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EXPECTATIONS OF MEDICAL STUDENTS TOWARDS FUTURE EMPLOYERS

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Background: The Polish healthcare system is undergoing a human resources crisis regarding labour shortages and unfavourable demographic changes, which affects the future demand for medical workers. Poland's healthcare workforce is ageing, and there is an urgent global need to attract young medical talents. The expectations of medical students towards their future employers are therefore crucial for ongoing healthcare planning.
Purpose: For this reason, the nationwide study aimed to identify medical students' expectations towards future employers (healthcare entities) in Poland. The study defined their developmental needs as well as organisational and motivational expectations.
Design/methodology/approach: A questionnaire addressed to students of medical faculties was used to collect the data. Four hundred-eight respondents from all over Poland took part in the survey. A five-point Likert scale was used to assess students' expectations towards future employers. In order to determine the variables to measure the expectations of medical students, an Exploratory Factor Analysis (EFA) was performed using the principal axis method with Varimax rotation and Kaiser normalisation. The data was then analysed using descriptive statistics. The analyses were carried out using the IBM SPSS Statistics version 27.
Findings: The factor analysis showed that three dimensions should be distinguished in the questionnaire of the examined needs and expectations of medical students: developmental needs (1), organisational expectations (2), and expected motivators (3). The results showed that the greatest expectations of medical students relate to organisational aspects and, above all: a good atmosphere in the workplace, work-life balance and the right climate created by managers. The expected motivators are the least important for students, especially the medical staff salaries' dependence on seniority and material benefits.
Originality/value: The study contributes to the new knowledge regarding the expectations of medical students towards future employers in the Polish healthcare sector. The results can help healthcare organisations plan recruitment and marketing processes in line with the expectations of young healthcare professionals. The information obtained will also be useful for governments and universities in planning strategies to improve the health professions' current state of human resources.

Keywords: healthcare entities, medical students, future expectations, human resource management.

Category of the paper: Research paper.

Introduction

Health is one of the most important values valued in Polish society. An important role in delivering this value is played by the National Healthcare System (NHS), which aims to promote and maintain public health (Chomątowska et al., 2020). The results of inspections carried out by the Supreme Audit Office in recent years show that the NHS in Poland is in bad condition, as it does not sufficiently ensure the effective use of public funds, is not very patient-friendly and, above all, does not ensure adequate availability of medical staff (Łuczak et al., 2018). Due to the inappropriate policy towards medical staff, the Polish healthcare system struggles with serious problems, such as workload and shortages of medical staff, emigration of healthcare workers and limited access to health services (Domagała, Klich, 2018). Poland has one of the lowest ratios of the number of doctors and nurses per capita compared to other European Union countries (OECD and European Union, 2020). For years, the problem of imbalance between the constantly growing demand for health services and the supply of human resources necessary to meet the health needs of society has been observed.

There is a shortage of both general practitioners and specialists in Poland, and demographic factors (ageing population) cause more and more people to enter the period when they need medical care the most (Kludacz, Piekut, 2014). At the same time, an increasing percentage of medical staff is in advanced age (over 60 years old), and the supply of young doctors and nurses is insufficient. The insufficient number of young doctors entering the Polish labour market is caused, among others, by limits of admission to medical universities and difficult access to specialisations.

Another problem in the Polish healthcare system is migrating medical personnel (doctors, nurses and midwives). The main reasons for the emigration of qualified employees from the country are low wages, worse working conditions and limited opportunities for professional development (Żuk et al., 2019). The problem of healthcare worker migration is becoming increasingly popular worldwide. The ageing European society creates new opportunities for Polish doctors, and inadequate working conditions and relatively low wages encourage many highly qualified healthcare professionals to look for work abroad (Krajewski-Siuda et al., 2012). The brain drain from developing to industrialised countries is a long-standing phenomenon in the medical profession but has taken on extreme proportions in recent years. Medical staff mobility is, therefore, highly asymmetric, to the detriment of less developed countries, which lose not only much-needed human capital but also significant investments in

education and tax revenues (Domagała et al., 2022). The result is staff shortages in Polish health care that are burdensome for society.

The long-term course of acquiring and expanding professional qualifications, with the insufficiency of the education system and postgraduate training, causes shortages of specialised young medical personnel. Rational planning of educating young medical personnel and persuading the right number of people to study medical professions is an increasing challenge. Appropriately educated and available human resources are needed to ensure quality healthcare to improve public health.

It is argued that low professional satisfaction and failure to meet the needs and expectations of healthcare professionals are important determinants of the declining attractiveness of medical professions (Marchal, Kegels, 2003). What motivates students to study at medical universities and to work in their learned profession? What are their development needs and organisational expectations from the future employer? What are the key work-life issues for today's students? What is their attitude towards their own development? These are some of the practical questions that continue to intrigue organisers and planners of medical education programs around the world. Unfortunately, there are not many studies on these issues among Polish students. So far, it has been shown that such factors as developmental needs influence the professional decisions of young medical personnel (Kruk et al., 2010), future expectations (Kolčić et al., 2014) and working and living conditions (Humphries et al., 2015; Mayta-Tristán et al., 2017).

The first factor that will be examined in this study will be the developmental needs of medical students. The success of healthcare systems worldwide depends on their physicians' competence development (Spilg et al., 2012). According to evidence-based management theory, physicians have a craft that can be developed with the right guidance through practice and experience. Knowledge of medical students' developmental needs can help organise an appropriate clinical learning environment, i.e., one that provides organisational and sociocultural interactions that support interns' entry into this environment's formal and technical elements. Such an environment should provide structured activities, resources and opportunities for practice. Knowledge of the developmental needs of medical students should therefore help provide high-quality education that will provide exposure to various medical cases, treatment scenarios and diagnostic tools to ensure the appropriate level of medical competence (Sheehan, 2010; Subramaniam et al., 2015).

The second factor that will be examined in this study will be the expected motivators. Research into the motivation of students to choose the medical profession and their plans to become a doctor seems paramount for decision-makers and educators (Gibis et al., 2012). Evidence from previous research shows that the motives, beliefs and values of medical students related to their studies and future profession influence their willingness to accept a training program and their academic performance, as well as the choices they make about their future career path (Draper, Louw, 2009; Gąsiorowski et al., 2015; Khader et al., 2008).

