ПСИХОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ВОСПРИЯТИЯ ПРОБЛЕМЫ ТУБЕРКУЛЕЗА ВРАЧАМИ ПЕРВИЧНОГО ЗВЕНА ЗДРАВООХРАНЕНИЯ

PSYCHOLOGICAL FEATURES OF PERCEPTION OF TUBERCULOSIS PROBLEM BY
PRIMARY CARE PHYSICIANS

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Аннотация:

Приоритет ранней диагностики и профилактики туберкулеза принадлежит врачам общей лечебной сети, но наблюдается негативная тенденция в вопросах его практической реализации. Все чаще приходится сталкиваться с явлениями блокирования или даже отторжения знаний по фтизиатрии врачами других специальностей. Проводя на кафедре фтизиатрии большую работу по подготовке и актуализации знаний по фтизиатрии у специалистов первичного звена здравоохранения, мы столкнулись именно с психологическими трудностями восприятия проблем туберкулеза. Целью исследования явилось изучение особенностей восприятия проблемы туберкулеза у врачей первичного звена здравоохранения и повышение эффективности мотивации по реализации противотуберкулезных мероприятий.

Проведено анкетирование 114 врачей общей лечебной сети до и после образовательной лекции по фтизиатрии с демонстрацией эпидситуации по туберкулезу на территории

Abstract:

The priority of early diagnosis and prevention of tuberculosis belongs to the general practitioners (GP), but there is a negative trend in its practical implementation. Increasingly, we have to deal with the phenomena of blocking or even rejection of knowledge on phthisiology by doctors of other specialties. We encounter psychological difficulties in the perception of tuberculosis during the large-scale work on the preparation and updating of knowledge of phthisiology by GP. The purpose of the research is to study the features of the perception of the problem of tuberculosis in GP, to increase the effectiveness of motivation for the implementation of anti-tuberculosis measures.

Questioning of 114 doctors of the general medical network before and after an educational lecture on phthisiology with demonstration of epidemiological situation on tuberculosis in the territory by method online of mapping and analysis of clinical situations is carried out. Are studied value judgment of

методом онлайн картографирования и разбором клинических ситуаций. Изучены субъективная оценка уровня знаний по вопросам фтизиатрии (самооценка) и результаты объективной оценки, корреляция субъективной оценки с объективными критериями знаний, эмоциональное отношение к туберкулезу в целом и применительно к своей личности. Составлены психологические образы восприятия проблемы туберкулеза врачами общей лечебной сети: «защитный блок» - «туберкулез где-то есть, но не может быть у меня» (64%), страх собственного заражения туберкулезом (30%), адекватное восприятие (6%). Уровень теоретических знаний у специалистов общей лечебной сети в разделе фтизиатрии недостаточен, у 58,8% врачей самооценка знаний по фтизиатрии завышена.

Психологические особенности неадекватного восприятия проблем фтизиатрии, низкий уровень знаний по фтизиатрии и преимущественно пассивная позиция врачей по получению новых знаний о профилактике и диагностике туберкулеза во многом объяснили сложившуюся ситуацию по недостаточной противотуберкулезной работе врачей первичного звена. Регулярная онлайн визуализация эпидситуации по туберкулезу, обсуждение клинических случаев повышало у врачей общей лечебной сети мотивацию проведения противотуберкулезных мероприятий.

Ключевые слова:

врачи общей лечебной сети,
психологическое восприятие туберкулеза,
фтизиатрическая настороженность.

level of knowledge of phthisiology questions (self-assessment) and results of objective assessment, correlation of value judgment with objective criteria of knowledge, the emotional relation to tuberculosis in general and in relation to the personality. Psychological images of perception of a problem of tuberculosis are made by doctors of the general medical network: "the protective block" – "tuberculosis somewhere is, but there cannot be at me" (64%), a fear of own infection with tuberculosis (30%), adequate perception (6%). Level of theoretical knowledge at specialists of the general medical network in the section of phthisiology is insufficient, at 58.8% of doctors the self-assessment of knowledge of phthisiology is overestimated.

Psychological features of inadequate perception of problems of phthisiology, low level of knowledge of phthisiology and mainly passive position of doctors on obtaining new knowledge of prevention and diagnostics of tuberculosis in many respects explain current situation on insufficient antitubercular work of GP. Regular online visualization of the tuberculosis epidemiological situation and discussion of clinical cases increase motivation of the general practitioners to carry out anti-tuberculosis measures.

Key words:

general practitioners, psychological
perception of tuberculosis, phthisiatric
alertness.

