



THE SPIRITUAL HEALTH STATE OF THE ILL AND ITS CONNECTION TO THE MEDICAL CONCLUSIONS ON SOMATIC HEALTH AT THE HEALTH RESORT

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Abstract

According to the definition of the World Health Organization (WHO) of health, spirituality is one of the constituents of the person's health. At this moment there are very few knowledge concerning the interrelation of spiritual and somatic health of the person.

The objective – to estimate the spiritual health state of people, who suffer from chronic diseases, at the health resort stage of rehabilitation and to establish its connection to medical characteristics of somatic health.

Methods. One hundred and forty-eight ill, who have been suffering from chronic diseases and have been admitted for the treatment to the climatic resort. Biological, social and general medical characteristics, as well as the spiritual health state of the examined have been studied with the help of a special questionnaire.

Results. All the examined at the health resort ill have been suffering from chronic diseases for a long period of time. The main diseases have been: cerebral atherosclerosis – 17.6% of cases, hypertensive disease – 17.6%, angina – 16.9%, diffuse cardiosclerosis – 15.5%, bronchial asthma – 14.9%, chronic non-obstructive bronchitis – 6.1%, chronic obstructive pulmonary disease – 4.7%, vegetovascular dystonia – 2.0%, bronchiectatic disease – 1.4%, chronic pyelonephritis – 1.4%, other diseases – 2.1% of cases. Duration of the main disease on the average has been 9.92 ± 8.38 (Me: 7 (4; 15)) years, and the relapse rate during the last year – 1.43 ± 1.75 (Me: 1 (0; 2)) times. Complications of the diseases have been absent in 50.0% of the ill, indolent – 31.1%, moderately expressed – 14.2% and prominently expressed – in 4.7% of the ill.

61.5% of the examined ill have had the unfavorable state (low and average levels) of spiritual health. The state of spirituality of chronically ill people to a certain degree has depended on the state of their somatic health, which have been indicated by the presence of the connection (associations) between the answers to a series of questions in the questionnaire, which has described spiritual health, and medical conclusions and characteristics. The answers to 13 questions of the given questionnaire have been 29 times connected to the 14 studied medical characteristics of the ill. The answers to the questions of the questionnaire have more often been associated to the presence of nervous system diseases (6 dependencies), relapse rate of the main disease (5 dependencies), quantity of the affected organs (3 dependencies), presence of oncologic diseases (3 dependencies), severity of patient's condition (3 dependencies), duration of the main disease (2 dependencies) and presence of metabolic disorders (2 dependencies) in the ill.

Conclusions. 61.5% of the ill who have been suffering from chronic diseases, and have been admitted to the health resort treatment have the unfavorable state (low and average levels) of spiritual health. The state of spirituality of chronically ill people to a certain degree depends on the state of their somatic health. Giving the health resort treatment requires the use of the programs of the formation and maintenance of the person's spiritual health.

Key words: person, spirituality, health, disease, health resort.



Introduction

The World Health Organization (WHO) defines health as «a state of complete physical, mental and social well-being, and not only a lack of illnesses and physical impairments» [1]. This implies that the person's health is a complicated and multicomponent phenomenon. One of the constituents of the person's health is empathy, which can be presented as spirituality, spiritual well-being [2]. The person's spirituality in a secular sense is its special activity directed at comprehending the meaning of life and their place in it, at defining criteria of the good and the bad, at estimating people and events [3]. Recently, spiritual health has been paid a lot of attention in Ukrainian- and Russian-language scientific literature, especially in philosophic argument-tation of the basis of health and life [4–8], during the analysis of the public health state [9–12], in interpreting the emergence and development of mental illnesses [13, 14], in explaining the life span [15, 16], etc. There are also individual academic papers concerning the role of the spirituality in the rehabilitation of primarily mental state of a person [17–19].

At this moment there are very few knowledge concerning the interrelation of spiritual and somatic health of the person. If the connection of the spiritual state of the society and its health is almost proved [9], the influence of the spirituality on individual health still requires study [20]. Several clinicians with philosophical views think that a part of diseases of the modern person to some extent depends on their mental and spiritual organization [4–7]. In medicine such diseases are called psychosomatic. Nevertheless, practical health worker in their majority do not associate these diseases with the spiritual state of the person.

The objective – to estimate the spiritual health state of people, who suffer from chronic diseases, at the health resort stage of rehabilitation and to establish its connection to medical characteristics of somatic health.