The third factor that will be examined in this study is organisational expectations, which are the main concern of all medical students (Khadem-Rezaiyan et al., 2015). It is precisely because of the failure to meet these expectations that there are difficulties in providing adequate healthcare in society. What medical students expect from their future employers can influence how they learn. These expectations contribute to students' ever-changing mental image of their careers and thus influence their apprenticeship expectations. Associated with this image are certain values, beliefs, and priorities related to the medical profession that students take with them to an institution that has its own set of values, beliefs, and priorities (Draper, Louw, 2009). When medical students expect that their future medical career will bring them professional satisfaction, they will stimulate interest and set goals, improving their academic achievement and ultimate professional skills (Wang, Mei, 2022). This will have a far-reaching impact on their career choices and future professional development (Pham et al., 2020). Therefore, it is crucial to anticipate these expectations and factors influencing their preferences, such as the working environment and conditions of employment and time flexibility (Khadem-Rezaiyan et al., 2018). The organisational expectations of medical students may also potentially be affected by the perception of future work-life balance (WLB) (Takahashi et al., 2017). Work-life balance can be defined as being satisfied and functioning well at work and home with minimal role conflict (Clark, 2000).

Medical professions in Poland are classified as professions of public trust. Therefore, it is associated with the need to complete university studies, constantly deepen knowledge, and have high competencies. Parallel to the discussion on the impact of a limited workforce on the healthcare system, attention is drawn to the younger generation of physicians, who may have a different attitude to work than their older colleagues (Diderichsen et al., 2011). There are concerns that the younger generation of doctors is less engaged and less hardworking. In order to understand and anticipate changes in attitudes towards work, it is not enough to look at the needs and expectations of modern physicians. We need to ask our future doctors about these needs. This is important because their attitudes, values and aspirations have a long-term impact on the quality of the healthcare system (Diderichsen et al., 2011).

Rational planning of the education system for young medical personnel is therefore becoming one of the priorities of NHS in Poland. This is of particular importance because medical universities accept representatives of the "Z" generation and the first graduates of this generation to enter the labour market. Therefore, it is important to get to know and understand the youngest generation of future doctors, see what they are like, learn about their values, expectations, and needs, and understand what motivates them and why they behave the way they do (Chomątowska et al., 2020).

Therefore, our research presented in this article aimed to examine Polish medical students' motivations, organisational expectations and development needs. Greater knowledge about the attitudes and expectations of medical students regarding their future careers is important for

healthcare planners as well as for medical teachers involved in education. This article presents only a fragment of a broader study conducted by the authors among medical students in Poland.

Methods

A questionnaire addressed to students of medical faculties was used to collect the data. A five-point Likert scale was used to assess students' expectations towards future employers, from 1 (strongly disagree) to 5 (strongly agree) (Elliott, Woodward, 2007). The survey of medical students from across Poland was conducted in 2021. The survey was anonymous, and the results were used in an aggregated manner for research purposes only.

Most universities, for the duration of the suspension of teaching due to the COVID-19 pandemic, introduced remote learning arrangements. In this situation, students must equip themselves with remote working tools and provide Internet access. On this basis, it was assumed that every medical school student had access to the Internet from their phone, computer or tablet. It was therefore decided to conduct only Computer Assisted Web Interview (CAWI) surveys. The inclusion criteria were: consent to the survey and being a medical student. Identification of the target group was possible by diversifying the sources of reaching the respondent. The authorities of 22 Polish medical universities (including medical universities, universities with Collegium Medicum, university faculties with medical programmes, and non-public universities with medical programmes) were contacted by email and telephone to obtain consent to conduct the survey among students. Two of them refused to participate in the study. The remaining universities agreed to allow students to participate in the survey (they provided their students internally with a link to the survey) or instructed them to contact the Student Council and Student Research Groups directly (96 emails containing a link to the survey were sent for this purpose). In addition to students at faculties of medicine, students from other medical faculties (including nursing and midwifery) were also surveyed.

The International Medical Students' Association IFMSA-Poland was also contacted. This organisation brings together students of all medical programmes in Poland. It is also the largest student organisation in the world, with students from 121 countries belonging to it through national organisations. The dissertation author provided the link to the survey to 18 branch presidents and one vice president.

Using MS Forms, an online survey tool in Office 365, responses were collected from 408 respondents. The platform allowed the results of the surveys to be verified while they were in progress; this functionality helped to determine the degree of progress. Data from the platform was exported to Microsoft Excel. Statistical analyses were then carried out using the IBM SPSS Statistics version 27 package for primary data analysis techniques. In order to determine the variables to measure the expectations of medical students, an Exploratory Factor

Analysis (EFA) was performed using the principal axis method with Varimax rotation and Kaiser normalisation. The data was then analysed using descriptive statistics.

Results

Characteristics of respondents

The survey of medical students involved 408 respondents from all over Poland. Preliminary characterisation of the respondents allows us to understand their structure and design more advanced analyses. The study group consisted of 315 women and 93 men.

One intuitively thinks of youth When considering studies and students in terms of age. However, the category of youth is no longer clear-cut. The phenomena of pluralisation and hybridisation of age categories in society make it difficult to define the point at which a person ceases to be counted as a youth and becomes an adult (Szafraniec, 2012). In the case of students, there are no definitional problems with the lower age limit. It has been shaped by the so-called traditional pathway to higher education. Any person who has completed secondary school and passed the matura examinations (i.e. usually 18-19 years of age) can become a medical student. For the upper age limit, the situation is no longer so clear-cut. Therefore, a maximum value for the age variable has not been assumed, as medical studies can be undertaken regardless of how old one is. Table 1 includes statistics for the age variable.

Table 1.
Age of students - number, mean, median, dominant, minimum, maximum, standard deviation

Variable	N	M	Me	Mo	Min	Maks	SD
Age	408	22.24	21.00	19	18	51	5.325

N – number, M – mean, Me – median, Mo – modal (dominant), Min – minimum value, Max – maximum value, SD – standard deviation.

