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Assessment of selected elements of healthcare in the opinion of healthcare workers

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Abstract

The healthcare system is an important part of the functioning of any country. A special role in this system is played by the personnel — especially medical, but also non-medical personnel, who perform their tasks based on the available resources. The article considers the opinions of healthcare workers about selected elements of this system proposed by Zgliczyński. The opinions of employees regarding the current healthcare system compared to the one in 2019 are also included, highlighting the nature of these changes. Bearing in mind the relatively limited literature in the field of the considerations undertaken in this article, they can be regarded as important, up-to-date, and filling the research gap in this respect. The aim of the study was achieved using a critical analysis of the literature on the subject and a diagnostic survey. Empirical data were obtained from fieldwork conducted among staff of public and/or private sector healthcare facilities.

1. Introduction

The most important component of any organization is people. It is no different in organizations that are part of an extremely complex health system. The focus of this article is on the people working in healthcare facilities, representing both medical and non-medical staff, these will include doctors, nurses, and physiotherapists on the one hand, and managers, executives, and administrative staff on the other. The literature recognizing their opinions on the functioning of the healthcare system is relatively scarce, and the one that exists refers to the past years, while the current period is so dynamic that it becomes necessary to monitor changes in this respect. It suffices to recall the COVID-19 pandemic, unforeseen by anyone, which changed the functioning of the system in many areas, such as organizational, communication, wages, and supplies (Rybarczyk-Szwajkowska et al., 2021). In this context, this article aims to present the opinions of healthcare professionals on selected elements of this system proposed by Zgliczyński (2018). It also explores the opinions of health facilities staff regarding the current healthcare system compared to that of 2019, exposing the nature of perceived changes in this area.

Two research questions were formulated:

- 1) Which of the elements of the health system analyzed in the study are best rated in the opinion of health facility staff, and which are least rated?
- 2) How much does the place of work of health facility staff (type of facility and sector) differentiate the ratings of the elements of the health system studied?

Given the above, the research problems undertaken in the article are considered important and topical, and fill the research gap in this respect. The aim of the study was realized using a critical analysis of the literature on the subject and a diagnostic survey method. Empirical data were obtained from field surveys conducted among employees of healthcare institutions in the public and/or private sectors. The structure of the article follows from the above assumptions. The first part is a review of the literature on selected elements of the healthcare system that determine its proper functioning and the specificity of employees in medical in-

stitutions. The second part discusses the methodology of the research conducted, and the last part presents the results answering the above research questions.

2. Healthcare system and staffing in medical facilities – theoretical issues

The healthcare system is an integral part of our economy. Together with its environment, it is composed of various elements of the organizational structure (governmental structures, local government, medical resources, patients, etc.), and its primary purpose is to protect the health of citizens. According to the commonly accepted concept of the so-called “triangle,” the health system consists of three basic interrelated groups, i.e., patients, providers, and the payer. To elaborate, this triangle of unsynchronized interdependencies is formed by the actors of the healthcare system: the state — the recipient, the state — the provider, and the provider — the recipient, which is subject to public and private law (Paszowska, 2020, 13–14). Indeed, the national legal order has mechanisms in place for the commercialization and privatization of healthcare facilities, with debates about whether this fact alone contributes to an automatic improvement in the functioning of the healthcare system and whether private facilities are, by definition, better managed, more profitable and more efficient (Borkowska, 2018a, 2018b; Zgliczyński, 2018). At this point, it is worth quoting Zgliczyński’s definition, which, based on the WHO guidelines, specifies that a health system is “the set of all organizations and institutions, both public and private, and all resources that serve to improve, maintain or restore health, regardless of the political and institutional environment in which that system is embedded” (Zgliczyński, 2018, 9). Management theorists, when talking about organizational resources, mean: human, tangible, intangible, financial, technological, informational, intellectual, and relational resources, and the use of these resources efficiently and effectively contributes to the achievement of intended goals and value creation (Rosak-Szyrocka and Roszak, 2019).

