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NAVIGATION LITERACY OF PRIMARY HEALTH CARE PERSONNEL (USING THE EXAMPLE OF THE HEADS OF MEDICAL AND OBSTETRIC CENTERS IN ORENBURG REGION)

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НАВИГАЦИОННАЯ ГРАМОТНОСТЬ МЕДИЦИНСКИХ РАБОТНИКОВ ПЕРВИЧНОГО ЗВЕНА ЗДРАВООХРАНЕНИЯ (НА ПРИМЕРЕ ЗАВЕДУЮЩИХ ФЕЛЬДШЕРСКО-АКУШЕРСКИМИ ПУНКТАМИ ОРЕНБУРГСКОЙ ОБЛАСТИ)

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Objective. To assess navigation literacy of primary health care personnel (using the example of the heads of medical and obstetric centers in Orenburg region).

Materials and methods. Navigation literacy of primary health care personnel was assessed among all heads of medical and obstetric centers in Orenburg region ($n = 58$). For this purpose, a single-stage continuous online survey was conducted using a combined questionnaire developed by the Central Research Institute for Healthcare Organization and Informatization of the Ministry of Health of the Russian Federation.

Results. The level of navigation literacy among the heads of the medical and obstetric centers of Orenburg region in 65.7 % of cases was excellent and sufficient. In the list of navigation skills, the heads of the medical and obstetric centers noted difficulties in the implementation of: issues of medical insurance (48.3 %), legal aspects of medical care and protection of patients' rights (27.5-48.3 %), healthcare reform (36.2 %). It was found out that from 63.7 % to 91.4 % of the heads of the medical and obstetric centers are aware of the ongoing state measures in the field of public health. The majority of the respondents (60.0 %) noted that they search for necessary information for professional purposes using digital tools. However, every third respondent (32.7 %) mentioned the difficulties in finding it on legislative issues, interpreting the quality and safety of food products according to their product labeling (27.6 %), solving problems related to mental health and well-being (18.9 %). These data demonstrate the need to improve navigation literacy of medical and obstetric centers managers in the digital environment.

Conclusions. The modern multilevel and multicomponent healthcare system is associated with the need to improve the navigation literacy of medical personnel. The data obtained determined the main directions for improving navigation literacy of the heads of medical and obstetric centers.

Keywords. Navigation literacy, primary healthcare, heads of the medical and obstetric centers.

Цель. Оценить навигационную грамотность медицинских работников первичного звена здравоохранения (на примере заведующих фельдшерско-акушерскими пунктами Оренбургской области)

Материалы и методы. Навигационная грамотность медицинских работников первичного звена здравоохранения оценена среди всех заведующих фельдшерско-акушерскими пунктами Оренбургской области ($n = 58$). Для этого был проведен одномоментный сплошной онлайн-опрос по комбинированному опроснику, разработанному Центральным научно-исследовательским институтом организации и информатизации здравоохранения Министерства здравоохранения Российской Федерации.

Результаты. Уровень навигационной грамотности у заведующих фельдшерско-акушерскими пунктами Оренбургской области в 65,7 % случаях был отличным и достаточным. Трудности в реализации навигационных навыков заведующие фельдшерско-акушерскими пунктами испытывали в сфере медицинского страхования (48,3 %), правовых аспектов оказания медицинской помощи, защиты прав пациентов (27,5–48,3 %), реформирования здравоохранения (36,2 %). Установлено, что от 63,7 до 91,4 % заведующих фельдшерско-акушерскими пунктами осведомлены о проводимых государственных мерах в сфере общественного здоровья. Большинство заведующих фельдшерско-акушерскими пунктами – это 60,0 % респондентов – отметили, что поиск необходимой информации в профессиональных целях осуществляют с помощью цифровых инструментов. Однако каждый третий (32,7 %) респондент отметил трудности её поиска по вопросам законодательства, интерпретации качества и безопасности продуктов питания согласно их товарной маркировке (27,6 %), решения проблем, связанных с психическим здоровьем и благополучием (18,9 %), что диктует необходимость совершенствования навигационной грамотности заведующих фельдшерско-акушерскими пунктами в цифровой среде.

