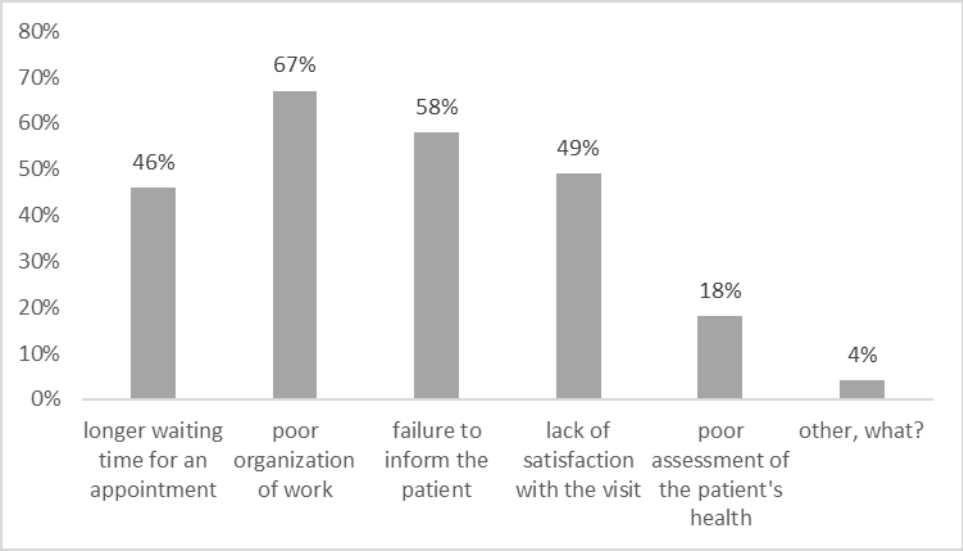

Figure 1. Impact of lack of skills/competence on quality of services provided.

Source: own elaboration based on quantitative research.

Respondents were also asked whether the number of forms of training offered on the market and their topics were sufficient. More than half of the respondents (53%) believe that the number of training forms provided on the market and their issues is insufficient. 35% of respondents take the opposite view. In addition, 51% of respondents thought there were barriers

to accessing forms of education. These relate to lack of time, lack of funding, and lack of staff (no one to replace the employee).

In the next part of the survey, respondents were asked about the most standard forms/mode of qualification improvement. In their opinion, the most common forms/modes of qualification upgrading include:

- group workshops (56%),
- professional courses (52%),
- online classes (46%),
- individual training (39%),
- postgraduate studies (18%),
- studies (7%).

In response to others, respondents indicated: conferences, reading medical work, recurrent training, post-secondary schools, online courses, webinars, short online lectures of a few minutes (if possible), training in small groups, and close to home/work. The data is presented in Figure 2.

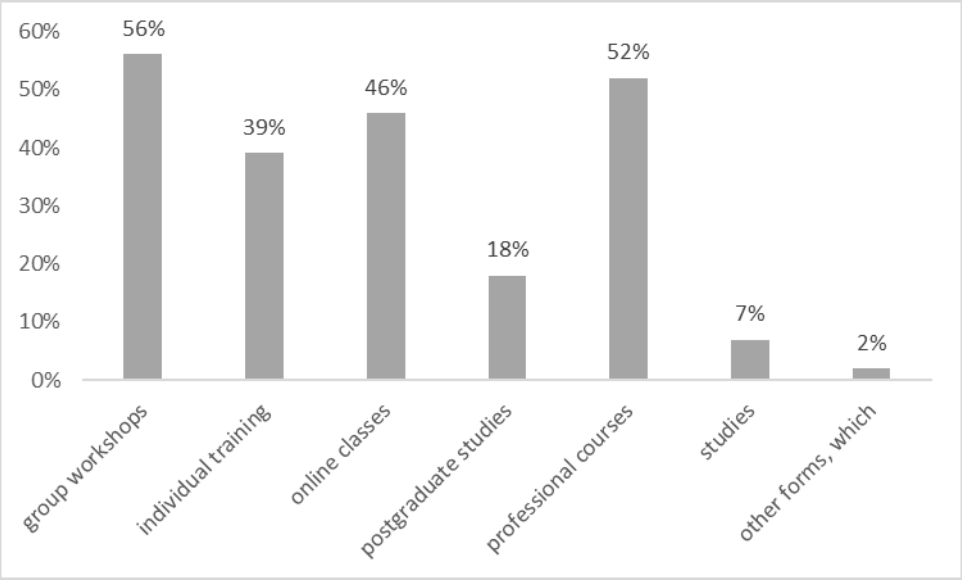

Figure 2. Most expected form/mode of qualification improvement.

Source: own elaboration based on quantitative research.

5. Conclusions and recommendations

Healthcare financing in Poland is at one of the lowest levels in Europe. In 2020, Poland spent 4.8% of its GDP on healthcare (with year-on-year growth of 7.3% in GDP alone), which puts us at the gray end. Other countries spent proportionally: Lithuania and Latvia: 5.2% each, Estonia 5.1%, Belgium 8.8%, France 10%, Germany 11.2%. From this, it follows that any effort to increase healthcare spending is essential.