The classification of the basic elements of the healthcare system in Poland proposed by Zgliczyński lists the following as key elements: human resources, healthcare delivery, health information system, access to medical products and technologies, financing system, and leadership and management. This terminology is adopted in this thesis as a starting point for the theoretical and empirical analysis carried out, described in the next section.

The first element mentioned, staff resources, is the intellectual capital that determines the smooth achievement of the organization’s goals. It is the staff that is decisively responsible for the quality of health services (Pintal-Ślimak, Eusebio and Pietruczuk, 2018), and as a group representing the healthcare provider, they carry out their duties within the framework of care: out-patient, in-patient, and long-term care (Zgliczyński, 2018). Analyzing the human resources of the med-

ical facilities of institutions embedded in the system, as public and private, two categories of employees are perceived: medical and non-medical (Opolski, Dykowska and Możdżonek, 2012). Lewandowski, Kautsch and Sulkowski (2013, 8) also refer to them as “white” (clinical) and “grey” (i.e., administration and technical services) staff.

Medical professionals are by far the largest group in healthcare and include doctors, dentists, nurses, midwives, paramedics, and physiotherapists, among others. According to Wiązowska (2023) 720,089 people are employed in Polish healthcare, both private and public; 384,058 in the public sector and 336,031 in the private sector. Those with the right to practice registered with the General Medical Council were 206,937 — a total of doctors and dentists as of 30 April 2023 (NIL, 2023). In comparison, in 2020, the number of doctors working directly with patients was 126,064, dentists 33,772, nurses 210,923, and midwives 27,629 (GUS, 2022), while a year later, respectively: 132,527 persons; 35,016; 215,064 and 28,534 persons. While there are increases in the number of medical professionals, the aging of the medical community is a cause for concern, according to GUS. A measurable indicator for examining the condition of the Polish health system, in addition to absolute numbers, is the ratio of the number of doctors per 1,000 inhabitants, in Poland amounting to 2.4. This state of affairs reveals certain staffing problems, which are also determined by the lengthening of the average waiting time for guaranteed health care services, and sometimes also by the closure of Hospital Emergency Departments (Szpitalny..., 2023). Thus, it is perceived that the demand for doctors, nurses, or medical caretakers is increasing, and the issue of the generation gap among medical staff is a real threat to the functioning of the entire healthcare system, not only due to the lack of staff but also their aging, which was emphasized earlier (Raczyńska, 2020). The drive to increase the number of qualified medical staff is a consequence of new organizational challenges increasing accessibility to health services aimed at older people (Szweda-Lewandowska, 2023). These and other problems (Buchelt and Kowalska-Bobko, 2020) are further compounded by the COVID-19 epidemic situation and its ongoing consequences (Banaś, 2022). After the pandemic, one would expect, on the one hand, a greater emphasis on health promotion, public education on hygiene and disease prevention, increased monitoring and response to potential health threats; and, on the other hand, improvements, funding and refinement of the health care system (Buchelt and Kowalska-Bobko, 2020). The question, raised in the research undertaken by the authors, whether people employed in medical facilities, notice this change, therefore seems important.

In addition to the quantitative profile, the qualitative view of the staff employed is equally important. According to ISO 9001, staff should be competent in their work through appropriate education, training, skills, and experience (Żebrowska, 2004).

Within the medical workforce, the qualification indicators are the specialization degrees of doctors and nurses. The literature contains the concept of “professionalism” (Rosak-Szyrocka and Roszak, 2019), understood as extensive know-

ledge of medical professionals and years of experience — medical competence and skills, but also professional skills such as proficiency in performing procedures. Worth noting is the recommendation to modify the distribution of roles and competencies to make better use of the professional qualifications of available staff and to relieve medical professionals of administrative and other non-medical tasks (Bociąga-Jasik, et.al., 2020). Given the above, in organizational theory, and therefore also in the health system, the competencies, attitudes, and behaviors of employees influence the processes within the organization, in this case, the treatment of patients, trust, and cooperative attitudes on the part of clients and colleagues.