Выводы. Современная многоуровневая и многокомпонентная система здравоохранения сопряжена с необходимостью повышения навигационной грамотности медицинских работников. Полученные данные определили основные направления совершенствования навигационной грамотности заведующих фельдшерско-акушерскими пунктами.

Ключевые слова. Навигационная грамотность, первичное звено здравоохранения, заведующий фельдшерско-акушерским пунктом.

INTRODUCTION

In the last decade, there has been an active transformation of the healthcare system [1–5], which is currently characterized by a multi-component and multi-level architecture¹ [6]. Particular attention is paid to improving and increasing the quality and accessibility of primary health care (PHC) [7; 8]. In this regard, for regions with a high proportion of rural population, for example in the Orenburg region, it is especially important to provide high-quality primary medical and health care at feldsher-obstetric stations (FOS) [9]. This is due to the fact that the organization of the work of the FAS and the level of work descriptors of paramedics largely determine the quality of primary health care in rural areas [10; 11]. At the same time, taking into account the arsenal of all regulated tasks of the FAS², the presence in the recommended staff of the FAS from among medical workers with secondary medical education of only the head of the FAS, the work function of the head of the FAS is not limited only to the management of a structural unit in organizations providing primary pre-medical medical care to the population³, but also expands to the direct implementation of all areas of providing primary health care to the rural population. As a result, it is important for the head of the

FAS not only to be able to directly provide primary health care at the request of the population, but also to be able to organize it. In order to make adequate decisions regarding the entry point into the patient's healthcare system, taking into account the required type and form of medical care [12; 13], the head of the FAS must have a sufficient level of navigational literacy in healthcare and be familiar with the current measures of state policy in the field of public health. As is known, the navigational literacy of the population itself is in most cases low [14]. As noted by L. Giese et al. [15], effective use of the healthcare system and navigation within it requires a special form of comprehensive health literacy – navigational literacy, that is, the ability to process information to successfully navigate the healthcare system and find the right help at the right time [16; 17]. In this regard, it is currently becoming relevant to study the navigation literacy of not only the population itself, but also health workers providing primary medical and social care in regions with a high proportion of rural population, in order to improve the efficiency of the health care system.

MATERIALS AND METHODS

An assessment of the navigation literacy of primary health care workers and the level of awareness of the already implemented measures of state policy in the field of public health was conducted among all heads of feldsher-obstetric stations in the Orenburg region ($n = 58$). For this purpose, a one-time continuous online survey was

¹ Schaeffer D, Hurrelmann K, Bauer U, Kolpatzik K, Altiner A, Dierks M, Ewers M, Horn A, Jordan S, Kickbusch I, Klapper B, Pelikan J.M., Rosenbrock R, Schmidt-Kaehler S, Weishaar H, Woopen C. National Action Plan Health Literacy. Promoting health literacy in Germany. 2018, available at: <https://api.semanticscholar.org/CorpusID:191667984>.

carried out using a combined questionnaire developed by the Central Research Institute of Occupational Health and Social Development [18].

The navigational literacy in health issues (NL) of the heads of FAS was assessed by calculating the navigational literacy index, the formation of which is based on the results of the answers to a separate block of questions [19] according to the formula:

$$I_{\text{ngs}} = \frac{\text{Number of answers "simple"/ "very simple" of the question pool}}{\text{Number of reliable responses}}.$$

The final result of the navigation literacy index ranged from 0 (low level) to 100 points (high level). According to the European methodology for grading the obtained index results [20], each navigation literacy index was interpreted depending on the range of values it fell within. The problematic level of the oil-and-gas pool index was established in the case of its values from 50.0 to 66.6 points. If the oil-and-gas pool index values were less than 50 points, the level was considered insufficient. The obtained results of the navigation literacy indices were compared with the all-Russian data obtained during a survey among 2627 respondents over 18 years old, whose average age was 42 years [18]. The level of statistical significance of differences between the compared groups was determined using the χ^2 Pearson criterion. Differences were considered statistically significant at $p \leq 0.05$. All calculations of statistical indicators were performed in the Statistica 10.0 program.

