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The empirical research of the professional reliability of 550 doctors during the COVID-19 pandemic in Ukraine (March-June, 2020)

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Abstract

The purpose of the article. In the process of our empirical research, we had the aim to examine the level of professional reliability of doctors who performed their professional duties during the COVID-19 pandemic in Ukraine. We assumed that the higher the level of professional reliability was, the more effectively doctors will perform their own professional activities in unusual, extreme conditions of their professional activity. The research involved 550 doctors of Rivne Regional Hospital (Rivne, Ukraine). **Methods and methodical instrumentation of the research.** To solve the problem of our research, a set of methods was used, the choice and combination of which have been determined by the subject, the purpose and the objectives of this research: - theoretical methods – theoretical and methodological analysis of scientific sources and available according to the problem of our research psychological approaches: their systematization, classification, generalization, theoretical modeling to study the phenomenon of professional reliability of doctors who worked in difficult conditions of the COVID-19 pandemic in Ukraine; - empirical methods – the observation, the interview, a questionnaire, testing, the method of expert assessments, which have been used for a deeper, holistic research of the structure of professional reliability of doctors; psychological and pedagogical experiment in the form of the empirical studying of the formation of a structure of professional reliability of doctors. **The results of the research.** We proved, that for specialists of medical sphere of the activity with a high level of professional reliability there was a main characteristic: the ability to perform professional activities in special and extreme conditions, the formation of professional and moral culture of a doctor, the constant development of components of his/her professional competence, professional readiness and professional reflection, the ability to implement effective psychological and acmeological influences, the development of reflective culture, the formation of a harmonious "self-concept" in professional and managerial activities, the actualization of psychological mechanisms, conditions, factors and determinants of the person's professional development, etc. In our opinion, the professional reliability of a doctor is characterized by: a high level of stable productivity (or efficiency) of the professional activity; a high level of professional qualification and developed professional competence; optimal intensity of the professional activity; a high level of accuracy and reliability; a high level of organization of the professional activity; low indirectness (depending on purely external factors); creativity; the possibility of developing the subject of the professional activity and ensuring the actual professional growth; focus on achieving positive socially significant goals and results. **Conclusions.** We proved that bifurcation space of a professionally reliable Doctor includes: the ability to transfer professional experience; a high stable productivity of professional activity; the responsibility for the decisions having been made and their implementation; the ability to achieve own goals in any case; professional knowledge and the experience to be the director of some medical organization; the ability to act in critical situations and situations of cognitive dissonance; the ability to control the flow of doctors' professional activity; a high level of professional competence; the ability to make and clearly implement their own decisions. If these components of a professionally reliable Doctor are formed at a high level, the Doctor can perform his/her professional activity with a high degree of its productivity, in difficult pandemic conditions, in situations of stress and cognitive dissonance. The latter emphasizes on the difference between the capabilities and the style of internal activity of Doctors who provide their activity in a period of COVID-19 pandemic: the ability to achieve meanings until the moment of meaningful acceptance of surrounding us reality and move on – to expand the meaning of the symbolic space (which is the COVID-19 pandemic) and, according to this, to show the measures of our own meaningful space (human life in a pandemic). Such conditions significantly encourage doctors to improve themselves as real professionals, to update their own professional reliability.

Key words: *professional reliability doctors, COVID-19, pandemic in Ukraine,*

Introduction

In the process of organizing the empirical research during the COVID-19 pandemic in Ukraine (March-June, 2020), we diagnosed spontaneous forms of deformations of the professional consciousness of doctors under the influence of extremely changed pandemic situation all around the world. It turned out that the deformation of the professional consciousness of doctors is a process that followed a certain logic and was carried out according to its own rules (Bai, Yao, Wei, Tian, Jin, Chen & Wang, 2020; Hayden, Farrar, & Peiris, 2014; Khwaja, 2012; Liu, Yang & Gao, 2020).

Let's try to explain this logic with the help of psychological frames. It should be noted that the rich phenomenology of ecopsychological expeditions and the small number of scientific researches of the mental state of individuals during the COVID-19 pandemic allowed us to identify some phenomena of Environmental Psychology categorically and, for the first time, although to determine well-known scientific concepts which have been used.