Relevance

More than a hundred years of work of the Soviet, Russian Phthisiology allowed to accumulate a huge experience of the organization of successful fight against tuberculosis. The phthisiological service has always performed organizational and methodological, controlling and mobilizing functions in relation to the primary health

care, in addition to the diagnostic and therapeutic process. The priority of early diagnosis and prevention of tuberculosis certainly belongs to the general practitioners (GP) [1-5]. Over time, this priority has not lost its importance, but there is a negative trend in its practical implementation. Increasingly, we have to deal with the phenomena of blocking or even rejection of knowledge on Phthisiology by doctors of other specialties. The need to increase alertness against tuberculosis, strengthening of anti-tuberculosis measures by GP, especially in the conditions of primary health care, is considered by many authors and is reflected in legal documents [6-9]. Early diagnosis of small forms of tuberculosis, rapid detection of bacillary patients, timely diagnosis of tuberculosis in patients with HIV infection by GP are key to reducing the burden of tuberculosis and to successful recovery of patients, because the epidemic chain of transmission is interrupted [10,11]. One of the fundamental moments in the implementation of phthisiological alertness of doctors of all specialties is the level of theoretical training in Phthisiology, while publications reflect the necessity and positive role of training seminars and lectures on the diagnosis of tuberculosis [6, 12-14]. We encounter psychological difficulties in the perception of tuberculosis during the large-scale work on the preparation and updating of knowledge of phthisiology by GP using all forms of training, including interactive one. These problems are not reflected in the literature.

The aim of the research

To study the features of the perception of the problem of tuberculosis in GP, to increase the effectiveness of motivation for the implementation of anti-tuberculosis measures.

Materials and methods

We used the survey method, in which 114 GP participated anonymously: pediatricians were made up the main part of this work – 95 (83.3%) doctors motivated to carry out active anti-tuberculosis work among the children's population, and 19 (16.7%) therapists. Women prevailed among GP – 107 (94%). The age of half of all doctors (50%) at the time of participation was more than 50 years. 38 (33.3%) of doctors had work experience of 30 years and more, 20-29 years old – 24 (21%), 10-19 – 27 (23.7%), 0-9 years old – 16 (14%) and 9 (8%) participants did not specify their work experience. The majority of doctors worked in the clinic – 86.8%, in hospitals – 8.6% and 4.6% of respondents did not indicate the place of work. The comparative assessment of the variability of responses did not show significant differences in the groups in respondents with different work experience ($p > 0.05$). The survey was conducted before (survey I – 10 questions) and after (survey II – 3 questions) educational lectures on Phthisiology in the framework of refresher courses for

pediatricians and therapists in the main specialty. Survey questions examined three main areas.

1. The subjective assessment of the level of knowledge on the issues of Phthisiology was studied – the survey participants were offered to evaluate themselves on a 10-point scale before and after the educational lecture. The maximum value was taken into account, when specifying border points, for example, 6-7 one. The criteria for the level of self-assessment of knowledge of respondents were established to objectify the data (Table. 1).

Table 1.

Gradation of levels of self-esteem of the respondents

Self-assessment scores	Interpretation
1-2	Low
3-4	below average
5-6	Average
7-8	above average
9-10	High

2. The correlation of the subjective level of knowledge on TB with the objective criteria of knowledge was studied. Objective assessment of knowledge was carried out by the number of correct/incorrect answers in theoretical questions that are directly relevant to anti-TB control activities of GP. Four questions are proposed (a total of eight correct answers): 1) true/false statement: “Does the contact with a patient with tuberculosis always lead to disease?”; 2) equality is true/is incorrect: vaccination of BCG-M = infection with mycobacteria of tuberculosis? 3) list conditions under which the successful person can get sick with tuberculosis (if the doctor offered 3-4 right terms – the answer was considered correct); 4) it is offered to choose measures of prevention and early diagnostics of tuberculosis at patients which they apply at implementation of the professional activity. Each of the chosen options was estimated as the right answer in the fourth question: a) I control regularity of passing of fluorography by adults and an immunodiagnosis at children; b) I get acquainted with lists of TB patients (on the site) and I carry in due time out control of inspection of persons in the center; c) I apply the legislative documents existing in phthisiology at the work; d) I always include tuberculosis in a differential row at difficulties in the diagnosis and I conduct necessary examination; e) I sent the patient for a consultation with a phthisiatrician. At interpretation of results adhered to the following criteria: more than three incorrect answers – the objective level of knowledge is low, three

incorrect answers – the level of knowledge is lower than an average, two – average, one – above an average, all answers are right – high standard of knowledge. In the comparative assessment of the variability of responses in respondents with different work experience, there were no significant differences in the groups, which allowed to consider the respondents as a single group of observations (Table 2).

Table 2.