In this study, 58 Heads of FAS of the Orenburg region over 18 years of age took part in the survey; the average age of respondents was 49.6 ± 1.37 years. Most of the surveyed Heads of FAS (75.9 %) lived with their official spouse in a marriage and had children over 15 years of age (63.9 %) (Table 1). The majority of respondents belonged to the social group passive (50.0 %), were social-safe (84.5 %), had high social integration (53.4 %), and also not in a difficult financial situation (65.5 %) (Table 2).

At the next stage, in order to detail the leading factors in the formation of the navigation literacy index, an assessment was made of the respondents' answers to each question in the block. Data for each question and the answers chosen by the majority of respondents were presented in the form of Me [Q25; Q75]. For this purpose, the respondents' answers to each question were interpreted into a point score (Table 3). In addition, for each question, the proportion of respondents from all those who indicated the answer "Difficult" and / or "Very difficult" was calculated. To do this, the respondents' answers to each question were interpreted into a point score (Table 3). In addition, for each question, the proportion of respondents from all those who indicated the answer "Difficult" and / or "Very difficult" was calculated.

RESULTS AND DISCUSSION

It was found that the average navigation literacy of FAS Heads corresponded to a sufficient level (75.8 points), which is 1.6 times

Table 1

Socio-demographic characteristics of respondents

Parameter	<i>n</i>	%
<i>Gender:</i>		
female	58	100.0
male	0	0.0
<i>Marital status:</i>		
I live with my official spouse in the same household	44	75.9
single / I live alone	4	17.2
single not married / I live in a civil marriage in one household	10	6.9
In an official / in a civil marriage, but live separately	0	0.0
<i>Having children:</i>		
No children	2	3.4
Less than 15 years	13	22.4
Less than 15 and more than 15 years	6	10.3
More than 15 years	37	63.9
<i>Level of education:</i>		
Secondary special	58	100.0

Table 2

Social activity of respondents

Question	Social Parameter	<i>n</i>	%
<i>Social activity</i>			
How many close people do you have that you can count on if you have serious personal problems?	Social passive	29	50.0
	Medium active	11	18.9
	Social active	18	31.1
<i>Social safety</i>			
How easy is it for you to get help from your neighbours if you need it?	Socially safe	49	84.5
	Socially unsafe	9	15.5
<i>Social integrity</i>			
How much attention / interest do people show in what you do (e.g. work / hobbies)	Much enough	31	53.4
	Average	13	22.4
	Little	14	24.2
<i>Financial position</i>			
How easy or difficult is it for you to pay your bills at the end of the month?	Not heavy	38	65.5
	Heavy	20	34.5

Table 3

Interpretation of scores of the level of proficiency of fas heads in navigation literacy in the field of healthcare

Parameter	Number of Scores			
	1	2	3	4
Interpretation (level of proficiency)	Very difficult	Difficult	Light	Very light

**Proportion of respondents with different levels of navigation literacy
in health issues, %**

Level Ings	Observation Group	
	FAS Heads	All-Russian Population Survey Data
Excellent	55.2	26.8
Sufficient	15.5	10.8
Problematic	8.7	12.6
Insufficient	20.6	49.6

higher compared to the all-Russian data (48.8 points). At the same time, the majority of respondents had an excellent and sufficient level of Ings (70.7 %). Nevertheless, 20.6 % of respondents had an insufficient level of Ings (Table 4).

Taking into account the age of the respondents, it was found that the lowest Ings was among people aged 55–64 years (71.5 points), and the highest was among people aged 25–34 years (90.2 points). Moreover, in all age categories Ings Head of paramedics was 1.5–1.7 times higher compared to all-Russian data and 1.4–1.8 times higher compared to the data of the Volga Federal District population survey (Fig. 1).

According to the data presented in Fig. 2, it is evident that the majority of FAS Heads chose the answer “Easy” for 9 questions out of 12, as evidenced by the calculated median, Q25 and Q75, the value of which was “3”. However, when calculating the proportion of respondents who answered the questions with the answers “Difficult” and / or “Very difficult”, it is noteworthy that up to 48.3 % of respondents experienced difficulties associated with forecasting the costs of medical services in relation to their compensation under the

compulsory medical insurance policy. Every third Head of FAS had difficulties interpreting changes in the provision of medical care associated with changes in the legal regulation of the healthcare sector. 27.5 % of respondents had difficulty finding information on legal issues regulating relationships between patients and healthcare providers. For every fifth head of FAS, it is difficult to conduct a preliminary assessment of the predicted satisfaction of patients with the planned medical service. Up to 22.4 % of respondents experienced difficulties in comprehensively understanding the functioning of the healthcare system. Every fifth head of FAS also indicated difficulties in finding funds and officials in the healthcare system who would allow them to clarify issues regarding the details of providing medical care (18.9 and 17.2 %).