It should be noted at once that under the influence of the COVID-19 pandemic human behavior acquires a sufficiently explicit eco-attribution (Chan, Ng & Chan, 2003; Choi, Chau, Tsang, Tso, Chiu, Tong, Lee, Ng, Wai, Lee, Lam, Yu, Lai, Lai & Sik, 2003; National Health Commission of the People's Republic of China, 2020). Eco-attribution (from the Greek oikos – the environment and from Latin – attribuo – to give, to provide) is a lifestyle that provides the primary importance of the environment, the natural expediency of caring for nature, a kind of harmony of a man and a nature, as well as the world around us. Eco-attribution or eco-attributive behavior presupposes the understanding not only of well-balanced harmonizations in the space of nature, but also in the living environment in general, as well as adequate inclusion of human activity in the environment, performance of its activities, on the one hand, in accordance with the laws of nature taking into account the conditions of existence in the society, taking into account the pandemic COVID-19 and working out its own style of the behavior, which is natural and viable under such conditions (Holshue, DeBolt, Lindquist, Lofy, Kathy, Wiesman, Bruce, Spitters, Ericson, Wilkerson & Tural, 2020; Lane, Marston & Fauci, 2016; Ranieri, Rubenfeld & Thompson, 2012; Wu & McGoogan, 2020; Yang, Yu & Xu, 2020; Zou, Ruan, Huang, 2020).

Eco-attributive behavior and the activity involves the search for adequate forms and principles, especially for biological adaptation and protection in changes of living conditions (Arabi, Balkhy, Hayden, Bouchama, Luke, Baillie, Al-Omari, Hajeer, Senga, Denison, Nguyen-Van-Tam, Shindo, Bermingham, Chappell, Van Kerkhove & Fowler, 2017). As we predicted, the characteristic features of eco-psychological stress, manifested in the person's desire to change the situation, significantly changes the very behavior and activities of people. Personal content, which is now formed in the case of absence of practical experience and practical skills of adaptation to such experiences and actions, forms, as it turned out, not flexible behavior. The basis of such behavior were rigid, torpedo mental states, pandemic or "covid" accentuations, anxiety and fear (Chen, Zhou & Dong, 2020; Hardeman, Medina & Kozhimannil, 2016; Kimball, Hatfield, Arons, James, Taylor, Spicer, Bardossy, Oakley, Tanwar & Chisty, 2020; Wang, Hu & Hu, 2020; Yang, Yang & Shen, 2020).

Many researches show that people in general are quite vulnerable creatures, and they are particularly concerned about what they do not see, but know for sure that it is too harmful, insidious, and so on (de Wit, van Doremalen, Falzarano & Munster, 2016; Epstein, Blake & González, 2017; Gorbalenya, Baker & Baric, 2020; Kalil, Metersky & Klompas, 2016). For many years people often do not know what to do in extreme situations, what to do in cases of disease prevention, where there is a great danger and in what cases there is no reasons for excitation. Thus, the set of negative factors caused by the COVID-19 pandemic leads to aggressive irritability of people, they have asthenia, depression, confusion, deep apathy (Chenguang, Zhaoqin, Fang, Yang, Jinxiu, Jing, Fuxiang, Delin, Minghui, Li, Jinli, Haixia, Yan, Jiuxin, Ling, Li, Zhixiang, Ling, Yanjie, Haixia, Feng, Kun, Yujing, Dongjing, Zheng, Yingxia & Lei, 2020). In these states people often turn to mysticism, religion, superstition, the protective mechanisms of the psyche, which, in their opinion, should eliminate the state of cognitive dissonance (Edwards, Lee & Esposito, 2019; Huang, Wang & Li, 2020; Villar,

Blanco & del Campo, 2015; Wu, Nethery, Sabath, Braun & Dominici, 2020). According to this psychological background the development of ecological negativism (from the Latin negatio – denial) is acceptable and quite understandable – not entirely motivated negative attitude of people to a new natural environment as a virus-damaged value, which is manifested in actions and relationships which are deliberately opposite to expectations.

Environmental (or "covid") negativism in the context of the COVID-19 pandemic is carried out as a situational reaction due to the individual's need to resist external influences (scientists say that this is what they see everywhere), but also as a purely personal position to deny or to disagree that does not take the form of forced self-observation (Li, Guan, Wu, Wang, Zhou, Tong, Ren, Leung, Lau & Wong, 2020; Phelan, Katz & Gostin, 2020). Psychologically ecological negativism is exacerbated by the phenomenon of the COVID-19 pandemic, it is found its explication in a sad, depressed and negative mood of rejection, or, conversely – in demonstrative bravado, stubbornness, sometimes – indifference, but always accompanied by internal contradictions (Wang, Li & Drabek, 2020; Xu, Shi, Wang, Zhang, Huang, Zhang, Liu, Zhao, Liu, Zhu, Tai, Bai, Gao, Song, Xia, Dong, Zhao & Wang, 2020).

It is this phenomenon of environmental (or "covid") negativism that we have observed in a case of doctors and all medical staff who have treated people with COVID-19 and resisted the situation in which their country (or even other countries) – take, for example, heroic help of Russian doctors in Italy). It was clear that external optimism and the desire to overcome difficulties often gave rise to a state of environmental (or "covid") negativity of medical staff. These states were demonstrated as externally vulnerable forms of manifestation as an internal attitude of the person and his/her value orientations. The nature of these processes is shown by Fig. 1.