The second element mentioned in Zgliczyński's classification is the delivery of health services. This is because the quality of a clinical medical service is determined by the provision of medical services by personnel with the required qualifications, as described above, but also: appropriate to the patient's health, safely and competently, at the right time and with the desired result (Cieślik, 2002). The importance and role of this issue are related to the universality of this type of service and its specificity revealed in the freedom of choice of the technology of service provision by medical personnel, the complexity of the process of meeting health needs (e.g., provision of different types of equipment, apparatus, different types of services), or finally the legal, infrastructural, organizational, or competence conditions, as mentioned above. In addition, the delivery and perception of this type of service are determined by its intangible nature. The result of a service provider will not always be due solely to their efforts and the quality of their work. The specificity of the processes and activities undertaken in the services in question should also be considered given their subject, which is the patient, and its impact on the treatment process (Rosak-Szyrocka and Borkowski, 2011).

Increasing the availability of healthcare services and improving their quality is served by the health information system, listed as the third element of the healthcare system in Zgliczyński's classification. The information system processes the data necessary for the state health policy and the financing of healthcare tasks. This aspect aims to enhance the benefits of exploiting the possibilities of information and communication technologies in the health sector, while preserving the essence, linked to the information autonomy of the individual, of patients' rights. As part of the improvement and professionalization of services, medical events require systematic reporting to the Medical Information System — an Electronic Platform for the Collection, Analysis, and Sharing of Digital Resources on Medical Events (Paszowska, 2021). Undoubtedly, the biggest task facing the health care system in this respect is the efficient implementation of technological, dynamically changing improvements and competent information management, while maintaining the security of the collected data of beneficiaries.

Further analysis of the elements of the health system accentuates the importance of another, namely access to medical products and technologies. Medical technologies top the list of the most innovative industries. Unfortunately, the path-

way for introducing new services using modern non-drug technologies to public funding is complex and extensive. As a result, healthcare providers either do not have access to them or have to finance them with their resources in the commercial sector. It is emphasized that legislative stabilization is key to improving access to innovative medical devices. Broad and rapid access to innovative drug and non-drug health technologies is one of the important elements in rebuilding the public health system and reducing health debt (Rudawska et al., 2023). In addition to technological solutions, it is also important to retrofit healthcare facilities to purchase disposable medical devices, personal protective equipment, and disinfectants.

It is the difficult financial situation of the Polish healthcare system that is permanently raised in the state policy and social discourse, and it is the manner of financing that constitutes another element of the system on the list formulated by Zgliczyński. Poland spends approximately 6.6% of its GDP on healthcare, with 72.5% of funding coming from public sources and 27.5% being so-called private expenditures (Rudawska et al., 2023). The health sector is subsidized on an ongoing basis by EU funds, e.g., the European Funds of the Infrastructure and Environment Program 2014–2020 (OPI&E), the EU NEXT Generation instrument, and the REACT-EU program. The financing of the public health sector has consequences for remuneration policy. Adequate remuneration is a real and positive motivator to work. The topic of wages being too low in relation to the type of work performed, the responsibility carried, and the shortage of staff is a frequently raised issue in the literature on the healthcare system in Poland. An increase in the remuneration of medical employees is undoubtedly one of the most important factors influencing the stabilization of the situation in the operation of hospitals from the point of view of labor resources management, especially when they are limited (Cofta et al., 2020). As of 1 July 2023, salary valorization has been introduced in the Polish health service (Świerczek, 2023). The situation is different in the private sector of medical services, where salary levels are at higher levels, due to the market nature of the services provided.