The average age of respondents was 22 years. The mean is affected by extremely large values. The median (also known as the 50th percentile) - that is, the value where half of the observations have a value less than it and the other half have values greater than it - is 21 years. In this situation, the survey is based on an even number of observations, so the median is the average of the two middle observations in the sample sorted in ascending order. It should be noted that the value of the mean and median differ slightly, so the age variable takes on maximum extreme values that affect the mean.

The dominant or most frequent value (as many as 103 times among all students) was age 19. The youngest respondents were 18, and the oldest was 51. The standard deviation of the age variable was 5.325.

The survey questionnaire addressed to medical students contained four possible fields of study and an open-ended answer - other. A pie chart (Figure 1) is shown below, together with the percentage structure indicators, showing what percentage of those with the characteristic under consideration are in the entire study group.

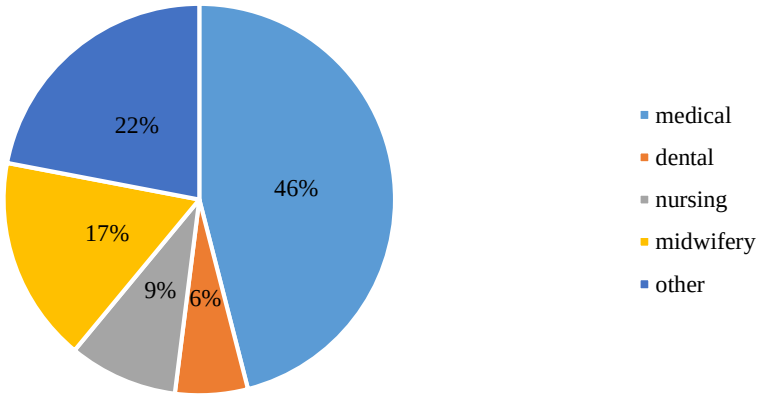

Figure 1. Respondents' fields of study.

Students of medicine-based programmes - doctors (46%) and doctors-dentists (6%) - were the dominant group. Nursing and midwifery students made up a total of 26% of all respondents. In contrast, 22% of respondents reported that they were studying another medical subject.

The survey was conducted among students from all over Poland. Respondents were asked to indicate where they grew up (rural or urban), the number of inhabitants in the locality in which they were studying, their mode of study and whether there were persons who could be considered representatives of the medical profession among their immediate family members. Respondents were also asked about their preferences with regard to the type and form of ownership of the medical entity in which they would like to work in the future and their professional activity (Table 2).

Table 2.
Characteristics of respondents

Variables		**Frequency (N)**	**Percentage (%)**
The number of inhabitants in the town where the university is located	Less than 50 000 inhabitants	37	9.1
	50 000-100 000 inhabitants	24	5.9
	100 000-500 000 inhabitants	168	41.2
	Over 500 000 inhabitants	179	43.9
	Total	408	100.0
Background	Rural	148	36.3
	Urban	260	63.7
	Total	408	100.0
Medical professionals in the immediate family of respondents	Yes	118	28.9
	Not	290	71.1
	Total	408	100.0
Mode of study	Full-time	371	90.9
	Part-time	37	9.1
	Total	408	100.0

Cont. table 2.

Preference for a type of treatment provider	Primary healthcare facility	45	110
	Outpatient specialised care facility	30	7.4
	Dental facility	31	7.6
	Hospital	277	67.9
	Health care facility, nursing and care facility, therapeutic rehabilitation facility, hospice	25	6.1
	Total	408	100.0
Preferences regarding the form of ownership of the treatment entity	Public healthcare entity	161	39.5
	Non-public healthcare provider	157	38.5
	Individual medical practices (doctors, nurses, midwives)	54	13.2
	Group medical practices (doctors, nurses, midwives) in the form of a civil law partnership or partnership	36	8.8
	Total	408	100.0

The medical institutions of higher education attended by the respondents were located in large agglomerations of more than 500 000 inhabitants (43.9%) and cities of 100 000-500 000 inhabitants (41.2%). Residents of cities (63.7%) were more likely to choose to study medicine than those from rural areas (36.3%).

Students were also asked whether there were any people among their immediate family members who could be considered to be medical professionals. More than 70% of the students surveyed did not confirm that there were medical professionals among their immediate family members.

The next variable to be analysed is the mode of study. Respondents studying full-time were the dominant group (90.9%). Those studying part-time accounted for 9.1% of all respondents.

The medical students also presented their preferences with regard to the type and form of ownership of the healthcare entity where they would like to work in the future. The majority of respondents would like to work in hospitals in the future (277 people, or 67.9% of all students). The least number of students (6.1%) preferred to be employed in healthcare facilities, nursing and care facilities, therapeutic rehabilitation facilities and hospices. In terms of the preferred form of ownership of a medical entity, the largest group were students wanting to work in public medical entities (161 people); however, this was only 39.5% of the respondents. Only 1% fewer respondents wanted to work in non-public healthcare entities (which is 157 people). Within individual medical, nursing and midwifery practices, 13.2% of respondents wanted to pursue their careers, and in group medical practices in the form of a civil law partnership or partnership, 8.8% of respondents.

Students were also asked about their professional activities. Respondents were given a choice of four options: working in the healthcare system, working outside the healthcare system, not working and looking for work, and not working and not looking for work. A summary of the student's responses regarding their current professional activity and the preferred form of ownership of the healthcare provider they would like to work for is presented in Table 3.

Table 3.
Relationship between the form of ownership of the health care entity where students would like to work and their current work activity

Variables		Ownership of the healthcare entity where students would like to work				
		Public healthcare entity	**Non-public healthcare provider**	**Individual medical practices**	**Group medical practices**	**Total**
Professional activity	I work in the healthcare system	24	19	4	7	54
	I work outside the healthcare system	19	25	7	5	56
	I am not working, and I am looking for a job	12	18	6	2	38
	I am not working, and I am looking for a job	106	95	37	22	260
	Total	161	157	54	36	408

The predominant group were students who were not working and were not looking for work (260 people, or 63.7% of all respondents). The survey shows that the decision to take up any casual work while studying is not a simple one. Only 27% of the total group decided to combine their medical studies with a job (of which 13.2% of the respondents were already working in the healthcare system (54 people), and 13.7% were working outside the healthcare system (56 people), while 9.3% of all respondents were not yet working but showed a desire to work during their studies (38 people).