Most Heads of FAS are aware of the actively implemented state policy in the area of prevention of chronic non-communicable diseases and risk factors for their development and progression (Fig. 3).

Probably, the measures implemented within the framework of the federal project to combat diabetes, aimed at training medical personnel from 2023, determined the

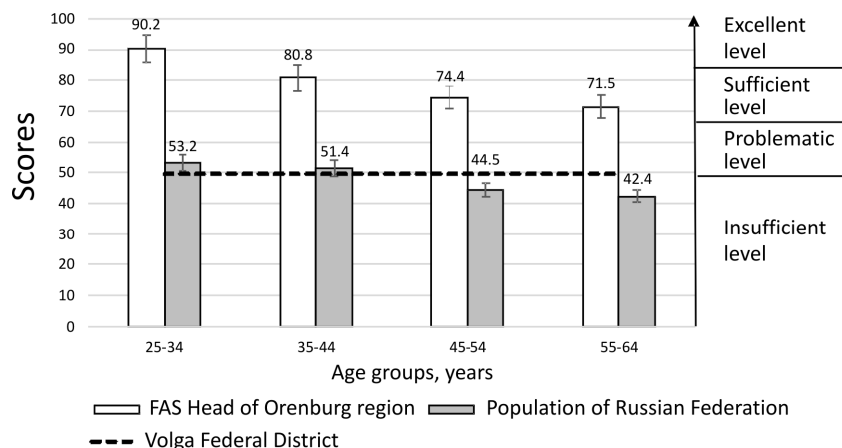


Fig. 1. Literacy index of health navigation taking into account age and territory of survey respondents

