

PUBLIC AWARENESS OF LABORATORY DIAGNOSTICIAN'S PROFESSION

*Marcin Mazurek¹, Paulina Gil-Kulik², Aleksandra Madej¹, Dorota Filipczak¹, Agnieszka Dziarmaga¹, Elżbieta Kulec¹, Tomasz Flis¹, Piotr Chomik², Jolanta Karwat², Joanna Wawer¹, Genowefa Anna Wawer³, *Janusz Kocki²*

¹Student Scientific Society of Clinical Genetics, Medical University of Lublin, Lublin, Poland

²Department of Clinical Genetics, Medical University of Lublin, Lublin, Poland

³Department of Foreign Languages Medical University of Lublin, Lublin, Poland

*Corresponding author e-mail: janusz.kocki@umlub.pl

S u m m a r y. The public awareness of medical professions and their role has become essential to health care nowadays. A doctor, nurse, midwife, pharmacist or a laboratory diagnostician represent professions, on which human health and life often relies. Medical Analytics/Laboratory Medicine is a relatively young, though quickly developing branch in medical sciences. Diagnosticians contribute to accurate diagnosis made by doctors and have essential share in the early detection of pathological changes before clinical symptoms appear. In spite of that, and partially due to limited contact with patients, diagnostician's profession is not popular compared to other medical professions. The purpose of the study was to assess the awareness of laboratory diagnostician's profession among the inhabitants of Lublin. A group of 188 randomly selected people were anonymously surveyed by means of a questionnaire. The survey was a part of health prevention programs carried out in shopping malls in Lublin in the academic year 2014/2015.

K e y w o r d s: laboratory medicine, medical professions, laboratory diagnostician's profession, public awareness

INTRODUCTION

Nowadays public awareness of medical profession is very important to health care. Almost all medical professions are interdisciplinary and medical specialists face a great responsibility.

Medical professions play a very important role in the society because every decision and action of medical service providers is of utmost importance to health, and in many cases to lives of patients. Appropriate education, preparation, consistency, professional independence, teamwork and professionalism play a very important role not only in the work of a physician, but also other health

professionals, such as nurses, midwives, pharmacists, or laboratory diagnosticians [1].

A degree in Medical Analytics or Medical Laboratory is a very recent one but it represents a rapidly developing branch in the medical industry. Continuous development in the field of medical analytics, and new research methods it employs results from the cooperation of many sciences such as medicine, biology, chemistry, biotechnology, and clinical genetics.

Proper education of laboratory diagnosticians at medical universities and post-graduate training or specialization courses allow improvement of the qualifications and continuous growth of highly qualified staff. In 2008 the report of the State Accreditation Committee confirmed high level of education and qualifications of the graduates of Medical Analytics Division [2].

Great responsibility for the results that diagnosticians bear, correct interpretation, reliability, principles of professional ethics, professional confidentiality, as well as knowledge and experience are the requirements that a person who takes up a job in a medical laboratory must meet. Thanks to these standards, the profession of a laboratory diagnostician has been recognized as a profession of public trust. Aside physicians, laboratory diagnosticians participate in the process of accurate diagnosis, treatment, and monitoring of treatment course which is very important and necessary for

the early detection of pathological changes before clinical symptoms have appeared [3].

The aforementioned high quality of education during studies, 13 specialization courses, and the establishment of laboratory diagnostician profession in healthcare contribute to ongoing recognition of the knowledge and skills of laboratory diagnosticians within the medical community, and in the field of health promotion and prophylaxis.

However, little contact with the patient limited to taking samples or releasing the results and lack of diagnostician's presence in the case of hospitalized patients makes this profession not as popular in the society as other medical professions are. According to a survey carried out by CBOS, little public knowledge about the education and work of a diagnostician, and dynamic development of the profession observed in the last few years gave lab diagnosticians 11th rank among the group of professions of public trust [4].

The purpose of the following article is to assess the awareness of laboratory diagnostician's profession among the inhabitants of Lublin.