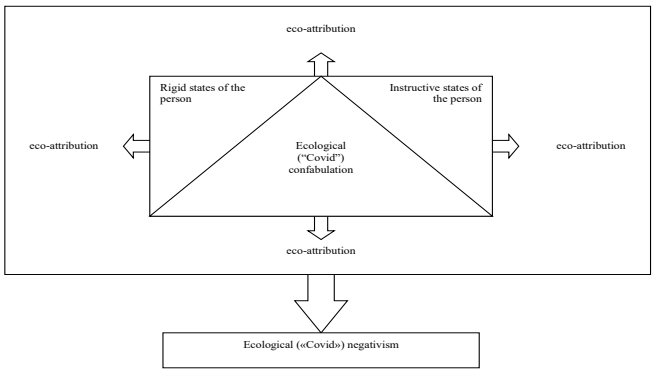

Figure 1. Subjective preconditions and directions of the formation of ecological ("Covid") negativism

The meeting with Nina D., a resident of city Kyiv in Ukraine, 38 years old, leaves contradictory feelings. Three weeks ago, in April 2020, she buried her brother, who died at the age of 34, and she took her 8-year-old niece for foster care. Also in early May she buried her father, who died at the age of 75, and her sister, who was the youngest in their family, at the age of 28.

In the behavior, language, thoughts and judgments of Nina D. there was an inflamed tear of the desperate, frantic and desperate hostage of fate. Her speech is fluent, sharp, not always intelligent and balanced, her behavior is calm from the outside, but there is a clear tension that is difficult to control statements of Nina D. are not always unambiguous, but in the most cases they are straightforward, frank, prudence, and their thinking is fast, balanced, but not always critical. In fact, this woman looks like a spring. In communication with her we specifically showed caution, so as not accidentally offended, not to put pressure on certain internal strings, not to allow her to fail, not to inadvertently provoke aggression or anger. In general, we were even ready to take on its discharge. But there was no relief: Nina D. skillfully warned her on her own, but, given external factors, she was not interested in surrounding world, but she was getting herself under control. Undoubtedly, the latter was not a simple demonstration, but a real, a true state of mind, a state of helplessness and despair, horror and confusion.

Gradually, in a conversation with us Nina D. began to tell the facts of her life, those facts which in logic and content could somehow be easily "tied" to the pandemic COVID-19. But she herself categorically did not do it, she constantly expected

from us certain facilitating influences provoking a current situation. And even our hints about such connections, sharp and insistent, although mostly unsubstantiated, Nina D. denied. She sought any justification for her position and behavior, except for the COVID-19 pandemic. At the same time, Nina D. behaved quite calmly and convincingly.

Meanwhile, careful observation and psychological analysis of all that Nina D. said and the explanation of her behavioral manifestations allowed us to notice the conviction of a man who internally rebelled against the COVID-19 pandemic. Here you could see a kind of breakdown in the depths of her soul, internally unprotected, from the illogical, but, at the same time, ordinary, everyday, vital and even combined with a kind of concept of faith, where a lot of things are unreal, strange, invented, and more of them are distrustful and confused.

Such artificial tolerance of self-consciousness of the individual, in our opinion, is nothing more than a reaction to the complete denial of the realities of the ecological reality that took place. We observed a state of ecopsychological (or "covid") negativism, which, in our opinion, was used by Nina D. as a mechanism of psychological protection against the COVID-19 virus due to the instructive, but unconscious denial of its impact on her own life, her life way and destiny. As the factor of the COVID-19 pandemic affectively intensifies the feeling of hopelessness and doom, Nina D. actively pushes the awareness of the consequences of the pandemic to the periphery of her self-consciousness, that is it seems consciously reject COVID-19 in such a way. However, in this case we diagnose certain psychological nuances: when the rejection of the affectogenic factor is carried out without a deep understanding of this process, and there is not a fact of the existence of COVID-19 virus, as in this case the rejected information is not fully displaced from consciousness, but only with its completeness, which is rationalized (or realized, analyzed and fully comprehended). That is, the displacement of information is carried out from the consciousness of the individual, while it was fixed at the level of her feelings.

Thus, it turns out that the COVID-19 pandemic, which deeply penetrated the fabric of personal meanings and became the basis of someone's life path (in this case – a prerequisite for negative scenicity) is rejected according to the chosen direction at the levels of behavioral and mental dispositions, but not at the level of the psycho-emotional sphere of the person. During the period Nina D. had a conversation with the experimenter, we had got the impression that the respondent was sobbing internally, although she was not showing signs from the outside world. The tears in her eyes were imperceptible, but it was clear that Nina D. was acutely experiencing a complex process of psycho-emotional stress. Also we had the feeling that tears were running inside her, flooding her soul, and there they ached, squatted, were frozen.