Methods

The research is conducted in the Autonomous Republic of Crimea in 2012–2013. One hundred and forty-eight ill, who have been suffering from chronic diseases and have been admitted for the treatment at the health resort (the South Coast of Crimea) have been

examined. The examination of the ill has included the study of the biological, social and general medical characteristics, as well as the constituents of the level of their spiritual health with the help of a special questionnaire [21]. The respondents (the ill people) have been proposed to answer 19 questions of this questionnaire. Due to the fact that the respondents in the majority have been Russian speakers, they have been provided with a Russian variant of the questionnaire (translation from Ukrainian is done by the author) [22]. Each answer to the question has been estimated with points: 0 – right answer, 5 – partially wrong and 10 – completely wrong answer. The estimation of the level of spiritual health has been conducted by means of counting a sum of the points of all the answers. The greater the sum of points have been the worse have been the condition of spiritual health. After the recommendations of the compilers of the questionnaire, we have established the levels of spiritual health: high level – the sum of points is from 0 to 69, average level – the sum of points is from 70 to 149 and low level – the sum of points is from 150 and more. The high level of spiritual health has been defined by us as favourable, while the average and low levels as unfavourable state of spiritual health.

The medical estimation of the state of health of the examined has been conducted by means of the analysis of doctor's diagnostic conclusions and some medical data. Fourteen medical parameters have been analyzed:

- 1) quantity of diagnosed diseases;
- 2) quantity of affected organs and systems;
- 3) presence of cardiosclerosis;
- 4) presence of non-sclerotic vascular disruptions;
- 5) presence of diseases of inflammatory character;
- 6) presence of allergic diseases;
- 7) presence of nervous system diseases;
- 8) presence of diseases of bones and joints;
- 9) presence of metabolic disorders;
- 10) presence of oncologic diseases (including in the medical history);
- 11) severity of the patient's condition (severity of manifestations of a disease at the moment of examination);
- 12) severity of complications;
- 13) duration of the main disease;
- 14) relapse rate of the main disease.



The qualitative medical indicators have been coded. For example, the presence of the diseases has been coded after the binary principle: there is no disease – 0, there is a disease – 1. The duration of the main disease has been presented in the form of the 10-year intervals with the following coding of these intervals.

The statistical description of the selection has been made with the help of the methods of variational series estimation. We have determined the arithmetic mean (M), the median (Me), the mean-square deviation (σ), the interquartile range – the values of the 25th (Lower Quartile – LQ) and 75th percentile (Upper Quartile – UQ), which comprise 50 % characteristic value in the selection. The analysis of dependence of spiritual health and medical parameters has been conducted by means of calculation of χ^2 criterion. The research data processing has been done with the help of the software program STATISTICA 6.6 (StatSoft Company, the USA).

Results and discussion

In general, the selection has comprised 33 (22.3 %) men, 115 (77,7 %) women. The average (M $\pm\sigma$) age of the ill equals to 59.22 \pm 10.90 (Me: 61 (54; 66)) years. In the social aspect the formed group has been a selection in which 49.3 % of cases have had vocational education, 35.1 % of cases – complete higher education. In 42.6 % of cases the professional education of the ill has been technical. The vast majority of the examined (52.7 %) – unemployed pensioners. Most of them have been working in government institutions (64.9 %) and have been executors at the workplaces (58.8 %). The average length of service in general has made 32.18 \pm 12.33 years. The income level of the ill in 42.6 % of cases has totaled \$121–235 a month during the last year. In 64.9 % of cases the main source of income has been a work at one place.

On the basis of the data from doctor's examination it has been established that all the ill have been suffering from chronic diseases for a long period of time. The main diseases have been: cerebral atherosclerosis – 17.6 % of cases, hypertensive disease – 17.6 %, angina – 16.9 %, diffuse cardiosclerosis – 15.5%, bron-chial asthma – 14.9 %, chronic non-obstruc-tive bronchitis – 6.1%, chronic obstructive pulmonary disease – 4.7 %, vegetovascular dystonia – 2.0 %, bronchiectatic

disease – 1.4%, chronic pyelo-nephritis – 1.4%, other diseases – 2.1 % of cases. Duration of the main disease on the average has been 9.92 \pm 8.38 (Me: 7 (4; 15)) years, and the relapse rate during the last year – 1.43 \pm 1.75 (Me: 1 (0; 2)) times. Complications of the diseases have been absent in 50.0% of the ill, indolent – 31.1%, moderately expressed – 14.2% and prominently expressed – in 4.7% of the ill.