MATERIAL AND METHODS

A study "Public awareness of laboratory diagnostician's profession" was carried out within the framework of activities by the Student Scientific Society of Medical Genetics, the Department of Clinical Genetics, Medical University of Lublin. In total a group of 188 randomly selected people were anonymously surveyed. The survey was a part of preventive programs carried out in shopping malls in Lublin in the academic year 2014/2015. The aim was to examine the awareness of Lublin inhabitants of the profession of a laboratory diagnostician. The questionnaire contained 5 socio-demographic items including gender, age, place of residence, education and occupation, and 16 principal questions that assess the level of knowledge on the profession of a laboratory diagnostician, e.g. required education to do the job, and opinions concerning diagnostician's role in diagnosing disease.

RESULTS

The study group comprised 188 participants, the majority were women (62%, N=117). Most of the respondents were people living in the city of >50 thousand inhabitants (51%, N=95). The largest age group was represented by people aged 18-25 years (42%, N=78). Half of the respondents (50%,

N=93) had higher education. The respondents represented various professional groups, the majority were not involved in health care (Tab. 1).

Table 1. Characteristics of the study group.

Tested characteristics		%	N
Sex	Women	62	117
	Men	38	71
Age	18-25	42	78
	26-35	22	41
	36-55	23	44
	56+	13	25
Place of residence	Rural areas	23	44
	Town (<50 thousand inhabitants)	26	49
	Town (> 50 thousand inhabitants)	51	95
Education	Basic education	4	5
	Secondary education	23	43
	Vocational training	5	10
	Higher education	50	93
	Pupil	3	8
	Student	15	29

The question "Who can perform laboratory tests?" revealed that the majority of respondents indicated a laboratory diagnostician (73%, N=161), and 140 out of 161 people marked the laboratory diagnostician as the only profession licensed to do laboratory tests (Fig. 1).

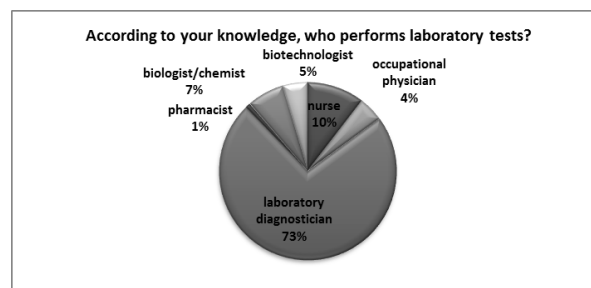


Fig. 1. The percentage (%) distribution of answers to the question: "Who, according to your knowledge, can perform laboratory tests?"

According to 78% (N=146) respondents, a person needs higher education to do the job of a laboratory diagnostician. More than half of the respondents (57%, N=108) said that only graduates of medical universities should work in the laboratory. This question provided additional chance to justify the respondent's answer. Most often the respondents mentioned the fact that at medical universities students learn the basics of medicine necessary to do the job and gain theoretical and practical knowledge allowing them to work professionally (Tab. 2.).

Table 2. Examples of responses to the open question: "Do you think that only graduates of medical universities should work in medical laboratory?"

they are properly trained to carry out research, they have extensive knowledge
they have more experience and adequate preparation
compulsory knowledge of medicine
they are more competent
the acquisition of theoretical knowledge and practice
they have appropriate qualifications, knowledge and skills, and this is a responsible job
because the knowledge and awareness about medicine obtained by students holding medical degrees is much more appropriate to work in the medical environment

As many as 146 people (78%) knew that there is a university degree for the profession of a laboratory diagnostician, 64% (N=120) respondents stated that in Poland a degree in Medical Analytics exists, and 36% (N=68) admitted that they never heard of such a degree. Despite a relatively high public awareness of the profession of a laboratory diagnostician, many people did not know what degree allowed working in a medical diagnostic laboratory. The answers to the question "What degree authorizes to work as a laboratory diagnostician?" revealed that 48%, N=146 respondents knew it was a degree in Medical Analytics, and 100 out of 146 respondents who marked Medical Analytics indicated that it was the only degree giving access to the profession. Other (according to the respondents) graduates who can work as laboratory diagnosticians were graduates of medical faculties (17%), biotechnology (11%) and chemistry (9%) (Fig. 2).