**Variability of answers at respondents with different length of service
 (subjective and objective estimates)**

Criteria of level of knowledge	Length of service (years), n=114									
	abs. (%)									
	0-9 n=16 (14)		10-19 n=27 (23,7)		20-29 n=24 (21)		≥30 n=38 (33,3)		Did not specify an experience n=9 (8)	
	subjective	objective	subjective	objective	subjective	objective	subjective	objective	subjective	objective
Low	-	2 (1,7)	-	3 (2,6)	-	7 (6,1)	-	5 (4,4)	-	-
below average	2 (1,7)	5 (4,4)	2 (1,7)	6 (5,3)	2 (1,7)	3 (2,6)	2 (1,7)	10 (8,8)	-	5 (4,4)
Average	8 (7)	6 (5,3)	13 (11,4)	11 (9,6)	10 (8,8)	5 (4,4)	8 (7)	11 (9,6)	3 (2,6)	2 (1,7)
above average	5 (4,4)	3 (2,6)	9 (7,9)	7 (6,1)	11 (9,6)	9 (7,9)	18 (15,8)	9 (7,9)	6 (5,3)	2 (1,7)
High	-	-	3 (2,6)	-	-	-	4 (3,5)	2 (1,7)	-	-
Not to estimate	1 (0,9)	-	-	-	1 (0,9)	-	6 (5,3)	1 (0,9)	-	-
p	0,05									

3. The emotional relation of GP to tuberculosis as to a medical problem and in relation to the personality is investigated – in the I survey it is offered to estimate as a percentage the probability of the meeting with the TB patient at operating time and in life and to give answers to the following questions: Are you afraid “to catch” tuberculosis when you are training at department of phthisiology? (Possible answers “yes/no”); Are you afraid “to catch” tuberculosis during implementation of the professional activity? (possible answers “yes/no”).

The educational lecture on phthisiology for GP included results of scientific development on cartography of the centers of tuberculosis online along with traditional sections on epidemiology, diagnostics, differential diagnostics and prevention of tuberculosis. Demonstration in real time allowed to choose territories of “sites” of work of the doctors who are directly present at the lecture. The fragment of the map of the city with an unsuccessful situation on tuberculosis in adults in the absence of suffering from tuberculosis children and children with positive immunologic analysis is presented on Figure 1 [15].

Figure 1.

Fragment of the map of the city online: There are no suffering from tuberculosis adults children with a latent tuberculosis infection or suffering from tuberculosis children in the presence in the territory

Условные обозначения:

adult suffering from tuberculosis allocating mycobacteria of tuberculosis
adult suffering from tuberculosis not allocating mycobacteria of tuberculosis

Considered possible options for epidemic links, taking into account the characteristics of these sources of tuberculosis and the necessity to enhance anti-tuberculosis work primarily by GP, in the analysis of each site, unfavorable for tuberculosis. Demonstrative clinical cases revealing difficulties and errors of tuberculosis diagnostics, shortcomings of prevention with emphasis on specificity of work of the primary link of health care were analyzed. The motivation of doctors to improve knowledge on tuberculosis, their practical application, the feasibility and necessity of lectures on Phthiisology of this kind was assessed after the educational lecture.

Statistical data processing was carried out by means of the applied Microsoft Excel and NanoStat 1.10 software packages. The importance of differences between parameters was estimated by means of pair t-criterion of Student.

Results and Discussion

The following data were obtained in the study of self-assessment of knowledge of doctors of Phthysiology before the training lecture: 49 (43%) doctors estimated themselves on 7-8 points (above an average), 42 (36.8%) – delivered themselves 5-6 points (average level), 8 (7%) – less than 5 points chose option (level lower than an average) and 7 (6.2%) doctors were put by 9-10 points (high standard of knowledge). Significant growth in a subjective indicator of level of knowledge in gradation the high level of a self-assessment was observed after the educational lecture in 28 (24.6%) doctors, 45 (39.5%) doctors estimated themselves on 7-8 points, the average level of knowledge specified 23 (20.2%) doctor, lower than 5 points gave a mark to themselves only 3 (2.6%) doctors and 15 (13.1%) doctors did not want to estimate repeatedly the level of their knowledge (Figure 2).

Figure 2.

A self-assessment of knowledge of questions of phthysiology of GP within specialty before and after a lecture (pair t-criterion of Student = 6.748, p0.0001)

The assessment of objective level of knowledge of doctors is carried out on the basis of studying of answers to a number of theoretical questions on phthysiology within the chosen specialty. For example, in a question: “Is this equality right: vaccination of BCG-M = infection with mycobacteria of tuberculosis?” – 12 (10.5%) doctors did not cope with a task. It was difficult to list conditions under which the social and successful person can get sick with tuberculosis for the majority questioned (106/114, 93%). It was offered to participants of questioning to choose measures of prevention and early diagnostics of tuberculosis in patients which they apply at implementation of the professional activity (Table 3).

Table 3.