The purpose of the article. In the process of our empirical research, we had the aim to examine the level of professional reliability of doctors who performed their professional duties during the COVID-19 pandemic in Ukraine. We assumed that the higher the level of professional reliability was, the more effectively doctors will perform their own professional activities in unusual, extreme conditions of their professional activity. The research involved 550 doctors of Rivne Regional Hospital (Rivne, Ukraine).

Methods and methodical instrumentation of the research

To solve the problem of our research, a set of methods was used, the choice and combination of which have been determined by the subject, the purpose and the objectives of this research:

theoretical methods – theoretical and methodological analysis of scientific sources and available according to the problem of our research psychological approaches: their systematization, classification, generalization, theoretical modeling to study the phenomenon of professional reliability of doctors who worked in difficult conditions of the COVID-19 pandemic in Ukraine;

empirical methods – the observation, the interview, a questionnaire, testing, the method of expert assessments, which have been used for a deeper, holistic research of the structure of professional reliability of doctors; psychological and pedagogical experiment in the form of the empirical studying of the formation of a structure of professional reliability of doctors.

In order to analyze the indicators according to the external criterion of professional success, the expert assessment of the respondents was carried out with the help of specially developed

questionnaire “Guidelines for doctors’ professional activity” (Mykhalchuk, 2020). We also used “The questionnaire of expert assessment of the level of professional (managerial) compliance of a specialist (a manager) with some degree of the development of his/her personal and professionally significant qualities” (Mykhalchuk, 2020).

In order to analyze the empirical information on the level of professional reliability of all respondents, a package of psychodiagnostic techniques was used:

- 16-factor Kettell personality questionnaire (16-PF), form C (2019);
- Minnesota Multidisciplinary Personality Questionnaire (MMPI) (2018);
- Schubert Method: Diagnosis of Risk Readiness (RSK) (2007);
- Methods of diagnosis of interpersonal relationships by T. Leary in the modification of A.O. Tyukov (2019).

The results of the research and their discussion

Thus, for specialists of medical sphere of the activity with a high level of professional reliability there is a main characteristic: the ability to perform professional activities in special and extreme conditions, the formation of professional and moral culture of a doctor, the constant development of components of his/her professional competence, professional readiness and professional reflection, the ability to implement effective psychological and acmeological influences, the development of reflective culture, the formation of a harmonious “self-concept” in professional and managerial activities, the actualization of psychological mechanisms, conditions, factors and determinants of the person’s professional development, etc.

In our opinion, the professional reliability of a doctor is characterized by:

- a high level of stable productivity (or efficiency) of the professional activity;
- a high level of professional qualification and developed professional competence;
- optimal intensity of the professional activity;
- a high level of accuracy and reliability;
- a high level of organization of the professional activity;
- low indirectness (depending on purely external factors);
- creativity;
- the possibility of developing the subject of the professional activity and ensuring the actual professional growth;
- focus on achieving positive socially significant goals and results.

In our empirical research 550 respondents were participated. In the table 1 we proposed data according to the age of doctors.

Among 46 women of F7 group there were 13 managers of structural subdivisions of medical institutions (28,2% of respondents), among 36 respondents of F8 group there were 15 managers (41,6%), including 6 persons – the heads of medical institutions (16,6%).

Table 1. Qualitative and quantitative characteristics of the experimental groups

Group	Sex	The amount of people	Age	Professional experience in the sphere of this professional activity
F1	women	48	23-30	up to 5 years
F2	men	45	23-31	up to 5 years
F3	women	39	23-35	from 5 to 10 years
F4	men	40	23-35	from 5 to 10 years
F5	women	42	35-47	from 10 to 15 years
F6	men	38	35-49	from 10 to 15 years
F7	women	46	47-63	from 15 and more years
F8	men	36	47-66	from 15 and more years
F9	women	52	17-22	students, there is no professional experience
F10	men	52	17-23	students, there is no professional experience

Psychological diagnostics was organized by psychologists in terms of group and individual forms of the activity in compliance with all requirements for the organization of such kinds of the activities. We’ll describe the techniques which have been used at this stage of psychodiagnostic experiment.

With the help of experts (12 teachers of Psychology of Rivne State University of the Humanities, Ukraine), the personal qualities of doctors which are the most important for a comprehensive assessment of the professionalism of specialists, were identified. The legitimacy of

this approach has been confirmed by a number of researches that show the psychological support of the effective professional activity of specialists (Villar, Blanco & del Campo, 2015).