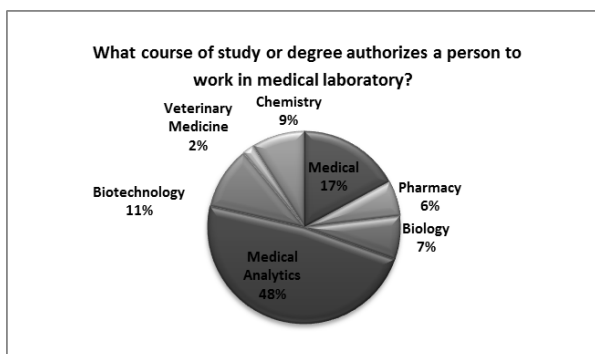


Fig. 2. The percentage (%) distribution of answers to the question: „What course of study or degree authorizes a person to work in a medical laboratory?"

The question concerning type of school offering educational program for laboratory diagnosticians revealed that nearly half (48%) of the respondents pointed to medical universities, while 32% respondents suggested a vocational medical college. Other educational institutions obtained less than 25% answers (Fig. 3).

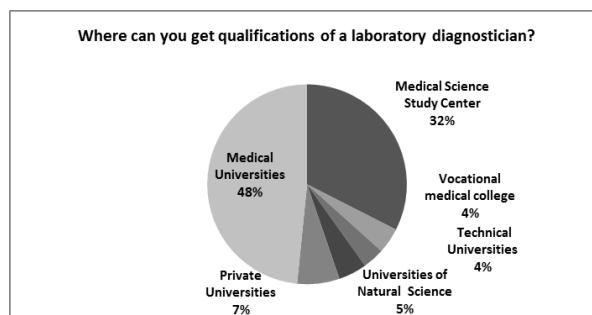


Fig. 3. The percentage (%) distribution of answers to the question: "Where can you get qualifications of a laboratory diagnostician?"

Choosing a place to work after the completion of the degree in Medical Analytics the respondents mentioned medical laboratory (36%), research institutes (21%) and SANEPID (State Sanitary Inspection) (16%). The respondents stated that graduates can also work in clinics (13%), mortuaries (6%), pharmacies, and nursing homes (4%). (Fig. 4).

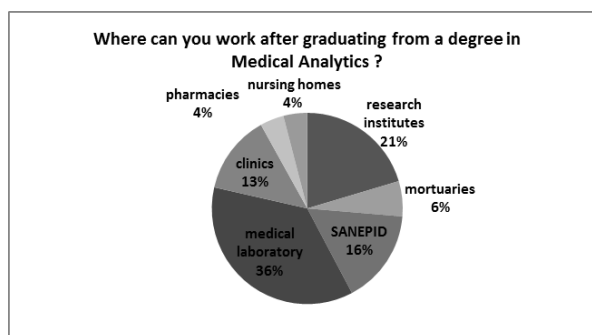


Fig. 4. The percentage (%) distribution of answers to the question: "Where can you work after graduating from a degree in Medical Analytics?"

The survey showed that the overwhelming majority of respondents were aware of the laboratory diagnostician's profession (77%, N=145), while 23% (N=43) never heard of it (Fig. 5).

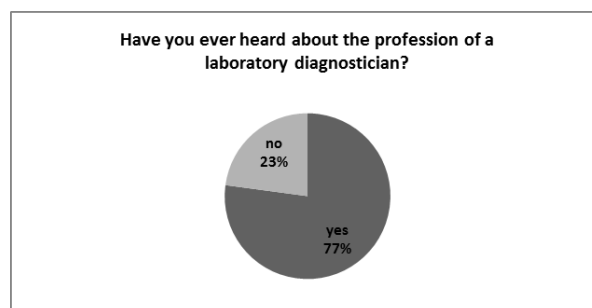


Fig. 5. The percentage (%) distribution of answers to the question: „Have you ever heard about the profession of a laboratory diagnostician?"