The choice of doctors for the prevention and early diagnosis of tuberculosis in patients

Options	Abs.	%
a) I control regularity of passing of FLG in adult and an immunodiagnosis in children	112	98,2
b) I get acquainted with lists of TB patients (on the site) and I carry in due time out control of inspection of persons in the center	79	69,3
c) I apply the legislative documents existing in phthisiology in the work	74	65
d) I always include tuberculosis in a differential row and I conduct necessary examination when I have difficulties in the diagnosis	85	74,6
e) I send to consultation to the phthisiatrician	65	57
f) the possible answer	1	0,9

It is established that GP carry out timely prevention and tuberculosis detection during the work by means of control of FLG of inspection and an immunodiagnosis, at the same time 30.7% of them does not know about existence on the site the centers of tuberculosis and actually does not take any actions for work with them. More than 35% interviewed do not use the legislative documents existing in phthisiology in the work, 25.4% of doctors did not face need of inclusion in a differential and diagnostic number of tuberculosis, and 43% consultation of the phthisiatrician was not required in spite of the fact that 78% of respondents have length of service more than 10 years.

40.3% of doctors had objectively “low” and “below an average” levels of knowledge (three and more mistakes), by results of a research (Table 4). This table shows general information of the self-assessment of knowledge of physicians in the TB before educational lectures for greater clarity. Correlation of subjective and objective levels of knowledge was carried out individually for each respondent.

Table 4.

**Results of objective and subjective estimates of level of knowledge
 of respondents (n=114)**

Level of knowledge	Objective assessment		Subjective assessment	
	abs.	%	abs.	%
Low	16	14	-	-
Below an average	30	26,3	8	7
Average	36	31,6	42	36,8
Above an average	31	27,2	49	43
High	1	0,9	7	6,2
Did not answer	-	-	8	7

The research of correlation of subjective and objective levels of knowledge showed that the self-assessment of knowledge of phthisiology is significantly overestimated in 67 (58.8%) doctors, is underestimated in 21 (18.4%) and corresponds in 26 (22.8%) doctors.

Questioned were divided into three groups at assessment of an emotional component:

1. The peculiar psychological “protective block” – “tuberculosis is somewhere, but I cannot have it” was observed in 73 (64%) doctors. This group included the doctors estimating risks of collision with the TB patient at work and/or in life less than 50% and have the objective level of knowledge from “low” to “average” inclusive.

2. The fear of own infection with tuberculosis is revealed in 34 (30%) doctors, 11 (32.4%) of them are afraid of tuberculosis irrespective of the location, i.e. and at department of phthisiology, and at work, 11 (32.4%) – only at department and 12 (35.2%) – only at work.

3. Adequate level of response to problems of tuberculosis is established in 7 doctors (6%) who estimated risks of collision with the TB patient at work / in life as 50/50% and more, and had the objective level of knowledge “above an average”.

90.3% of questioned noted increase in the vigilance concerning tuberculosis after listening of an educational lecture on phthisiology. It was noted that 25 (21.9%) of respondents do not need additional information about tuberculosis for their further professional activities, when evaluating the opinions of doctors about the motivation of increasing the level of knowledge on TB and the necessity of carrying out of lectures in Phthisiology of this kind (Table 5). The majority (81/114, 71%) of physicians chooses

the lecture as the main method of obtaining knowledge of TB.

Table 5.

Results of assessment of interest of doctors questions of phthysiology and need of illumination of problems of tuberculosis

After the lecture of ftiziopulmonologiya Options:	abs.	%
a) You received optimum level of knowledge for yourself, it is not required more for your activity	25	21,9
b) You were interested in tuberculosis problems, and you will attend similar lectures	81	71
c) You were interested in tuberculosis problems, and you will independently be engaged in studying of this subject	31	27,2
d) You think you've wasted your time, learned nothing new	0	0
e) did not answer	12	10,5

Conclusions

Inadequate perception of a problem of tuberculosis is revealed at 94% of GP. Existence in 64% of doctors of the peculiar psychological “protective block” – “tuberculosis is somewhere, but cannot have it” and, on the contrary, fear of own infection with tuberculosis (30%) generates prejudices, creates difficulties during the training and implementation of professional activity in the section of antituberculous care. Insufficient theoretical preparation in phthysiology questions in 40.3% of doctors which is combined with essential high self-esteem of knowledge that interferes with obtaining sufficient knowledge of phthysiology is revealed objectively. Psychological features of inadequate perception of problems of phthysiology, low level of knowledge of phthysiology and mainly passive position of doctors on obtaining new knowledge of prevention and diagnostics of tuberculosis in many respects explain current situation on insufficient antitubercular work of GP. Regular visualization and discussion of an epidemic situation on tuberculosis at the territory of service, clinical analyses with a theoretical reinforcement of knowledge allow GP to see results of own influence on the phthysiological course and promote increase in motivation of holding antitubercular

actions.

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