The spiritual health of the ill has been estimated by the rate of the given right and wrong answers to the 19 questions of the questionnaire, summing up the points of the received answers. In general, the rate of the right answers equals to 38.9 %, wrong – 61,1 %, 27.1 % of which have been partially wrong and 34,0 % – completely wrong (of the total number of the answers). In accordance to the recommendations of the compilers of the questionnaire, we have established the three levels of spiritual health: low – 2 (1.4 %), average – 134 (90.5 %) and high – 12 (8.1 %) of the ill. Almost all the ill have had the average level of spiritual health. In order to avoid such concentration of the ill within the framework of one gradation of the spiritual health level, we, on the basis of the value of the standard error of the mean of total points in the selection in general (118.51 \pm 23.38 points), have singled out five gradations of this parameter and have determined the distribution of the ill according to it: low – 6 (4.05 %), average-low – 33 (22.3 %), average – 52 (35.1 %), average-high – 45 (30.4 %) and high level – 12 (8.11 %) of the ill. In this case the average level of the spirituality has totaled 35.1 %, while low and average-low – 26.4 %, which sums up to 61.5 % of cases.

Further, dependencies (connections) of parameters of spiritual health distribution (answers to the questionnaire questions) on the distribution of the 14 medical parameters which have characterized somatic health of a person have been defined by us. The results of this work are presented in Table 1. It is worth noticing that, first of all, the six questions of the questionnaire have not had such dependencies. They have included: the 5th – concerning the permissibility of the self-sacrifice for the sake of spirituality, the 7th – about the execution of a spiritual mission, the 8th – concerning the resemblance of the ear and the hand, the 10th – about the subjects which worry us the most, the 11th – about the attitude towards their own past, the 12th – concerning the self-esteem training.

Table 1
Dependency (Contingency) of Distribution of the Spiritual Health Parameters of the Ill on the Distribution of the Medical Conclusions and Somatic Health Characteristics

Number of Question	Crux of the Question from the Questionnaire on Estimation of Spiritual Health	Medical Parameters	Xi-square	Statistical Significance (p)
1	Selection of the main qualities which are the main manifestation of the human spirit	Quantity of affected organs	32.56	0.00844
2	Selection of human qualities, which are connected to spirituality	Presence of nervous system diseases Presence of oncologic diseases Relapse rate of the main disease	15.57 26.83 78.25	0.04891 0.00075 0.02643
3	Interrelation of the concepts of «intellectuality» and «spirituality»	Presence of metabolic disorders	5.82	0.01582
4	What are the ways of spirituality manifestation (art, literature, cooking)	Presence of nervous system diseases Presence of metabolic disorders Relapse rate of the main disease	6.75 8.61 23.68	0.03409 0.01347 0.05001
5	Whether self-sacrifice is acceptable for the sake of spirituality	—	—	—
6	Selection of motives for buying things	Quantity of affected organs Presence of nervous system diseases Severity of the patient's condition	23.5 13.21 22.23	0.00277 0.00135 0.01396
7	About executing a spiritual mission (what it is and how to find it out)	—	—	—
8	Whether the ear and the hand are alike	—	—	—
9	About successful and unsuccessful events in life (attitude towards them)	Quantity of diseases Presence of nervous system diseases	24.74 6.03	0.00585 0.04892
10	About the subjects which worry us the most	—	—	—
11	About attitude towards their own past	—	—	—
12	Self-esteem training (how often)	—	—	—
13	About happiness (attitude towards it)	Presence of cardiosclerosis Duration of the main disease Relapse rate of the main disease	5.87 12.85 23.76	0.05288 0.04540 0.04896
14	What to do prior to the beginning of a new necessary work	Presence of oncologic diseases Relapse rate of the main disease	7.58 52.14	0.02252 0.00001
15	About secrets (keep or tell)	Severity of the patient's condition	21.9	0.01561
16	About hand movements while explaining information	Presence of nervous system diseases	5.991	0.04999
17	About attitude towards the weather	Presence of allergic diseases Duration of the main disease	6.734 31.6	0.03448 0.00002
18	About female spirituality (selection of the main qualities)	Quantity of affected organs Presence of diseases of inflammatory character Presence of nervous system diseases Presence of oncologic diseases Presence of complications Relapse rate of the main disease	26.25 8.26 15.72 16.18 25.84 42.55	0.00988 0.04085 0.00129 0.00104 0.00216 0.00357
19	About male spirituality (selection of the main qualities)	Severity of the patient's condition	26.13	0.03660
	Level of spiritual health (5 scales)	Presence of nervous system diseases	12.18	0.01602

Note. The elongated hyphen – lack of the statistically significant dependencies



The distribution of the answers to the 1st question of the questionnaire (about the selection of the main qualities which are the main manifestation of the human spirit) has depended on the distribution of the quantity of affected organs ($\chi^2 = 32.56$; $p = 0.00844$) of the ill. The overwhelming majority of the ill has had 1 to 3 affected organs. There are 11.49 % of individuals who have provided right answers to this question, and 72.97 % of these who have provided wrong answers. Individuals with 4 or more affected organs have mainly provided wrong answers to this question of the questionnaire – in 12.85 % of cases (there have been only 1.36% of right answers).