Data was obtained on the inflow of medical students to healthcare entities in the future. The largest subgroup of students wishing to work in public healthcare facilities in the future (26% of all respondents) were students who were not economically active and did not plan to look for a job during their studies. If they do as declared, they will join the ranks of employees in public facilities, but most likely only after graduation, as they are not currently planning to combine study with work. In this situation, ambitious student has the opportunity to devote themselves fully to furthering their knowledge, so this will be an invaluable gain for their future employer, but they will nevertheless have to wait longer. This group will not make up for the pressing staff shortages of public healthcare providers in the short term (the only exception may be students above the fifth year of study).

In the near future, people who are not currently working but are looking for a job (unfortunately, this is only 2.9% of all respondents) may start working in public healthcare institutions. Taking into account their preferences regarding the form of ownership of the facility in which they would like to work - it can be assumed that, given the choice of working in different facilities, they will choose the public ones.

Measurement of medical students' expectations

In order to establish variables to measure medical students' expectations, an Exploratory Factor Analysis (EFA) was performed using the principal axis method with Varimax rotation with Kaiser normalisation. Initially, all variables relating to medical students' expectations and needs were entered. The adequacy of sampling was checked using the Kaiser-Mayer-Olkin (KMO) coefficient. Its formula takes the form (Kaiser, 1974):

$$KMO = \frac{\sum_j \sum_{h \neq j} r_{jh}^2}{\sum_j \sum_{h \neq j} r_{jh}^2 + \sum_j \sum_{h \neq j} \hat{r}_{jh}^2}$$

where:

r_{jh} is the correlation coefficient between variables numbered j and h,

$\hat{r}_{jh}^2$ is the partial correlation coefficient between them.

This coefficient takes values in the range [0,1]. The higher the value of the coefficient, the stronger the basis for using factor analysis in assessing the relationships between the observed variables. H.F. Kaiser (1974) proposed the following breakdown of KMO: 0.9 - very high, 0.8 - high, 0.7 - medium, 0.6 - moderate, 0.5 - very low. Values lower than 0.7 may suggest the need to remove some of the variables (Rozmus, 2018). Some researchers believe that this indicator should take a value higher than 0.5 (Staniec, 2015).

The KMO measure of sampling adequacy is at a satisfactory level with a value of 0.842 (Sztemberg-Lewandowska, 2008), and Bartlett's test of sphericity is statistically significant: $\chi 2(153) = 1846.34$; $p < 0.001$. This indicates the validity of conducting a factor analysis (Bartlett, 1950). The analysis made it possible to identify four factors, explaining a total of 50.19% of the variance. The first factor explained 27.20% of the variance, the second 8.95%, the third 8.24% and the fourth 5.80%. The extraction of factors was carried out on the basis of both eigenvalues (>1.0) and the scatter plot (Kowalska-Musiał, 2013). According to the Cattell test criterion, four factors should also be selected. In the next part of the analysis, the values of the factor loadings were verified after applying the rotation. Factor 4 was formed only from one item. Furthermore, another item in no factor reaches a charge value greater than 0.30. Therefore, it was decided to abandon the 4-factor structure in favour of a 3-factor structure.

In the next step, items with a charge value of less than 0.40 were excluded from the analysis (six items). The KMO measure was again at the appropriate level: 0.833; as well as the desired Bartlett's sphericity test results were obtained: $\chi 2(66) = 1393.75$; $p < 0.001$. Results based on eigenvalues (<1.0) indicate a 3-factor structure. In addition, the scatterplot (Figure 2), as well as the factor charge values (Table 4), are presented.

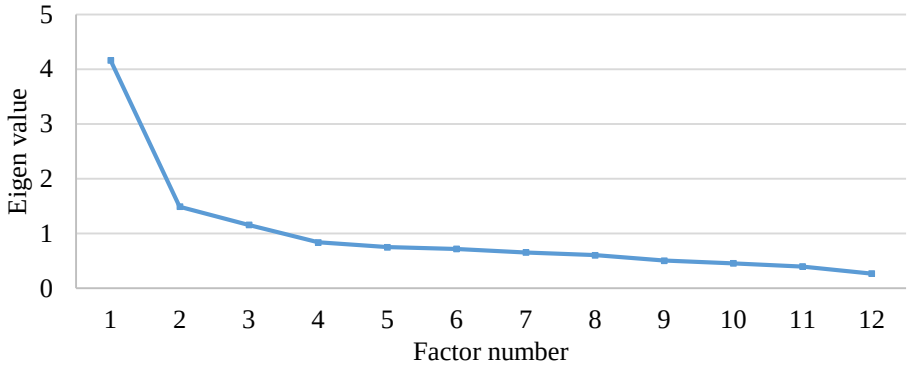

Figure 2. Scatter plot for variables relating to medical students' expectations and needs.

As it turns out, the entire 3-factor model explains 56.76% of the variance. This is sufficient in identifying the latent construct. Reliability methods are only applied after assessing unidimensionality. In this case, Cronbach's alpha coefficient was determined, indicating whether the way the individual questions were answered was consistent (Carmines, Zeller, 1979). It measures the ratio of the variance of individual items to the variance of the entire scale (the sum of these items):

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k} S_i^2}{S_\Sigma^2}\right)$$

where:

k - number of items,

S_i^2 - variance of the i-th item,

S_Σ^2 - variance of the whole scale (sum of all items).

Reliability describes the accuracy with which a factor (dimension) measures what it measures. High-scale reliability is indicated by values of this factor greater than 0.7 (Carmines, Zeller, 1979). The level of reliability for all analysed dimensions is at an acceptable level (Table 4). The reliability level for the dimension 'Expected motivators' is lower than for the other two dimensions but takes a value above 0.7.

Table 4.