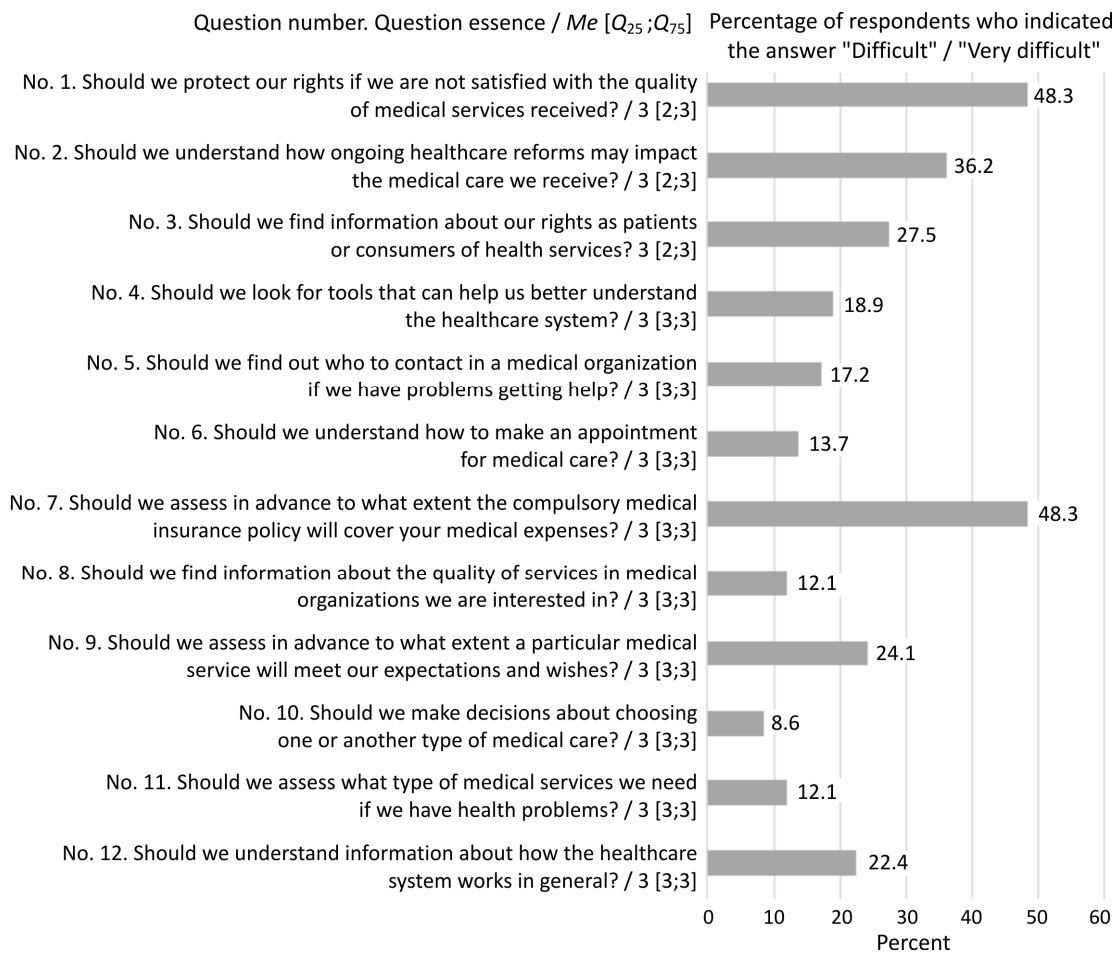


Fig. 2. Indicators of level of navigation skills in healthcare system of heads of FAS

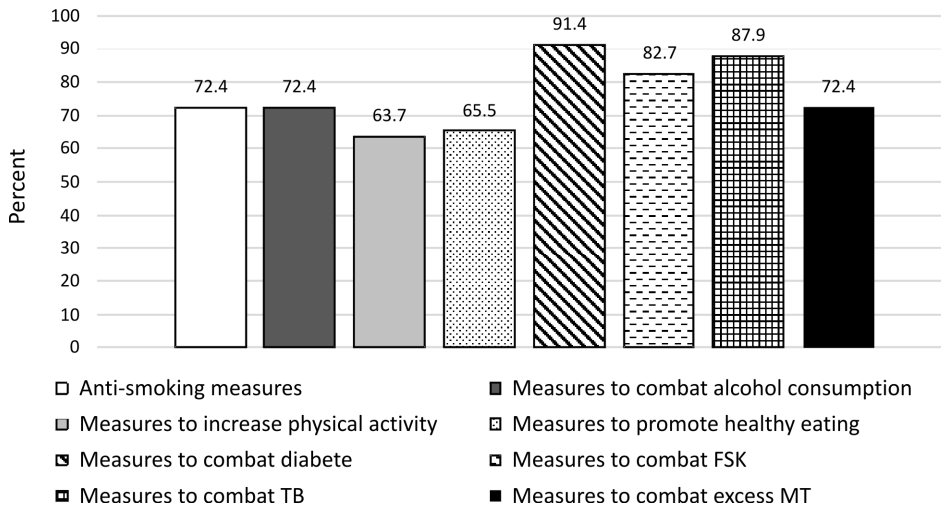


Fig. 3. Awareness of respondents about measures of state policy implemented in field of public health

highest proportion of Heads of FAS aware of measures to combat diabetes (91.4 %), compared with other measures of state policy. It is noteworthy that the minimum number of respondents aware of the implemented state policy measures was identified in the area of increasing physical activity (63.7 %), while it is known that this factor plays a leading role in preventing the development of chronic non-communicable diseases, and also significantly determines the patient's well-being and the course of an existing disease. Despite the fact that the majority of Heads of FAS are aware of the state policy measures in various areas, the fact that from 27.6 to 36.3 % of respondents had an insufficient level of awareness of the measures being implemented in the territory of the Russian Federation in the area of combating bad habits, physical inactivity, excess body weight, as well as in the area of popularizing healthy eating remains alarming.

It is known that most of the information about the implemented state policy

measures, as well as data on the implemented federal projects, are presented in sufficient detail on the official websites of the Ministry of Health, as well as on specialized portals. In the digital environment, information is systematically updated by developers of projects and reforms. In this regard, it is important that healthcare workers are aware of them. Along with official sources, there are many platforms in the digital environment that broadcast information that does not reflect modern scientific achievements, as well as government policy in the field of healthcare. It is also becoming relevant for health workers to be critical in assessing the information analyzed in the digital environment. It has been shown that up to 96.6 % of FAS Heads searched for information on medical topics and health. Moreover, when it was necessary to search for information on health issues, 60.1 % of FAS Heads used digital resources: the Internet, social networks, and every third (33.4 %) consulted with colleagues (Fig. 4).