The answers to the 2nd question of the questionnaire (about the selection of human qualities, which are connected to spirituality) have been connected to the presence of nervous system diseases ($\chi^2 = 15.57$; $p = 0.04891$), oncologic diseases ($\chi^2 = 26.83$; $p = 0.00075$) and the relapse rate of the main disease ($\chi^2 = 78.25$; $p = 0.02643$) of the ill. In the absence of nervous system diseases, the right answer to this question has been provided by the ill in 41.22 %, wrong – in 31.75 % of cases; in the presence of these diseases, the right answers have been provided in 6.08 %, wrong – in 15.55 % of cases. In the absence of oncologic diseases, the right answers have been provided in 45.95 %, wrong – in 42.56 % of cases; in the presence of these diseases, the right answers have been marked in 1.35 %, wrong – in 3.39 % of cases. The ill with the absence of the relapse of the main disease or with the rate 1–2 times a year have provided the right answers in 39.46 % and wrong answers – in 46.24 % of cases. Thus, the ill with the absence of nervous system diseases have mainly provided the right answers, while the rest with the presence of these diseases – mainly wrong answers to the 2nd question of the questionnaire.

Answers to the third question (about the interrelation of the concepts of «intellect-tuality» and «spirituality») have been connected to the presence of metabolic disorders ($\chi^2 = 5.82$; $p = 0.01582$) of the ill. The patients with the absence of metabolic disorders have given the right answers to this question of the questionnaire in 34.46 %, wrong answers – in 50.68 % of cases, in the presence of these disorders the right answers have been discovered in 2.03 %, wrong – in 12.84 % of cases. Thus, it is possible to state the predominance of wrong

answers to the 3rd question of the questionnaire in the presence of metabolic disorders in the ill.

The answers to the 4th question (concerning the ways of spirituality manifestation) have been connected to the presence of nervous system diseases ($\chi^2 = 6.75$; $p = 0.03409$), metabolic disorders ($\chi^2 = 8.61$; $p = 0.01347$) and relapse rate of the main disease ($\chi^2 = 23.68$; $p = 0.05001$) of the ill. In the absence of nervous system diseases the right answers to this question have been provided by the ill in 60.14 %, wrong – in 18.25 % of cases, in the presence of these diseases the right answers have been provided in 14.86 %, wrong – in 6.76 % of cases. The ill with the absence of metabolic disorders have given the right answers in 67.57 %, wrong answers – in 17.57 % of cases, in the presence of these disorders the right answers have been discovered in 7.43 %, wrong – in 7.48 % of cases. The ill with the absence of the relapse of the main disease or with the rate 1–2 times a year have given the right answers in 67.35 % and wrong – in 18.36 % of cases. Thus, mainly the right answers to the 4th question of the questionnaire have been given by the ill in the absence of nervous system diseases, metabolic disorders and in the absence or with the rate 1–2 times a year of the relapse of the main disease.

The answers to the 6th question (concerning the selection of motives for buying things) have been connected to the quantity of affected organs ($\chi^2 = 23.5$; $p = 0.00277$), presence of nervous system diseases ($\chi^2 = 13.21$; $p = 0.00135$) and severity of the condition ($\chi^2 = 22.23$; $p = 0.01396$) of the ill. The ill with the affection of 1 to 3 organs including have given the right answers to this question in 5.41 % and wrong – in 80.40 % of cases, people with the affection of 4 or more organs have provided the right answers in 3.38 % and wrong – in 10.81 % of cases. In the absence of nervous system diseases the right answers have been provided by the ill in 4.05 %, wrong – in 74.33 % of cases, in the presence of these diseases the right answers have been given in 4.73 %, wrong – in 16.90 % of cases. In the absence of manifestations of the disease or with the insignificant severity of the patients' condition right answers to the 6th question have been provided by the ill in 1.35 %, wrong – in 18.92 % of cases, with the moderate severity of the condition the right answers have been marked in 5.40 %, wrong



– in 52.7 % of cases, in the significant severity of condition the right answers have been discovered in 2.03 %, wrong – in 19.6 % of cases. Thus, the ill have mainly given wrong answers to the 6th question in the presence of nervous system diseases, with affection of 4 or more organs and with the significant severity of their condition.