Factor charge values for the three-factor solution for "Expectations and needs of medical students"

Variables	**Factor**		
	Development needs	**Organisational expectations**	**Expected motivators**
My future employer should have learning and development programmes that aim to develop talent	0.816		
The employer should organise training to develop competences	0.793		
The healthcare entity should offer the opportunity to apply for funding to improve professional skills	0.524		
The employer should provide opportunities for advancement	0.439		
There should be a friendly atmosphere in the workplace.		0.691	

Cont. table 4.

Terms and conditions of employment should allow for a work-life balance.		0.662	
Managers should create a professional climate in which medical staff are shown respect.		0.639	
Remuneration should be commensurate with the duties and responsibilities performed.			0.537
Remuneration should be commensurate with qualifications and training acquired.			0.511
The employer should recognise the commitment of employees and praise them for their successes.			0.478
Remuneration should be linked to employee performance.			0.452
The facility should have a reputation for caring about the quality of its medical services.			0.440
% of explained variance	34.71%	12.42%	9.63%
Cronbach's α	0.77	0.75	0.72

Method of extracting factors - Main factor.
Rotation method - Varimax with Kaiser normalisation.

A high level of reliability of the scale was noted (Cronbach's alpha index values $\alpha > 0.70$) (Hair, 2013). Factor analysis showed that there were three dimensions to be distinguished in the questionnaire of the surveyed medical students' needs and expectations: developmental needs (1), organisational expectations (2), and expected motivators (3). Eighteen statements were analysed.

Analysis of medical students' expectations

The responses of future doctors, nurses, midwives and other interviewees expressing their developmental, organisational and motivational expectations of future employers are shown in Table 5 and Figure 3.

Table 5.
Expectations of medical students surveyed towards future employers

Construct	Variables		Mean	Standard Deviation
Development needs	DN1	The healthcare entity should offer the opportunity to apply for funding to improve professional skills	4.72	0.613
	DN2	The employer should organise training to develop competences	4.66	0.642
	DN3	My future employer should have learning and development programmes that aim to develop talent	4.38	0.853
	DN4	The employer should provide opportunities for advancement	4.70	0.611
Expected motivators	EM1	The employer should recognise the commitment of employees and praise them for their successes	4.73	0.557
	EM2	The facility should have a reputation for caring about the quality of its medical services	4.79	0.492
	EM3	Remuneration should be commensurate with the duties and responsibilities performed	4.84	0.467
	EM4	Remuneration should be linked to employee performance	4.23	0.944
	EM5	Remuneration should be commensurate with qualifications and training acquired	4.58	0.679

Cont. table 5.

	EM6	There should be a fair staff remuneration policy in the healthcare entity*	4.73	0.635
	EM7	The employer should provide attractive financial benefits (e.g. company housing, additional medical care, additional pension insurance)*	4.06	1.009
	EM8	I expect job security from my future employer*	4.73	0.585
	EM9	My workstation should be equipped with modern equipment*	4.67	0.575
	EM10	Remuneration of medical staff should depend on the length of service*	3.44	1.142
Organisational expectations	OE1	There should be a friendly atmosphere in the workplace	4.89	0.423
	OE2	Terms and conditions of employment should allow for a work-life balance	4.84	0.504
	OE3	Managers should create a professional climate in which medical staff are shown respect	4.84	0.426
	OE4	The organisation should have a flexible working time system*	4.07	0.880

* variable excluded from the model (based on the factor analysis performed).