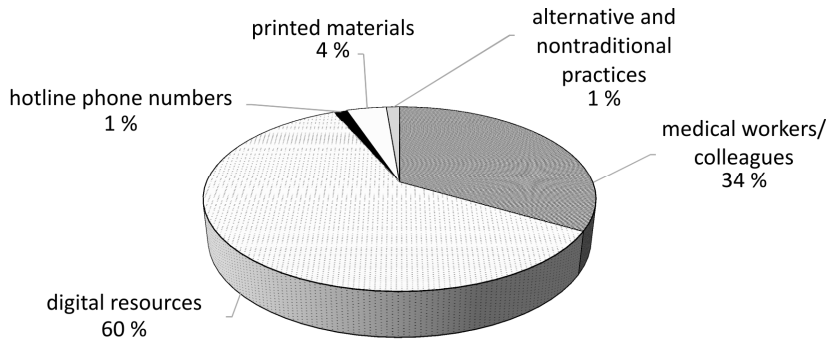


Fig. 4. Structure of respondents' answers about sources used to search for information on medical topics and health issues

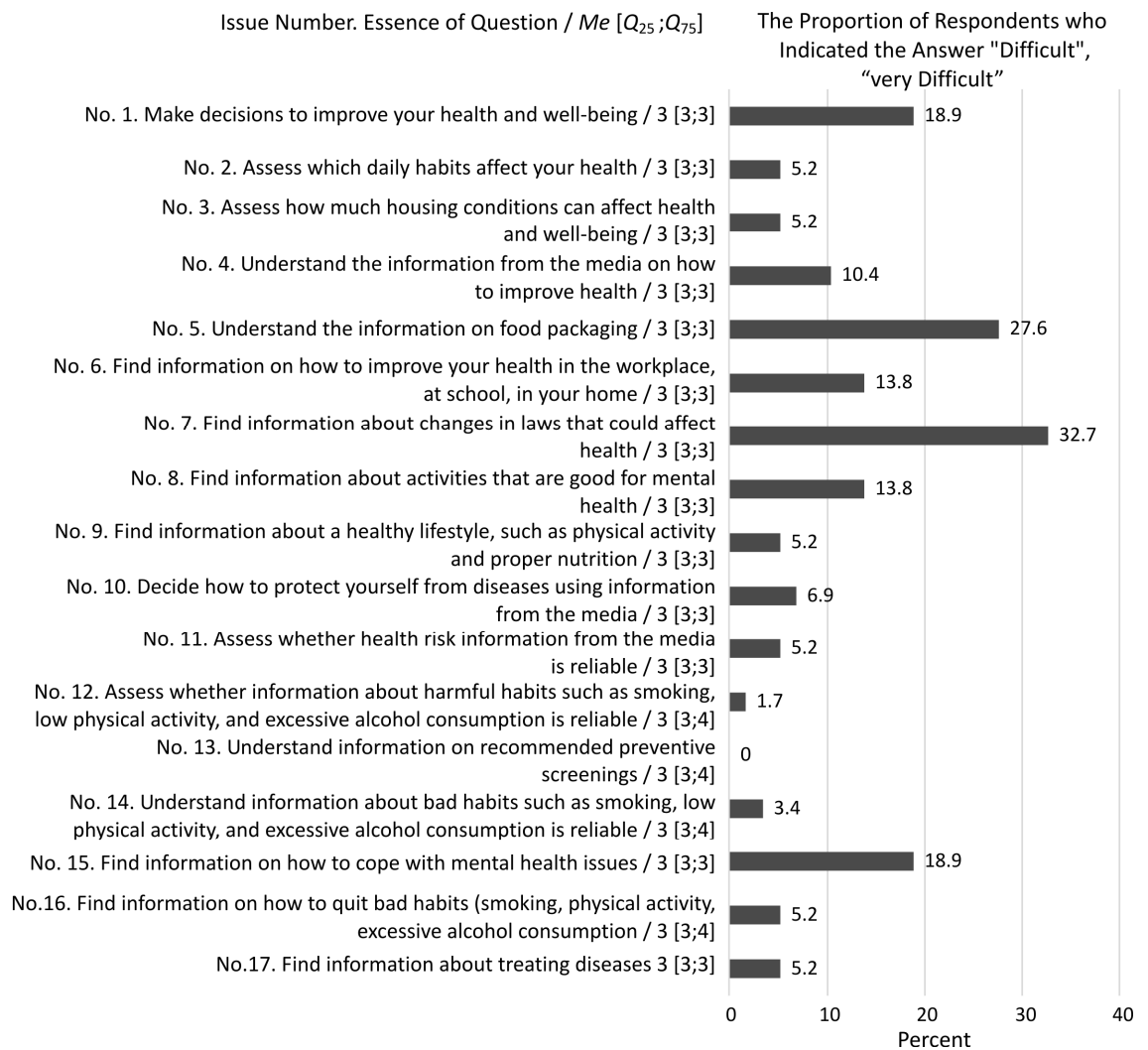


Fig. 5. Indicators of level of navigation skills in health care system of heads of FAS

It is shown that for the Heads of FAS it is easy and very easy to find, understand, evaluate and apply information on medical issues in the field of health, as evidenced by the data obtained from the respondents' answers (Fig. 5). At the same time, attention is drawn to the proportion of FAS Heads who noted difficulties in finding, understanding, evaluating and applying information on some medical issues in the field of health. Thus, every third respondent experienced difficulties in finding information about changes in the area of legislation regulating healthcare issues (32.7 %).

Between 13.8 and 18.9 % of respondents experienced difficulties in finding information on issues of regulating mental well-being and promoting health at their place of professional activity or study, respectively. For every third head of FAS, it was difficult or very difficult to understand the information placed on the packaging of food products (27.6 %), which requires the inclusion of hygiene topics on assessing the quality and safety of food products in advanced training programs. It is also necessary to pay attention to the fact that every fifth respondent finds it difficult and / or very difficult to make a decision on the implementation of measures aimed at health and well-being, which indicates an insufficient level of development of professional skills in this area.

CONCLUSIONS

1. The modern multi-level and multi-component health care system is associated with the need to improve the navigation literacy of health workers. Improving the

organization and provision of primary health care to the rural population is possible by increasing the level of navigation literacy of health workers of FAS as one of the supporting structures for the provision of primary health care to the population living in rural areas.