The respondents with higher education, people living in a city of > 50 thousand inhabitants, and

young people aged 18-25 years demonstrated the greatest awareness about the profession (Fig. 6).

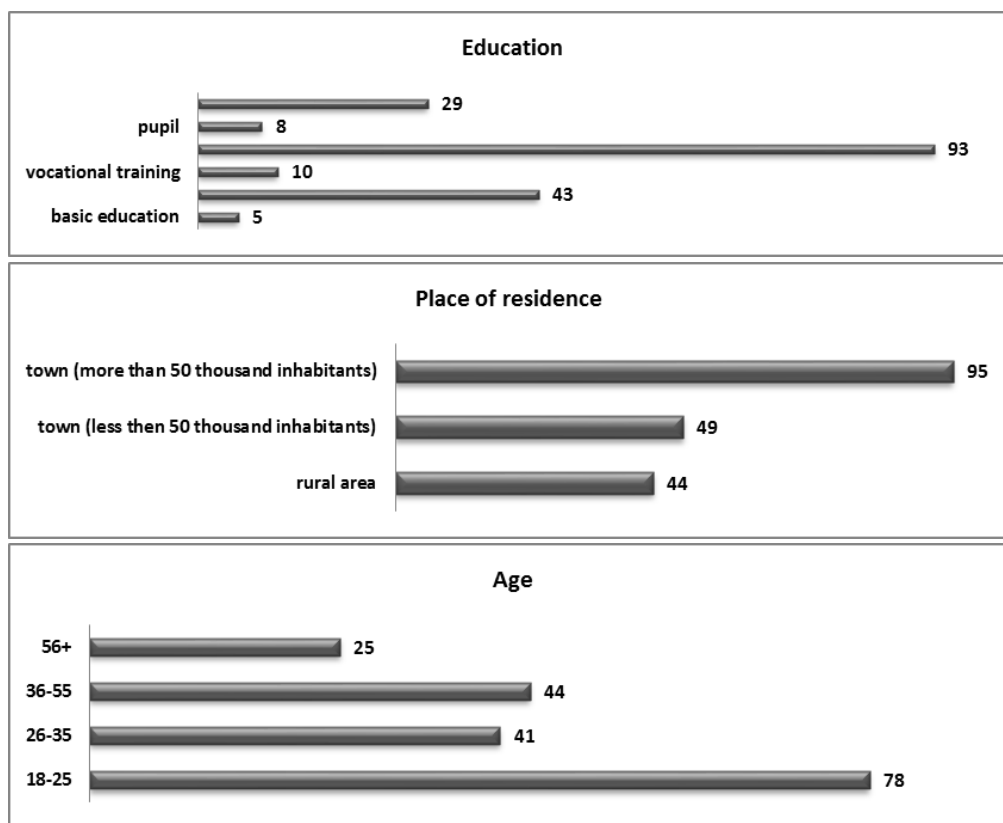


Fig. 6. Awareness of the profession of a laboratory diagnostician with reference to respondent's age, profession and place of residence

An overwhelming number of respondents (98%, N=184) thought that the results of laboratory tests have a significant impact on the diagnosis made by a physician. The majority of respondents (95%, N=178) stated that a physician should closely cooperate with a laboratory diagnostician during diagnostic process. In contrast, only few respondents (5%, N=10) believed that this is not essential (Fig. 7).