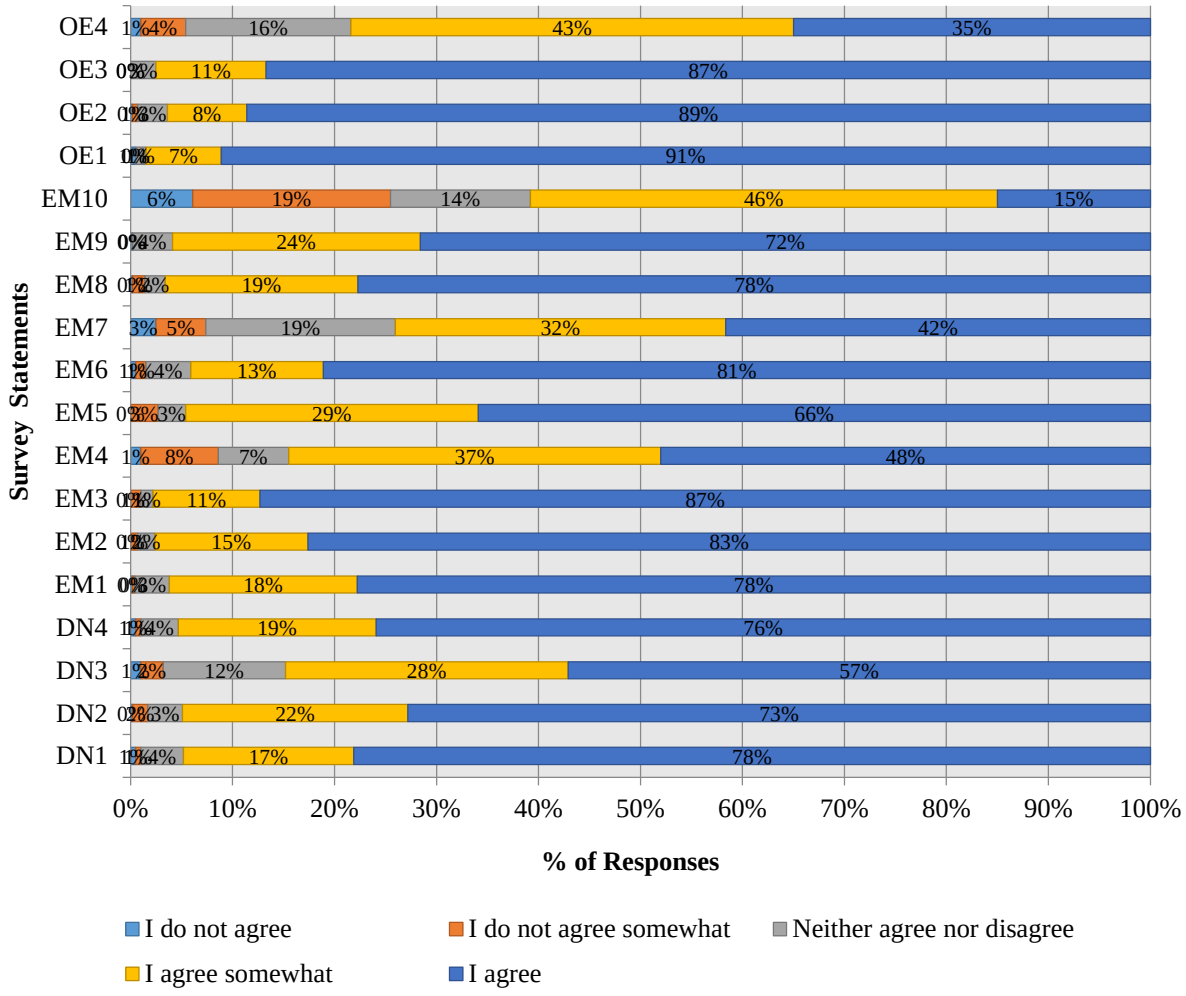

Figure 3. Distribution of survey responses.

The development expectations of medical students are related to the first dimension. The survey questionnaire verified their attitudes towards training provided by the employer, promotion opportunities, learning and development programmes offered, and the possibility of applying for funding to improve their professional qualifications.

The majority of medical students (78.2%) had very high expectations of the financial support they thought the healthcare facility should provide to its employees for the improvement of their professional qualifications (DN1: M = 4.72; SD = 0.613), and 16.7% of respondents partially agreed with the statement that the facility should offer the possibility to apply for funding for the improvement of professional qualifications. About 1% of the students completely or partially disagreed with this statement, and 4.2% of the respondents did not want to take a position on this issue. According to 72.8% of the students, the employer should organise competence development training. 22.1% of the respondents partially agreed with this statement (DN2: M = 4.66; SD = 0.642). Approximately 5.1% of the students thought that the healthcare entity did not need to provide staff training or had no opinion on the subject. The mean and standard deviation for the next variable (DN4: M = 4.70; SD = 0.611) were similar to those for DN1. In the opinion of 76% of medical students, there should be an opportunity for career advancement within the structures of the medical entity (DN4).

In contrast, 19.4% of the respondents were of the opinion that the employer should rather provide the opportunity for promotion. It was very important for 57.1% of the students surveyed and rather important for 27.7% of the respondents (DN3) that healthcare entities have learning and development programmes to develop talent. About 12% of the respondents did not respond to this statement (M = 4.38; SD = 0.853).

The second dimension presents what motivators medical students expect from their future employers. The questionnaire makes it possible to examine the respondents' attitudes to: the need to appreciate commitment and praise for success; motivation in the form of working in an organisation with a reputation for the quality of medical services provided; adjustment of remuneration to duties and responsibilities performed and qualifications and education obtained, or to link them to the effectiveness of the employee. The survey showed that the majority (77.7%) of the students believed that the employer should value the commitment of employees and praise them for their successes (EM1: M =4.73; SD = 0.557). This view was partially shared by 18.4% of the respondents. For 82.6% of respondents, it was very important whether the facility where they were considering working had a reputation for caring about the quality of services provided (EM2: M = 4.79; SD = 0.492), and 15% of respondents partially agreed with the statement that a healthcare entity should have a good reputation for them to want to work there. The majority of respondents (87.3%) believed that the remuneration should be adequate for the duties and responsibilities performed, and 10.5% of respondents were of the opinion that such a relationship should rather exist (EM3: M = 4.84; SD = 0.467). Those surveyed responded as to whether they thought remuneration should be linked to employee performance (EM4: M = 4.23; SD = 0.944). This expectation was completely

confirmed by 48% of medical students and partially confirmed by 36.5% of respondents. 1% of the students would not like to encounter such a relationship with their future employer. 65.9% of the students completely agreed with the statement that the salary should be adapted to the qualifications and education acquired (EM5: M = 4.58; SD = 0.679). This view was partially shared by 28.7% of the respondents. The majority of students (81.1%) believed that there should be fair remuneration rules in the healthcare entity where they would like to work, while 13% of respondents partially agreed with this opinion (EM6: M = 4.73; SD = 0.635). According to 41.7% of the respondents, the employer should provide attractive benefits to employees such as for example, company housing, extra medical care or extra pension insurance (EM7: M = 4.06; SD = 1.009). 32.4% of respondents partially agreed with this statement. Some 7.4% of students did not feel the need to receive motivators in this form. Job permanence is very important for 77.7% of medical students and somewhat important for 18.9% of the respondents (EM8: M = 4.73; SD = 0.585), and 1.4% of the respondents did not expect their future employer to ensure that they would establish a long-term relationship with them. A condition that should be fulfilled by the employer in order for medical students to find the job offer with them very attractive is that the workstations should be equipped with modern equipment (EM9). 71.6% of respondents fully agreed with this statement, while 24.3% of respondents partially agreed. None of the medical students surveyed stated that equipping their future workstations with modern equipment was unnecessary (representing M = 4.67; SD = 0.575). Approximately 15% of the respondents believed that the salary of medical staff should depend on their seniority (EM10: M = 3.44; SD = 1.142). The majority of respondents (45.8%) partially agreed with this statement. A group representing 25.5% of respondents was against this (of which 6.1% categorically denied this dependence).

The third dimension identifies the expectations of medical students with regard to the organisation of healthcare entities: the atmosphere in the workplace, the work-life balance, and the atmosphere created by managers. The survey shows that, according to the majority of students (91.2%), there should be a friendly atmosphere at the workplace (OE1). This statement was partially agreed with by 7.4% of the respondents (M = 4.89; SD = 0.423). The respondents responded to the statement about whether the employment conditions should allow for a work-life balance. This was fully confirmed by 88.5% of respondents and partially confirmed by 7.8% (OE2: M = 4.84; SD = 0.504). The majority of medical students (86.8%) surveyed believed that managers should create a professional atmosphere in which respect is shown to medical staff (OE3). About 11% of the surveyed students partially agreed with this statement (M = 4.84; SD = 0.426). According to 35% of the students surveyed, there should be flexible working hours at the institution where they would like to work (OE4). The largest group of respondents (43.4%) partially agreed with this statement. 16.2% of the respondents did not respond to this statement (M = 4.07; SD = 0.880).