At the beginning of our research personal qualities were selected. These qualities facilitated the professional development of the individual to the maximum extent, correspond to the semantic blocks of certificated characteristics, which made it possible to assess the professionalism of doctors. The list of the most significant personal qualities and characteristics for the professional development of a doctor is proposed in Table 2.

Table 2. The list of the most significant personal qualities and characteristics for the professional development of a doctor

№ п/п	Orientation of personal qualities and characteristics	Personal qualities and characteristics of a doctor, which are the most important for his/her professional development
1	Personal	• Moral and psychological stability • Principledness in solving professional and social issues, problems • Obligation (the ability to keep one's own word) • Justice in solving business and personal issues, problems • Honesty and decency • Modesty • Moral stability, justice • Focus on achieving positive socially significant goals • A high level of personal culture • A high level of professional reflection
2	Social	• Social acceptability in the team • Adequate perception of criticism • Formed leadership qualities, the ability to unite the team to solve professional problems and tasks • The attentive attitude to the opinions of others • A high level of communication and general personal culture • The ability to exert educational influence on subordinates (to be an example) • The ability to find an individual approach according to other people • The ability to convince other people • The ability to trust other people • The desire to show a concern according to his/her colleagues in the professional sphere of the activity • Sociability (ease of contact) • Friendliness in dealing with colleagues • Restraint and balance in the process of communication • Psychological tact and the culture of communication • A high level of sense of humor • Taking into account the interests of colleagues • Politeness and tact • Respect from colleagues • The ability to exert psychological influences on others
		• The attentive attitude to performance the official duties • Responsibility and diligence • The ability to anticipate other people's behavior and the ability to evaluate them adequately • The ability to distribute the professional activity in a team • The ability to interact with other teams and organizations • The ability to defend the interests of his/her own team • The ability to organize control over the professional activities of colleagues and encourage others to perform the most productive activities • The observance of discipline and order, the formation of business qualities, focus on clear performance of the professional activity
3	Competence	• Professional acceptability in the team • A high level of professional competence • Updating the acquired professionally significant experience • The ability to transfer professional experience • The acquisition of professional knowledge and the experience of providing a managerial position • The ability to identify "key" tasks in personnel management • Updating professional knowledge, gaining professionally significant experience in medical sphere of the activity • Achieving depth in professional knowledge and skills • A high level of professional creativity • The formation of professional skills • A high level of qualification and professional competence • A high level of personal and professional culture
4	Regulatory-target	• A wish of professional growth • The interest and initiative in the sphere of the professional activities • The ability to gain constantly professionally meaningful experience • The ability to apply creatively professional skills in the activities • The desire to introduce new techniques in the sphere of the professional activity • The desire to use new, non-standard approaches in in the sphere of the professional activities • Creativity • A high creative potential • The ability to solve creatively professional tasks and problems • To focus on self-development • Adequate self-esteem
5	Adaptive-managerial	• Knowledge of instructions, regulations, programs and documents • The ability to provide the professional activity according to its norms • Knowledge of necessary documents providing professional activities • Knowledge of theory and methods of management in the sphere of the professional activities • Knowledge of technical, legal, economic issues

№ п/п	Orientation of personal qualities and characteristics	Personal qualities and characteristics of a doctor, which are the most important for his/her professional development
		• The observance of norms of performance of professional activity • The ability to compile the necessary documents • The ability to adapt to new conditions of the professional activity • The ability to focus on professional activities
6	Organizational	• The ability to form the instructions to recognize by colleagues the priority of their own professional activities • The awareness of the importance of their profession • Organizational skills • The ability to establish adequate business relationships • The ability to organize the professional activities of colleagues • The ability to maintain contacts with other employees in the professional sphere • The organization and concentration in the sphere of the professional activity • The ability to control the flow of the professional activity • Personal responsibility for decisions and for performance of professional activities • Use of rights and powers in the professional sphere • The ability to establish business relationships • The quality to propose the end result of the professional activity • A high level of stable productivity • The ability to make timely and adequate decisions • The responsibility in decision making • The independence in formulating decisions and performing professional activities • The rationality and realism of decisions • The responsibility for making professionally significant decisions and their implementation
7	Anticipatory-regulatory	• The ability to act adequately in critical situations and situations of cognitive dissonance • The ability to respond to difficult situations adequately, to moderate risk appetite, the ability to take risks consciously • The ability to take responsibility in critical situations and situations of cognitive dissonance • The ability to perceive information and predict the professional situation adequately • Self-control and endurance in difficult professional situations and situations of cognitive dissonance • The ability to find a way out of a stressful situation • A high level of anticipation • A high level of self-regulation • The ability to make and clearly implement decisions in the sphere of professional activities • The ability to achieve goals • Purposefulness, a desire to complete the professional activity started in order to achieve high results in the sphere of the professional activity • Combining strong will in solving professional tasks with the ability to work with other people • Independence and initiative • Perseverance • The ability to defend one's own point of view

In the process of qualitative analysis of the content of selected groups of personal qualities from their totality there were excluded semantically similar, those ones which duplicate each other. In the result their list was reduced to 14 qualities.