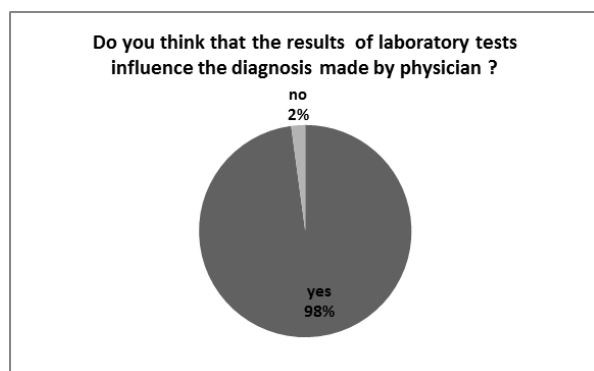


Figure 7. The percentage (%) distribution of answers to the question: „Do you think that the results of laboratory tests influence the diagnosis made by a physician?”

According to 94% (N=176) of the respondents the results issued by the laboratory staff are reliable, only 12 persons (6%) did not trust these results. Almost all respondents (98%, N=185) agreed that the job of a laboratory diagnostician is a responsible one (Fig. 8).

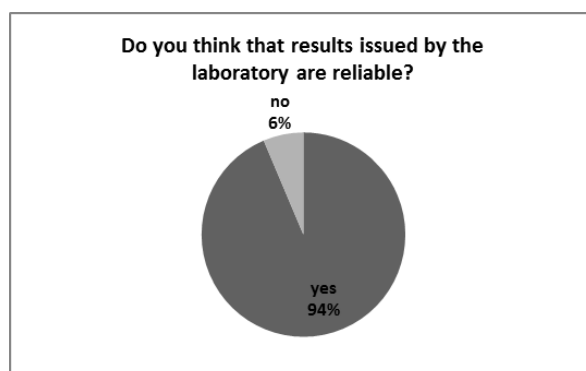


Fig. 8. The percentage (%) distribution of answers to the question: „Do you think that results issued by the laboratory are reliable?”

The majority (84%, N=157) of respondents declared that the profession of a laboratory diagnostician is a profession of public trust, while only 16 % (N = 31) presented a different opinion. More than half (60%, N=112) of respondents believed that a laboratory diagnostician is a competent person to advice on health (Fig. 9).

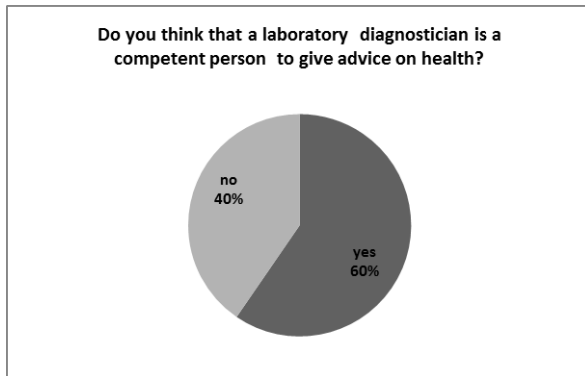


Fig. 9. The percentage (%) distribution of answers to the question: „Do you think that a laboratory diagnostician is a competent person to give advice on health?”

The respondents were also asked whether medical equipment was able to replace human work. As many as 78% (N =146) of respondents said that the human factor was irreplaceable, while 22% (N=42) of respondents believed that it would be possible in the future (Fig. 10).

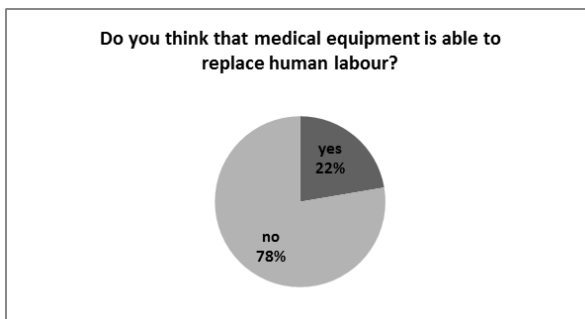


Fig. 10. The percentage (%) distribution of answers to the question: „Do you think that medical equipment is able to replace human labour?”

DISCUSSION

The respondents who participated in the survey represented various professions rarely associated with medical industry; they also represented different levels of education, age groups, and different places of residence (rural and urban areas).