The final element that Zgliczyński highlights is leadership and management. In this context, organizations in the health care system should be looked at as working conditions that should be taken care of by the employer and over which the employee has little influence, but which affects his or her efficiency productivity, and comfort at work. They are also important for creating a good atmosphere and feeling satisfied at work. Working conditions can thus be defined as “the totality of physical (material) and psychosocial factors originating in the work environment and affecting those doing the work” (Pocztowski, 2008, 377). These determine the atmosphere at work, which is often cited as one of the advantages of work. A factor influencing it is the quality of cooperation with the direct supervisor and colleagues. As mentioned previously, the substantive, managerial, and soft skills in leadership roles of those in managerial positions, including at lower levels, are a decisive factor in personnel management. In this area, it is also worth

taking care of intergenerational management, especially given the aging of the professional group of the medical community.

In summary, the proper functioning of healthcare is a topical issue for policy-makers, recipients, and theorists of the subject. The year 2023 brings with it many legislative, organizational, and qualitative changes as a response to emerging barriers and problems. As part of this, a reorganization of centers, institutions, and the entire system is planned.

It seems that the need to search for a better pattern of functioning of the Polish healthcare system is still valid. Some indications, as suggestions of the personnel about their working conditions measured by the state of the equipment of the surgical infrastructure, the state of the disposable medical devices, the efficiency of communication, and, above all, the financial conditions and the atmosphere at work — i.e., about the elements of the health care system according to Zgliczyński, can be formulated based on the following studies conducted by the authors.

3. Research methodology

The following research questions were used to obtain the aim of the study:

1. Which of the elements of the healthcare system analyzed in the survey achieved the highest and lowest ratings in the opinion of the staff of healthcare facilities?

2. How much does the workplace of the staff of healthcare facilities (type of facility and sector) differentiate the ratings of the surveyed elements of the healthcare system?

Answers to the above were sought in the authors' research. The research was conducted between April 1, 2023, and May 19, 2023, among 124 employees of healthcare institutions using a diagnostic survey and a questionnaire developed by the author. The final version of the research tool was preceded by a pilot study conducted among five people, i.e., three representing medical staff and two non-medical staff. The pilot study was designed to adapt the questions to the specifics of the professions in this sector, in terms of language and content. The final research tool consisted of seven specific questions and six metric questions. This article presents the results of some of the questions from the questionnaire; the idea was to verify several research areas. The study used a purposive sampling of sample units.¹

In the survey participated 64.5% of women and 35.5% of men. Among them, nurses and midwives (nearly $\frac{1}{3}$) and doctors (41.9%) predominated. Non-medical staff also took part in the survey including the hospital director, accountant, and manager, among others. Detailed information is presented in Figure 1.

¹ The authors would like to draw attention to the difficulty of conducting the survey caused by the lack of willingness on the part of healthcare professionals to complete the questionnaire, which affected the size of the research sample, previously planned at a much higher level.

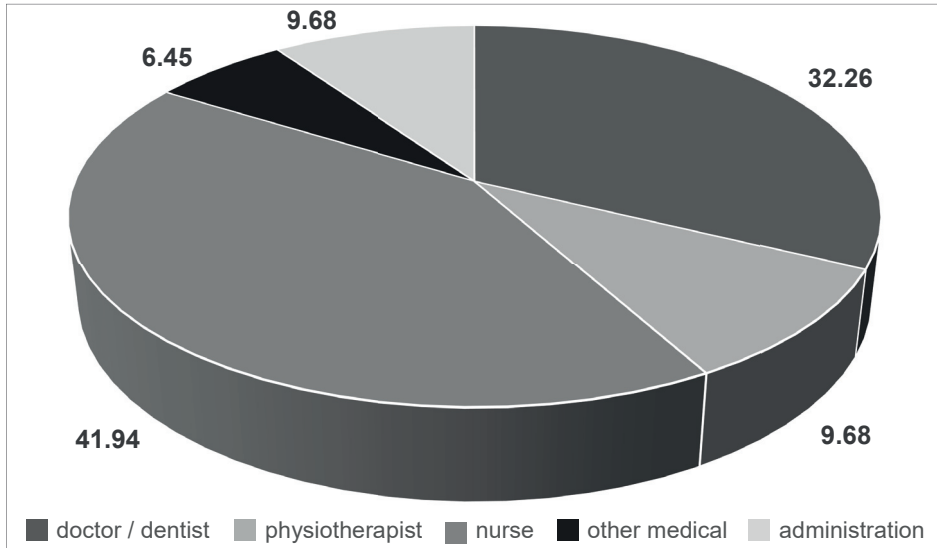


Figure 1. Structure of respondents by occupation

Source: own elaboration based on conducted research.