Discussion

The aim of this study was to identify medical students' plans, needs and expectations towards future employers (healthcare entities) in Poland. This survey shows that medical students representing the upcoming generation of doctors are most interested in working in a hospital (68%). The great interest in working in hospitals may be due to the fact that in order to obtain the right to practice medicine, medical graduates must, among others: complete a 13-month internship in hospitals on the basis of an employment contract. The conducted research showed that a high number of students want to work for the public sector (40 %), but the majority of them prefer employment in non-public and private entities (medical practice) (60%). This may be due to the expectation of higher income from unpublic employers. A study conducted on a group of Polish students in the first decade of the 21st century showed that preferences regarding the place of employment depend on the study period (Gąsiorowski et al., 2015). The results then showed that half of the first-year students and most of the graduates expected to work in hospital conditions. More than 40% of first-year students then said they did not know their preferences, and those who did most preferred working in the private sector. On the other hand, all the last-year students who answered indicated their preferences, and the majority expected to work in the public sector or in the public and private sectors. According to the authors, the shift in preferences between the first and the last year of studies towards favouring work in the public sector seems to correspond with the greater attention that the students of the sixth form pay to job safety. This can be taken as an indication that graduates are genuinely concerned about finding a secure employment option. This may also indicate that students who prefer future work in the public sector are slightly more socially minded.

The results of studies conducted in other countries in this area have been inconsistent. For example, students in Germany preferred working in the public sector over the private sector (Gibis et al., 2012), while more students in South Africa chose the private sector (De Vries et al., 2010). On the other hand, most students from African countries preferred to combine work in the private and public sectors (Ferrinho et al., 2010, 2011; Fronteira et al., 2011).

Medical students seem to know that they will be needed in the public sector and that this is an opportunity to contribute to the public good. On the other hand, however, their expectations in order to improve their earnings require combining practice in the public sector with private medical work. For example, the income expectations of students from African countries amounted to 2-3 times the average salary per month (Ferrinho et al., 1998). In terms of income, also surveys of students in other countries (Angola, Guinea-Bissau and Mozambique) (Ferrinho et al., 2011) showed that most students would like to earn well above the income offered by public sector jobs, creating a context that encourages overlap between public and private practice. Salary expectations are, therefore, highly inflated, suggesting that new doctors will seek other sources of income to supplement their salaries in the public sector (Ferrinho et al.,

2011). Health systems should therefore be prepared for dual practices (in the public and private sectors), which should be regulated (Ferrinho et al., 1998).

The survey also reflected the general trend of women making up a higher percentage of doctors than before (77%). The higher proportion of women reflects the increasing representation of women in medicine (Adams, 2010). The feminisation of students is an important issue that affects career choices in other countries as well (Dorsey et al., 2005; Ferrinho et al., 2015; Fukuda, Harada, 2010; Lambert, Holmboe, 2005). As in other studies worldwide, a small proportion of students (37.5%) came from rural areas (Kruk et al., 2010; Shankar, Thapa, 2012). Almost one-third of respondents have representatives of medical professions in their immediate family. As in the case of other studies, relatives practising the medical profession significantly influence the choice of a medical profession (Ferrinho et al., 2015).

Researchers around the world agree that the motives for choosing medical studies are a combination of development needs supported by professional interests and ambitions, material and recognition needs (salary, perceived prestige of medical professions and social position), and on the other hand, the expected lifestyle and family needs (Gąsiorowski et al., 2015).

The study showed that such development needs and expectations of Polish medical students in relation to future employers are high. Most medical students have very high requirements for financial support that, in their opinion, a medical entity should provide to its employees as part of improving their professional qualifications. According to the majority of respondents, the employer should organise training to develop competencies. They also expect the possibility of professional advancement from the employer. The need for professional development of medical students has also been confirmed by research conducted in Iraq (Lafta et al., 2018). Meanwhile, the policy regarding developing medical staff in Poland is currently insufficient and inadequate. There is no comprehensive, long-term strategy for training medical staff adapted to society's rapidly changing health needs, which may be dangerous for the Polish healthcare system (Domagała, Klich, 2018).

The organisational expectations of medical students are also very high. The vast majority of future medical employees expect a friendly atmosphere in the workplace (98.8%), employment conditions allowing for a balance between work and private life (95.9%), and a professional atmosphere and respect in the workplace (98.1%). Flexible working hours are of the least importance to them (80.8%).

The importance of the atmosphere in the workplace was also confirmed by research conducted among Iraqi students (Barnett-Vanes et al., 2016; Lafta et al., 2018). Students realise that a bad atmosphere causes mental exhaustion, weakening of personal security, anxiety and depression. Therefore, future Polish medical staff will be motivated by a friendly and professional working atmosphere. Still, they also emphasise the importance of a reasonable work-life balance as a key element in providing sustainable healthcare services, which aligns

with other researchers worldwide. For example, medical students in Norway highlight a good work-life balance as one of the main values in their future working life (Fimland et al., 2019). They expressed a strong motivation to become a doctor and concern for their professional future and development. They were prepared for several dilemmas, such as choosing between professional development and family time, as well as the fact that they will have to work a lot of overtime, which can be a problem in prioritising their needs. On the other hand, German students highly rated aspects such as flexible working hours, career prospects and work-life balance. Work-life balance was the most preferred item over all other expectations, followed by flexible working hours and career prospects (Baller et al., 2013).

Work-life balance and flexible working hours are highly important to students worldwide today. Interviews with Australian medical students showed that they placed great importance on their future family plans, the possibility of part-time work and the possibility of taking longer holidays (Tolhurst, Stewart, 2004). On the other hand, research conducted among Asian students showed the important role of the family in making decisions regarding the choice of place of employment (Draper, Louw, 2009). In studies conducted in Germany, the reconciliation of professional and family life was very important for both men and women, as evidenced, among others, by the increased interest in hired work in this country (Gibis et al., 2012). Other authors (Andlauer et al., 2012; Bickel, Brown, 2005; Sanfey et al., 2006) point to the generational shift in priorities among medical students. Today's students, regardless of gender, seem to pay more attention to work-life balance, spending time with family, friends and hobbies, which requires a more flexible approach to working life (Andlauer et al., 2012; Sanfey et al., 2006). Unable to achieve a work-life balance contributes to medical staff burnout (Suresh et al., 2020).