Next, the experts were asked to rank the selected groups of personal qualities according to the criterion of the importance of their impact on the category of "professional reliability". Coefficients of agreement of experts' opinions were adopted according to the criteria of selection of groups of personal qualities (Table 3).

Table 3. Coefficients of agreement (W) of experts' opinions

№ of personal quality	1	2	3	4	5	6	7	8	9	10	11	12	13	14
W	0,72	0,82	0,70	0,76	0,79	0,70	0,76	0,71	0,70	0,84	0,59	0,66	0,62	0,61

Symbols:

1) high stable productivity of the professional activity;
2) responsibility and independence in decision-making;
3) responsibility for decision-making and its implementation;
4) the ability to achieve the goal;
5) the ability to act adequately in critical situations and situations of cognitive dissonance;
6) the ability to adequately respond to difficult situations, to moderate risk situations, the ability to take risks consciously;
7) the ability to take responsibility in critical situations and situations of cognitive dissonance;
8) the ability to independently make and clearly implement their own decisions;
9) a high level of professional competence;
10) the ability to form attitudes of colleagues to the priority of their professional activity;
11) the ability to control the flow of doctors' professional activity;
12) a high level of professional reflection;
13) professional knowledge and experience from the side of managerial position;
14) the ability to transfer the professional experience.

The value of the coefficient 0,7 was the limit of the criterion for selecting personal qualities, having been defined by us as those ones that are the most important characteristics of the professional reliability of a doctor, which, in turn, in a great

degree determines the effectiveness of professional activities of specialists.

In Table 4 there is the data of factor weight of indicators of professional reliability of respondents of the groups selected by us. According to the obtained results, the lowest results are in the groups of students – future doctors (F9, F10) and in groups of specialists with up to 5 years of professional experience. However, these respondents were not diagnosed with a statistically significant difference in results between men and women. Despite the fact that all these indicators have an insufficient level of its formation (for example, the highest level has the indicator of "a high level of professional competence": 0,4105 – in F1, 0,4065 – in F2, 0,3351 – in F9, 0,3007 – in F10). Such results are not sufficient for a competent doctor. Significant are the results of professional reliability, such as "the ability to take responsibility in critical situations and situations of cognitive dissonance" (-0,3318 – in F1, 0,3016 – in F2, -0,3126 – in F9, -0,3278 – in F10), "the ability to form attitudes of colleagues to the priority of their professional activity" (-0,3374 – in F1, -0,3658 – in F2, -0,2716 – in F9, -0,3158 – in F10), "professional knowledge and great experience from the side of a managerial position" (-0,3207 – in F1, -0,3658 – in F2, -0,3008 – in F9, -0,3172 – in F10), "the ability to transfer professional experience" (-0,3678 – in F1, -0,3317 – in F2, 0,3012 – in F9, -0,3123 – in F10), but these results are presented with a sign "-".

Table 4. Factor weight of indicators of professional reliability of respondents (according to the results of factor analysis)

№	The indicator of professional reliability	Groups of respondents									
		F 1	F 2	F 3	F 4	F 5	F 6	F 7	F 8	F 9	F 10
1.	A high level of stable productivity of professional activity	0,341	0,327	0,511	0,612	0,580	0,603	0,711	0,723	0,332	0,341
2.	Responsibility and independence in decision making	0,325	0,361	0,523	0,623	0,531	0,682	0,652	0,739	0,291	0,287
3.	Responsibility for decisions having been made and their implementation	0,362	0,371	0,577	0,601	0,535	0,633	0,661	0,756	0,231	0,355
4.	The ability to achieve goals	0,421	0,362	0,516	0,623	0,490	0,601	0,593	0,768	0,412	0,357
5.	The ability to act adequately in critical situations, situations of cognitive dissonance	0,300	0,388	0,493	0,601	0,451	0,613	0,556	0,760	0,427	0,301
6.	The ability to respond adequately to difficult situations, to risk only in critical situations, the ability to take risks consciously	0,322	0,303	0,503	0,631	0,496	0,640	0,589	0,761	0,301	0,297
7.	The ability to take responsibility in critical situations and situations of cognitive dissonance	-0,332	-0,302	0,313	0,552	0,362	0,521	0,559	0,771	-0,313	-0,327
8.	The ability to make and clearly implement his/her own decisions	0,248	0,318	0,329	0,592	0,333	0,582	0,592	0,703	0,283	0,237
9.	A high level of professional competence	0,411	0,407	0,582	0,620	0,563	0,600	0,682	0,731	0,335	0,301
10.	The ability to form attitudes of colleagues to the priority of their professional activity	-0,337	-0,366	0,431	0,511	0,389	0,556	0,691	0,751	-0,272	-0,316
11.	The ability to control the flow of his/her own professional activity	0,352	0,313	0,531	0,603	0,562	0,611	0,680	0,703	0,288	0,300
12.	A high level of professional reflection	0,384	0,401	0,401	0,432	0,432	0,462	0,712	0,681	0,357	0,337
13.	Professional knowledge and experience as a director of this organization	-0,323	-0,366	-0,231	0,491	-0,229	0,442	0,652	0,719	-0,303	-0,317
14.	The ability to transfer professional experience	-0,368	-0,332	0,247	0,434	0,312	0,492	0,692	0,711	-0,301	-0,312