The appearance of laboratory diagnostician's profession in the health care structure has created a group of competent medical laboratory workers, valuable members of a therapeutic team. The doctor-diagnostician cooperation has allowed faster and more accurate diagnosis.

Moreover, the respondents (95%) emphasized the importance of close doctor-diagnostician cooperation. The results of the study found that 98% of the respondents appreciated the participation of a diagnostician in the process of making a diagnosis. Appropriate medical education and broad experience have made diagnostician's job a profession of public trust [3].

Much research was carried out on public perception of auxiliary medical personnel.

Studies on the perception of nursing profession carried out among patients and doctors [5] found that nurses perceive their own profession as less valued in society in comparison to the other two surveyed groups. Public perception of nursing profession is lower compared to the role of doctors.

Another survey carried out among the inhabitants of Zachodniopomorskie Province [6] found the profession of a physiotherapist was underestimated, too. However, recent legal regulations about physiotherapist's profession will certainly increase the importance of that profession as a medical care provider.

Satisfactory is the fact that 73% of the respondents knew that a diagnostician performs laboratory tests. This may result from the presence of a diagnostician's stamp on the test results where details are shown.

There was much confusion among the respondents concerning the degree that entitles to work in medical diagnostic laboratory. The reason for this phenomenon may be the fact that in addition to master's degree in medical analytics, there is a possibility of doing postgraduate degrees for the representatives of other sciences, like medicine, pharmacy, biology, biotechnology, veterinary medicine, or chemistry, i.e. a two-year postgraduate degree in Medical Analytics. More than half of the respondents felt that graduates of medical universities are better qualified to work in a medical laboratory, and are better prepared to work in medical environment. Despite the fact that 78% respondents believed that a university degree is necessary to do diagnostician's job, still 32% mentioned a vocational medical college where one can get diagnostic qualifications.

As far as potential workplace for graduates of Medical Analytics is concerned, the respondents indicated mainly medical diagnostic laboratories, scientific institutes and SANEPID (State Sanitary Inspection).

About 84% of respondents agreed that the profession of a laboratory diagnostician is among the professions of public trust. According to the data of a nationwide survey on professions of public trust published by the Research International Pentor only 29% of respondents believe that laboratory diagnosticians enjoy the status of the profession of public trust. In Lublin there is a strong trust in the reliability of test results, as indicated by the 94% positive responses. Almost all respondents stated that profession of a laboratory diagnostician is responsible and important, and cannot be replaced by medical diagnostic equipment. Despite continuous technological advances and more precise diagnostic tools, human factor is an indispensable element in the process of making a diagnosis. So laboratory diagnosticians who provide test results are an important link in the process of making a diagnosis [7].

A study conducted at Polish medical universities among the students of Medical Analytics/Laboratory Medicine into their knowledge on public perception of laboratory diagnostician's profession revealed that the majority of the surveyed students found low public awareness of their profession. The results of the survey conducted in Lublin allow to conclude that the respondents are aware of the important role laboratory diagnosticians play. This may be partially due to the presence of the Medical University offering a degree in Medical Analytics, and partly due to students' active participation in health promotion programs addressed at general population [8].

CONCLUSIONS

Students of Medical Analytics/Laboratory Medicine found low public awareness of their profession.

Public awareness of the profession of a laboratory diagnostician among the randomly selected respondents in Lublin (not students of Medical Analytics/Laboratory Medicine) is satisfactory.

In order to improve public awareness, the public should be informed about the profession and the role of laboratory diagnosticians. Some health promotion actions should be implemented on a larger scale.

There is high trust of the public in the diagnostician's profession and in the results of medical tests.

A laboratory diagnostician's work is an integral part of the diagnostic process.

A nationwide study should be conducted to present a complete picture of the level of awareness of laboratory diagnostician's profession among Polish society.

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Correspondence:

Janusz Kocki, Department of Clinical Genetics, Medical University of Lublin, 11 Radziwillowska Str., 20-080 Lublin, Poland. E-mail: janusz.kocki@umlub.pl, Tel.: +48 81 4486110, fax: +48 81 4486110.