The study group was most represented by employees with the longest length of service (Figure 2), which makes it possible to conclude that the data obtained in the study are reliable and allow for a proper evaluation of selected elements of the healthcare system.

Those taking part in the survey mostly represented the public and private sector as their place of work (nearly 42% of the total surveyed), while the smallest percentage were those working only in the private sector ($\frac{1}{4}$ of the surveyed) (Figure 3).

The object of interest was to identify the main source of livelihood of the surveyed health facility employees. The data obtained from the respondents made it possible to identify the main place of work without a dominant facility, in this respect. Almost $\frac{1}{4}$ of the responses were distributed between hospitals, primary care, specialist clinics, and other types of healthcare facilities (Figure 4). Thus, the surveyed collective, although not very large, represents all the most important establishments in the healthcare system.

All respondents work in health services: 64.5% worked on one contract, 35.5% on more than one contract.

The evaluation of the healthcare system was carried out through the prism of selected elements described in the theoretical part and summarized in Figure 5. The assessment was carried out on a 5-point scale, where 1 meant “very bad” and 5 “very good.” This type of ordinal scale makes it easy to give the respondent an

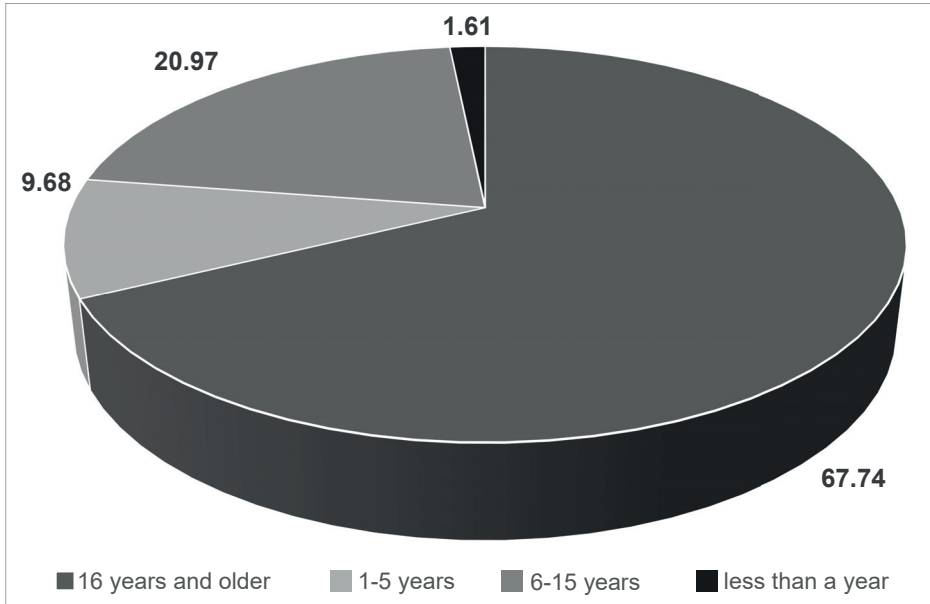


Figure 2. Length of service of respondents

Source: own elaboration based on conducted research.