Such results indicate a rather low level of professional reliability of respondents in these groups, inability to provide their professional activity in critical situations and situations of cognitive dissonance, lack of professionally significant experience to carry out their own professional activities, and, moreover – to teach others to pass on their experience.

In groups F3-F6 the results of professional reliability are much higher, while the results for men are higher than the results for women (according to t-criteria of Student at 0,05 level of reliability). For example, according to the indicator "responsibility and independence in decision-making" in groups of women the results are such, as: 0,5229 – in F3 and 0,5311 – in F5, while the data of men are much higher: 0,6231 – in F4 and 0,6819 – in F6. Men have greater will to set goals and to achieve them: 0,6229 – in F4 and 0,6008 – in F6 (while women's results are: 0,5164 – in F3, 0,4902 – in F5). Men also respond more adequately to critical situations which are arisen, such as the situations of cognitive dissonance (0,6003 – in F4 and 0,6127 – in F6), while in groups of women the data according to this criteria are: 0,4925 – in F3 and 0,4513 – in F5. These results between groups of men and women are significant at a confident level of 0,01 according to t-criteria of Student.

Statistically significant at the level of reliability of 0,01 there is the difference in results between men and women according to the "ability to respond quite adequately to difficult situations, to moderate risk appetite, the ability to take all possible risks consciously" (the results of women are: 0,5003 – in F3, 0,4964 – in F5, of men they are: 0,6311 – in F4 and 0,6402 – in F6). Also, men are more able to control the flow of the process of professional activity (0,6028 – in F4 and 0,6113 – in F6), while women have such results, as: 0,5309 – in F3 and 0,5624 – in F5). As for men, we've to admit that they have more higher data (the difference in results is significant according to t-criteria of Student at 0,05 level of reliability). These results were diagnosed by the indicator "professional knowledge and the experience of being at the position of manager" (0,4901 – in F4 and 0,4420 – in F6), while for women according to this indicator we received such results, as: -0,2310 – in F3, -0,2294 – in F5. It is interesting that among the men of groups F4 and F6 there was no head of the hospital or a structural unit, which indicates some "natural" characteristic of men to be the director, or to lead (data from the personal questionnaire 16-PF). Also we'd like to emphasize on such an interesting fact that in groups F3-F6 both men and women were not characterized with a statistically significant difference in the results on the indicators of "a high level of professional competence" (0,5817 – in F3, 0,6201 – in F4, 0,5634 – in F5, 0,6004 – in F6), as well as according to the data "a high level of professional reflection" (0,4004 – in F3, 0,4324 – in F4, 0,4325 – in F5, 0,4619 – in F6). The last gives us a reason to assume that the professional reliability of a specialist is influenced by certain personal qualities that are positively correlated with the component "professional reliability". What characteristics have all these qualities exactly, we will try to find them out in more details in our empirical study.

The highest results (among women and men) there are in F7 and F8 groups. Men have particularly higher results according to such indicators of professional reliability as "the ability to achieve somebody's own goals" (0,5931 – for women and 0,7604 – for men), "the ability to respond adequately to difficult situations, to show a moderate level of risk solving different problems, the ability to take risks consciously" (0,5893 – for women, 0,7612 – for men), "the ability to take a great responsibility in critical situations and situations of cognitive dissonance" (0,5592 – for women and 0,7714 – for men). We'll explain this by the fact that in F8 group (a group of men) there is twice the number of respondents who hold managerial positions and have some managerial experience. Thus, we can conclude that the professional reliability of doctors is directly related to the leadership qualities of the person, as well as self-realization, satisfaction of motivational domains of success.

Our results made it possible to calculate the coefficients of intercorrelation between the selected indicators of professional reliability of the person (Table 5). Identified intercorrelations also indicate that it is necessary to determine the personal qualities that provide the formation of a particular indicator of professional reliability of doctors.