Interest in medical education has been at a similar level for many years. Still, one should not forget about the candidate base that can start training yearly (number of high school graduates + about 10% of candidates from previous years). With the number of candidates relatively constant for Poland and the number of universities authorized to educate in the medical field increasing, individually for the universities, a decrease in the number of candidates may be recorded (and this is happening). This is fostered by an irrational and rigged recruitment system that simultaneously adds up the number of candidates at all universities without considering that candidates apply for admission at several or even a dozen universities. Being admitted to one of them, they drop out of the next ones, creating a vacancy.

In light of the research, a significant change would be the introduction of mandatory training for the POZ team and management in communication, conflict resolution, assertiveness, stress management, professional burnout, and emotion management. It is equally important to improve teamwork, cultural competence, IT skills (including remote working), and digital cyber security competencies. Upgrading skills is part of the idea of lifelong learning. In this aspect, it is of utmost importance that it is the legislator/organizer of the healthcare system that should take care of the possibility of improving these competencies and qualifications, creating appropriate conditions (time-wise) for cadres to participate in training.

In addition to identifying funding sources, it would be necessary to develop a system for monitoring this obligation, accreditation for training institutions, validation of results, and a method for supporting alternative work organizations. This refers to the organization of substitution of a doctor or other employee at work while they are participating in the mandatory training, especially in small medical entities and professional practices (e.g., one doctor + two nurses + one registrar).

The implemented activities should also go in the direction of financing and organizing qualification courses for nurses and midwives in the interpretation of ECG and ultrasound, as well as the creation, available from any medical entity, of the possibility of teletransmitting the image to a reference center for evaluation. This way, examinations performed at the primary care level and AOS could be interpreted and analyzed by physicians of the appropriate specialty. A specialist's consultation would guarantee the person acting it (PCP, nurse, midwife) the security of a therapeutic decision.

The changes in the labor market and organizations, including medical entities, resulted in the need to define the areas in which medical institutions must seek opportunities for further development and improvement of their organizational efficiency. Looking at both the needs of private and public medical entities, one gets the impression that, if not now, then shortly, the qualifications and competencies of their employees will be an advantage for these entities. The challenge facing medical facilities will be to develop and improve the qualifications and competencies of their employees in line with the needs of the organization and customers/patients.

References

1. Butkiewicz, M. (1995). *Model polskich standardów kwalifikacji zawodowych*. Warszawa, p. 30.
2. Caupinet et al. (2006). *ICB – IPMA Competence Baseline, version 3.0.* International Project Management Association, p. 9.
3. EMIS (n.d.). *Rynek prywatnej opieki zdrowotnej w Polsce 2022. Analiza rynku i prognozy rozwoju na lata 2022-2027*. Retrieved from https://www.emis.com/php/search/doc?pc=PL&doc_dtyp=1&lang=en&dcid=757701532&range=365&indu_local_class=induall&similar=hide&show_translated_articles=1&coverage=all&title=0&rpp=100&sort_by=relevance&display=1&search_selected_tab=all&search_log_id=e779bda2-aee1-4f27-9089-606b4c8afdf1&search_log_event_id=a53831d4-d495-43be-926e-71df65b49523&get_translated_articles=1&isSerp=false&profile_type=0&keyword=Private+healthcare+market+in+Poland&query_entry=quick&numresult=4, 20.08.2022.
4. Kowalska-Bobko, I. et al. (2021). *Sustainability and resilience in the Polish health system*. Retrieved from https://www3.weforum.org/docs/WEF_PHSSR_Poland_Report.pdf, 21.08.2022.
5. Ministerstwo Edukacji i Nauki (nd). *Ustawa z dnia 22 grudnia 2015 r. o Zintegrowanym Systemie Kwalifikacji.* Retrieved from D20160064.pdf (sejm.gov.pl), 21.08.2022.
6. Ministerstwo Zdrowia (n.d.). *Zdrowa przyszłość. Ramy strategiczne rozwoju systemu ochrony zdrowia na lata 2021-2027, z perspektywą do 2030 r.* Retrieved from https://pracodawcy.pl/wp-content/uploads/2021/06/Zdrowa-Przyszlos%CC%81c%CC%81.-Ramy-strategiczne-rozwoju-systemu-ochrony-zdrowia-na-lata-2021-2027-z-perspektywa%CC%A8-do-2030-r..pdf, 21.08.2022.
7. Orczyk, J. (2009). Wokół pojęć kwalifikacji i kompetencji. *Zarządzanie zasobami ludzkimi*, *3-4,* pp. 19-32.
8. PARP (n.d.). *Bilans Kapitału Ludzkiego. Raport podsumowujący wyniki badań 2019-2020*. Retrieved from https://www.parp.gov.pl/storage/publications/pdf/RAPORT_wersja_ostateczna_korekta_220121.pdf, 22.08.2022.
9. Schulz, T.W. (1987). Education and Population Quality. *Economics of Education. Research and Studies.* Pergamon Press, p. 12.
10. Shippmann, J.S., Ash, R.A., Batjtsta, M., Carr, L., Eyde, L.D., Hesketh, B., ... Sanchez, J.I. (2000). The practice of competency modeling. *Personnel Psychology*, *53(3),* pp. 703-740.
11. Sławiński, S. (2017). *Mała encyklopedia ZSK,* pp. 24-26.
12. Strojny, P., Nowak, P., Hetmańczyk, M., Malaka, J., Skrzek, K. (2021). *Standardy kształcenia kompetencji przyszłości,* pp. 8-9.