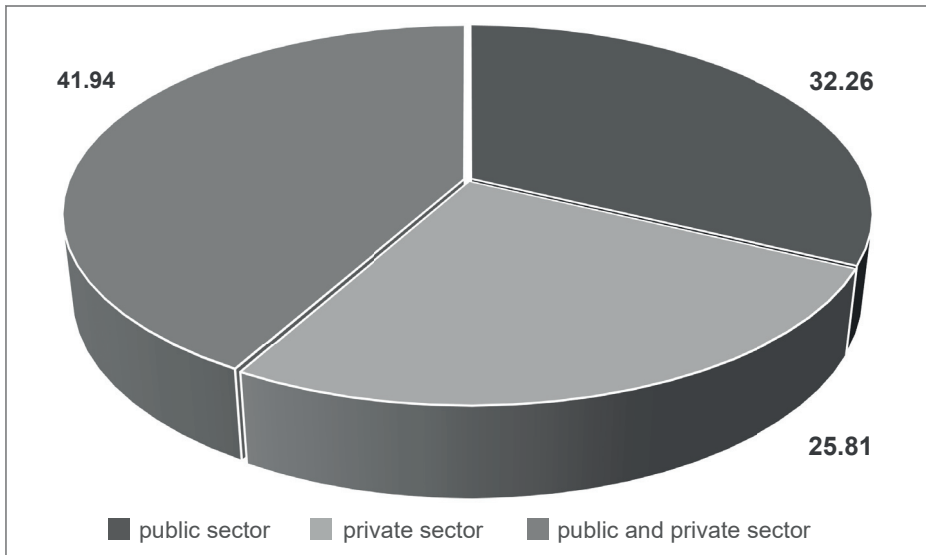


Figure 3. Respondents' place of work (sector)

Source: own elaboration based on conducted research.

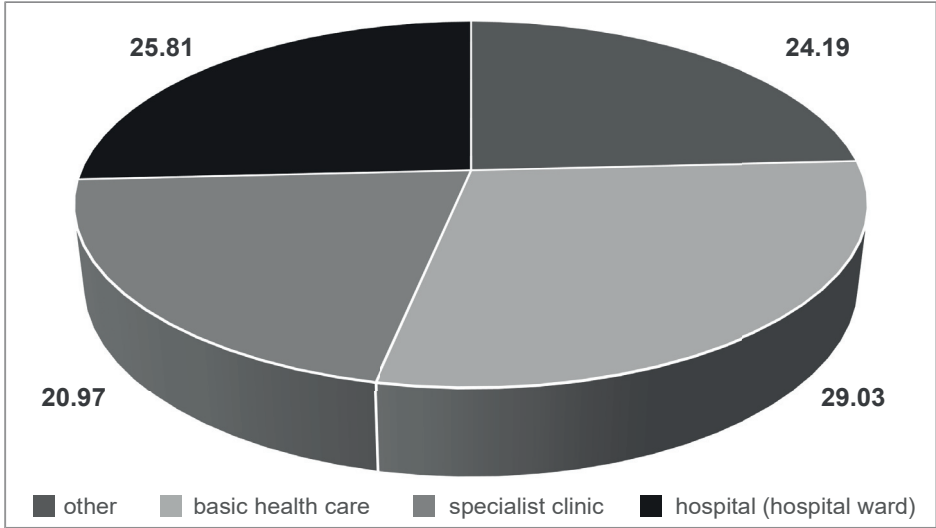


Figure 4. Respondents' place of work (main source of livelihood)

Source: own elaboration based on conducted research.