Table 5. Coefficients of intercorrelation of complex factors of professional reliability of doctors (according to the results of correlation analysis)

Groups	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
F1										
F2										
F3	0,48**	0,27*								
F4	0,58**	0,32*	0,30*							
F5	0,59**	0,30*	0,31*	0,39*						
F6	0,50**	0,38*	0,29*	0,45*	0,37*					
F7	0,59**	0,63**	0,45*	0,69**	0,75**	0,78**				
F8	0,67**	0,65**	0,67**	0,72**	0,78**	0,80**	0,55**			
F9			0,38*	0,44*	0,39*	0,51**	0,79**	0,75**		
F10			0,39*	0,46*	0,41*	0,55**	0,77**	0,74**	0,78**	

* – the level of significance $\rho < 0,05$;

** – the level of significance $\rho < 0,01$.

In Table 6 there are the data obtained by us by the personal qualities of doctors, which, according to the opinion of experts, the most closely correspond to such a complex characteristics, which is professional reliability.

Table 6. Frequency of distribution of experts' assessments of personal qualities of doctors in the paradigm of complex characteristics, such as "professional reliability" (in%)

Personal qualities	The level of quality's explication				
	Low	low average	Average	over average	High
A high level of personal culture	0	2	44	44	10
The ability to establish adequate relationships between colleagues	0	6	34	24	36
The ability to act independently in critical situations	2	5	19	26	48
The ability to achieve goals	2	10	16	36	36
The desire for professional growth	0	15	15	21	49
Professional acceptability in the team	0	5	18	17	60
Social acceptability in the team	0	8	17	35	40
Responsible attitude to performance the official duties	0	10	21	24	45

Thus, in our further articles we will describe the results of our empirical research, which will allow to obtain statistically significant results which can show the influence of personal qualities of a specialist on the level of his/her professional reliability.

The empirical results analyzed by us according to personal psychodiagnostic methods and the complex factors of the formation of professional reliability of doctors allow us to build a bifurcation space of a professionally reliable specialist (Fig. 2).

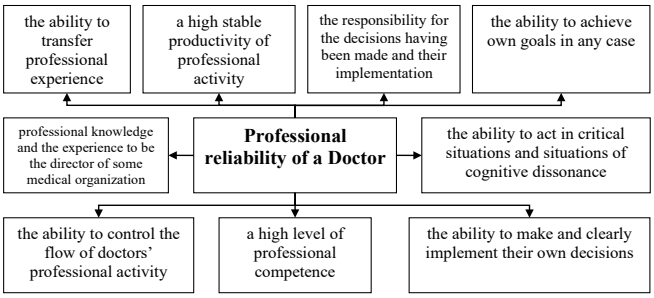

Figure 2. Bifurcation space of a professionally reliable Doctor

Conclusions

We proved that bifurcation space of a professionally reliable Doctor includes: the ability to transfer professional experience; a high stable productivity of professional activity; the responsibility for the decisions having been made and their implementation; the ability to achieve own goals in any case; professional knowledge and the experience to be the director of some medical organization; the ability to act in critical situations and situations of cognitive dissonance; the ability to control the flow of doctors' professional activity; a high level of professional competence; the ability to make and clearly implement their own decisions.

If these components of a professionally reliable Doctor are formed at a high level, the Doctor can perform his/her professional activity with a high degree of its productivity, in difficult pandemic conditions, in situations of stress and cognitive dissonance.

Under the influence of the consequences of the COVID-19 pandemic doctors need to interpret other, completely new meanings of the coronavirus symbol, meanings of which in everyday practice gives us more expressive and, at the same time, more incomprehensible semantics of this symbol. In other words, due to the actualization of professional reliability of doctors, the operative semantic space of symbols as a subject of perception of the COVID-19 pandemic is expanding. Before the subject of survival of people in the COVID-19 pandemic was meaningless, it attracted the attention of doctors as the leading persons in life, forcing them to turn again and again to what circumstances which were the most inconsistent with their previous ideas. Nowadays when the doctors have a great experience working in the extreme conditions of the COVID-19 pandemic, new, transcendent means are opening up to them. Those ones go beyond the previously acquired experience of the pandemic symbol, and doctors begin to relate to it, while updating their own professional reliability.

The latter emphasizes on the difference between the capabilities and the style of internal activity of Doctors who provide their activity in a period of COVID-19 pandemic: the ability to achieve meanings until the moment of meaningful acceptance of surrounding us reality and move on –

to expand the meaning of the symbolic space (which is the COVID-19 pandemic) and, according to this, to show the measures of our own meaningful space (human life in a pandemic). Such conditions significantly encourage doctors to improve themselves as real professionals, to update their own professional reliability.

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