2. The level of navigation literacy among the Heads of FAS of the Orenburg region was excellent and sufficient in 65.7 % of cases, which is 1.8 times higher than the all-Russian data. The level of navigation literacy was maximum among FAS Heads aged 25–34 years (90.2 %) and minimum – among those aged 55–64 years (71.5 %).

3. Heads of FAS have been found to have difficulties in implementing navigation skills in the field of health insurance (48.3 %), legal aspects of providing medical care, protecting patients' rights (27.5–48.3 %), and healthcare reform (36.2 %).

4. Most Heads of FAS are aware of the state measures in the sphere of public health (63.7–91.4 %). At the same time, every third has an insufficient level of awareness regarding the implementation of state measures to combat bad habits, physical inactivity, excess body weight, and unhealthy diet, against the background of a high level of awareness regarding the fight against diabetes, tuberculosis, and diseases of the circulatory system.

5. The established fact of commitment to searching for information using digital resources (60.0 %) and the difficulty of searching using this method for information on a number of preventive issues, such as: changes in legislation regulating the work of the healthcare system (32.7 %), interpreta-

tion of the quality and safety of food products according to their product labeling (27.6 %), solving problems related to mental health and well-being (18.9 %), dictates the need to improve the navigation literacy of FAS Heads in the digital environment.

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Authors Contribution.

D.N. Begun, V.V. Bulychev, Ye.V. Bulycheva – concept and study design.

Ye.V. Bulycheva – data collection.

V.V. Bulychev – analysis and results interpretation.

Ye.L. Borschuk – literature review.

Ye.V. Bulycheva, D.N. Begun – manuscript preparation.

Ye.L. Borschuk – editing the manuscript.

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