Swedish and Australian students also express concerns about how to reconcile a professional career with non-professional life (Johansson, Hamberg, 2009; Tolhurst, Stewart, 2004). A Scandinavian study showed that when students chose a career after medical school, work-life balance was important to them (Aasland et al., 2008). It was important to achieve balance by managing and negotiating the spheres of work and family and the boundaries between them. Most of these students were work-oriented but clarified that they wanted more out of life than work. In Sweden, 55% of doctors declare they are either too tired or have too little time for private life. Such conditions may contribute to the desire to maintain a work-life balance and the desire for a richer life among students. This would also explain why older students with more clinical experience focused more on family, leisure time, and quality of personal life than first-year students (Diderichsen et al., 2011). Most work-life balance studies identify two domains: home/family and work (Clark, 2000; Hakim, 2002). However, research from Sweden suggests that there is a third important domain: leisure time (Diderichsen et al., 2011). When work and family involve meeting other people's needs, physical activity, spending time with friends, and hobbies can meet personal needs. Therefore, Medical students are focused on work, but they intend to balance and negotiate the domain of work with the domain

of the home and the domain of recreation. This was particularly emphasised at the end of medical studies, suggesting that future doctors would emphasise the importance of family, free time and quality of personal life, but not at the expense of work. Perhaps when these three domains are balanced, "Quality of Personal Life" is achieved.

The smallest needs of the surveyed students were related to motivators in the future workplace. Here, the most important were remuneration adequate to the duties and responsibilities, a fair remuneration system, the opinion of a facility that cares about the quality of medical services, recognition of the employer (praise and a sense of appreciation), job safety, and modern equipment in the facility. The least important were remuneration depending on working time and material benefits.

Our results from the student survey confirm the research conducted in Iraq that emphasised the need for adequate remuneration for medical staff, material benefits and equipping the facility with modern equipment (Amin, Khoshnaw, 2003; Lafta et al., 2018; Squires et al., 2010). The salary was the lowest factor in job satisfaction here. However, it is generally not expected that new medical graduates will be strongly motivated to work in this system due to perceived insecurity by students. Financial motivators are the most important for Polish students. A different picture emerges from earlier research conducted in the 1980s among senior medical students, who said they viewed the physician's role from a more professional perspective, having more to do with alleviating suffering than with money, prestige and success (Powell et al., 1987).

The main advantages of our study were the large-scale nature of the study and representation from most medical universities throughout Poland. In addition, factor analysis allowed for the verification of the original tool for measuring medical students' developmental needs and expectations. Poland is still an under-researched country (Domagała, Klich, 2018), so the analysis presented in this article makes a theoretical contribution to the scarce literature on the labour market in the Polish healthcare system.

The article is not free from limitations. First of all, the factors influencing Polish medical students' developmental needs and expectations were not considered. Therefore, some issues raised in the article require a broader development, for example, the impact of socio-economic factors, year of study, and medical speciality on students' expectations. Investigating the factors behind students' decision-making would provide a better understanding of what drives their choices. In subsequent studies, it would also be worth taking into account humanitarian motives, e.g. the possibility of helping and caring for people, and scientific ones, taking into account the entire period of study (Draper, Louw, 2009; Gąsiorowski et al., 2015; Puljak et al., 2009). The earlier study conducted in Poland showed that among the five different expectations related to job security, high prestige and income, and further professional development, Polish students attributed the greatest importance to the perspective of performing socially important work (Gąsiorowski et al., 2015). It is unclear whether the humanitarian and scientific motives for studying medicine remain constant throughout the study (Draper, Louw, 2009) or decrease

significantly (Puljak et al., 2009). Earlier exploratory research conducted among Polish students showed that the most frequently indicated motives for choosing medical studies were internal motives, such as the desire to help others and interest in medical subjects and issues. However, the frequency of such motivators was higher among first-year students than graduates (Gąsiorowski et al., 2015). It would also be worthwhile to carry out an international comparison in this area.

Summary

The shortage of doctors in certain specialities is becoming one of the most important reasons for limited access to health care. The key challenge is implementing a holistic, systemic approach to planning medical staff based on strategic principles and practices and using tested models and tools. The lack of such a mechanism results in increased workload and doctors' dissatisfaction with working and employment conditions.

Our research has revealed that Polish medical students have high development needs and organisational expectations. First, they expect support from future employers to meet the challenge of balancing private life and a medical career. Perhaps today's medical students intend to "work to live" rather than "live to work." This trend towards a more controlled lifestyle may react to today's physicians' heavy workload. These results indicate the need for continuous research into the possibilities of improving work-life balance in the medical profession. Today's medical students want more out of life than work. The medical profession is known for its long hours and heavy workload. These professional attitudes and values among future physicians pose a challenge to the planning of medical professions. Part-time work can be one way to achieve a work-life balance. However, we suggest that it is important for policymakers and healthcare planners to plan for full-time work that also provides time for family and recreational activities. Interestingly, despite sociocultural differences and different educational traditions, Polish medical students' developmental needs, motivations, and professional expectations are essentially similar to those reported in various international samples of medical students.

Our data can guide future labour market trends in the healthcare system. The transformational planning of this labour market must be tailored to the needs of future healthcare workers to counteract the erosion of the workforce of healthcare systems. The high development needs of medical students indicate that their future workplaces should be properly structured and support trainees' learning. A holistic, systemic approach to planning human resources in the health service should be implemented, based on an effective system for monitoring professional development (including diploma and postgraduate training) and the structure of employment in the Polish health care system, taking into account the needs of the new generation of students. One of the most urgent actions should be to retain medical staff,

including improving working conditions (e.g. remuneration, workload) and facilitating career paths (e.g. specialisation and professional development) so that medical staff educated and trained in the country also choose to work in Poland. We also suggest that discussions about work-life balance should be included in the curricula of medical schools.

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