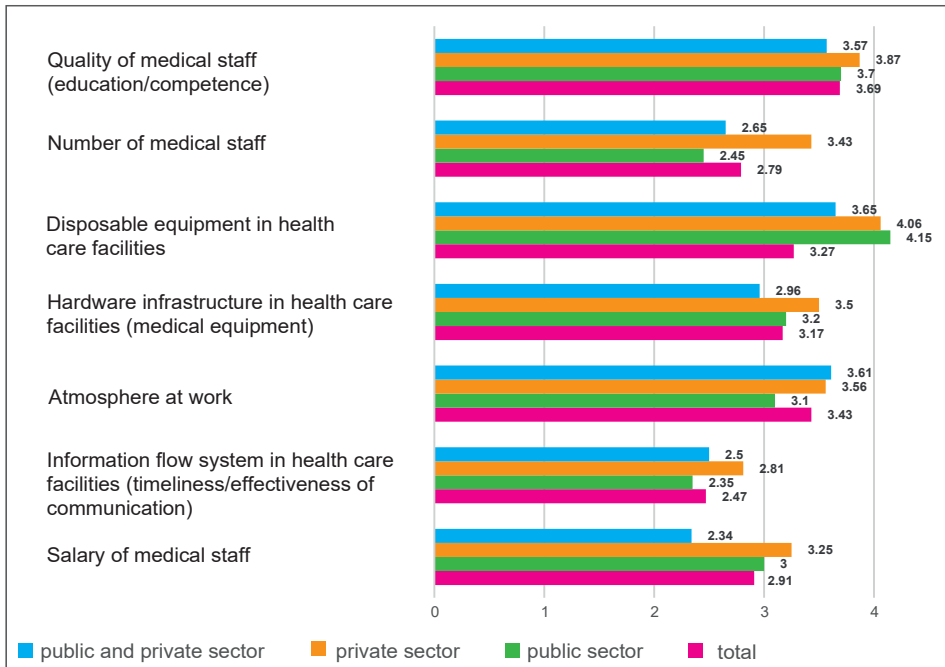


Figure 5. Assessment of selected elements of healthcare by healthcare workers in general and by workplace (sectoral approach)

Source: own elaboration based on conducted research.

appropriate rating, especially as it is also the scale associated with the school scale. The weighted average of the scores obtained is shown in Figure 5. Analyzing the data obtained from the survey, it turned out that all respondents rated the quality of medical staff perceived by education and competence the highest (rating close to 4). The second place with a rating of 3.5 is occupied by the atmosphere at work, and the podium is closed by the supply of disposable equipment. In contrast, the lowest rating was given to the information flow system (timeliness and effectiveness of communication) with a score of 2.47, i.e., at an average level.

There is an interesting distribution of ratings of elements of the healthcare system taking into account the place of work, i.e., the sector in which the respondents work (Figure 5). Representatives of the public sector rated the supply of disposable equipment highest with 4.15; interestingly, this is the highest rating of all the elements of the health system analyzed. In the group of those working in the private sector, the quality of medical staff came second; both factors discussed ranked inversely to the group of respondents overall. The podium is closed by equipment infrastructure with a rating of 3.2. The lowest rating in this group was given to the information flow system, similarly to the segment of employees in health care institutions in general, except that this rating is lower by 0.12. An identical hierarchy of importance of health care system factors was revealed among those working in private sector institutions. In all these categories, the ratings indicated by the representatives of the commercial sector are higher, except for the item “supply of disposable equipment.” The hierarchy of evaluated components of the health care system is quite different between employees working in the public and private sectors. While the supply of disposable equipment opens the podium (3.65), the atmosphere at work is second (3.61) and the quality of staff is third (3.57). It is worth noting that the sector in question rated the working atmosphere the highest of the others and medical staff salaries the lowest (2.34). Regarding the latter, the highest ratings in this respect were declared by representatives of the commercial sector (3.25).

Given the tumultuous (ongoing for many years, e.g., Lewandowski, Kautsch and Sulkowski, 2013; Raduła, 2021) changes in the healthcare system in Poland in recent years (if only because of COVID-19), the authors found it interesting to have the perspective of those working in healthcare facilities on the current state of the system compared to that of 2019.

The data summarized in Figure 6 allow us to conclude a negative assessment of this issue. Assessments of worsened and worsened were declared by almost half of the respondents; noteworthy is the $\frac{1}{5}$ declaration of definitely worsened. No change in this respect was declared by $\frac{1}{3}$ of the employees in general. Improvement in the health care system was pointed out by one in seventeen people; no one indicated a definite improvement in this respect.

Assessing the current situation in healthcare institutions, most respondents declared a bad rating — 69.35%; one in three respondents indicated a good rating.

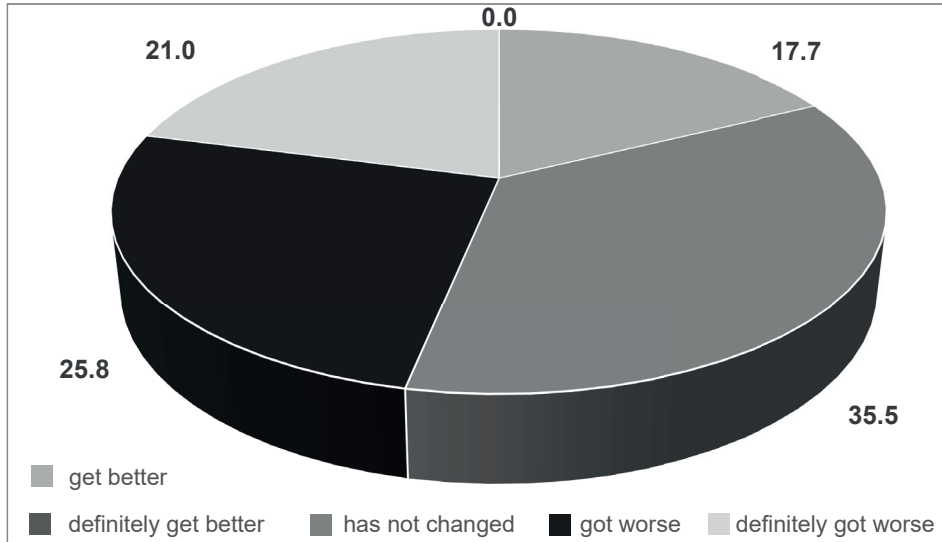


Figure 6. Current healthcare system vs. 2019 system as perceived by surveyed healthcare workers

Source: own elaboration based on conducted research.

When looking for reasons for negative ratings, those of an organizational nature were indicated, treated as the poor management system of health care entities, staff shortages, etc. — 53.48%. Such a view is not isolated, a similar view is also promoted in the literature (e.g., Raczyńska, 2020). On the other hand, 46.52% of respondents explain this state of affairs by economic reasons, such as lack or bad distribution of financial resources.

4. Conclusion

The content undertaken in the article presents a picture of the healthcare system through the prism of its selected components, which narrows the possible research areas, and the authors include this fact in the definition of the limitations of the realized project. Nevertheless, the opinions obtained seem important from the perspective of the adopted research problem, given the research sample, which was represented by people working in the system for a relatively long time ($\frac{2}{3}$ of the respondents) and, on this account, their opinions appear to be relevant to the present study. Moreover, the respondents were dominated by professions representing the largest percentage of all employees in the Polish healthcare system, i.e., nurses, midwives, and physicians.

In answering the research questions posed, it is concluded, based on the research carried out, that:

1. The lowest rating for components of the healthcare system was given to the information flow system — in the declarations of all surveyed employees of healthcare facilities, as well as those who represented the public sector and the commercial sector separately.

2. The highest rating was given to the quality of medical staff (considered from the perspective of education/competence) in the opinion of employees in general, but also to the supply of disposable equipment declared by those working in the public sector, in the private sector, as well as by employees working in both sectors (public and commercial).

As research has shown, the weakest link in the healthcare system has proved to be the system of information flow in healthcare facilities, yet proper communication, both internally and with external stakeholders, is considered an important determinant of the success of any organization (Kotler, 2005) and — an extremely important tool for building sustainable relationships inside and outside the organization (Shah et al., 2022). Although research on communication in health care devotes most attention to models in the doctor-patient relationship, or more broadly: the patient-doctor-healthcare provider relationship (Strzelecka and Syrkiewicz-Światała, 2016), inter-professional and external institutional communication are equally important for management effectiveness (Vrucan, 2022), and it is about the latter that the authors have undertaken research formulating conclusions as a complement to the content presented in this article (Niemczyk et al., 2023).

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