The answers to the 9th question (about successful and unsuccessful events in life) have been connected to the quantity of diagnosed diseases ($\chi^2 = 24.74$; $p = 0.00585$) and the presence of nervous system diseases ($\chi^2 = 6.03$; $p = 0.04892$) in the examined. When the ill have been determined with 1-2 diseases the right answers to this question have been provided in 23.65 %, wrong – in 20.25 % of cases, when being diagnosed with 3–4 diseases simultaneously the right answers have been discovered in 23.65 %, wrong – in 18.25 % of cases, with 5 or more diagnosed diseases the right answers have been discovered in 8.78 %, wrong – in 5.42 % of cases. In the absence of nervous system diseases the right answers have been provided by the ill in 42.57 %, wrong – in 35.37 % of cases, in the presence of these diseases the right answers have been provided in 13.51 %, wrong – in 8.11 % of cases.

The answers to the 13th question (about happiness) have been connected to the presence of atherosclerosis ($\chi^2 = 5.87$; $p = 0.05288$), duration of the main disease ($\chi^2 = 12.85$; $p = 0.04540$) and the relapse rate of the main disease ($\chi^2 = 23.76$; $p = 0.04896$) of the ill. In the absence of atherosclerosis the right answers to this question have been provided by the ill in 4.05 % and wrong – in 35.81 % of cases, in the presence of atherosclerosis the ill have given the right answers in 8.11 % and wrong – in 52.03 % of cases. The ill with the duration of the main disease up to 5 years including have given the right answers to this question in 1.36 % and wrong answers – in 38.09 % of cases, with the duration of the main disease within the framework of 6–20 years the right answers have been given in 7.48 % and wrong ones – in 44.9 % of cases, with the duration of the main disease 21 or more years the right answers have been given in 2.72 % and wrong ones – in 5.44 % of cases. The ill with the absence of the relapse of the main disease or with the relapse rate 1–2 times a year have given the right answers in 7.48 % and wrong answers in – 78.23 % of cases, with the relapse rate of the main disease 3 or

more times a year have provided the right answers in 4.08 % and wrong ones – in 10.20 % of cases. Thus, the ill have mainly given wrong answers to the 13th question in the presence of atherosclerosis, with longer duration and higher relapse rate of the main disease.

The answers to the 14th question (concerning what to do prior to the beginning of a new necessary work) have been connected to the presence of oncologic diseases ($\chi^2 = 7.58$; $p = 0.02252$) and relapse rate of the main disease ($\chi^2 = 52.14$; $p = 0.00001$) of the ill. In the absence of oncologic diseases mainly right answers to this question have been provided by the ill in 67.57 % of cases, wrong – in 24.70 % of cases, in the presence of these diseases the right answers have been marked in 4.05 % of cases, wrong – in 0.68 % of cases. The ill with the absence of relapse of the main disease or with the relapse rate 1–2 times a year have provided the right answers in 60.55 % and wrong answers – in 25.16 % of cases, with the relapse rate of the main disease 3 or more times a year have given the right answers in 10.88 % and wrong – in 3.40 % of cases.

The answers to the 15th question (about a secret) have been connected to severity of the patients' condition ($\chi^2 = 21.9$; $p = 0.01561$). In the absence of manifestations of a disease or with insignificant severity of the condition the right answers to this question have been provided by the ill in 12.17 %, wrong – in 8.11 % of cases, with moderate severity of the condition the right answers to this question have been marked in 46.95 %, wrong – in 12.16 % of cases, with the significant severity of the condition of the ill the right answers have been discovered in 17.57 %, wrong – in 4.06 % of cases.

The answers to the 16th question (concerning hand movements while explaining information) have been connected to presence of nervous system diseases ($\chi^2 = 5.991$; $p = 0.04999$) of the ill. In the absence of nervous system diseases the right answers to this question have been provided by the ill in 18.24 %, wrong – in 60.14 % of cases, in the presence of these diseases the right answers have been provided in 4.05 %, wrong – in 17.57 % of cases. Thus, the ill have mainly given wrong answers to the 16th question in the presence of nervous system diseases.

The answers to the 17th question (about attitude towards the weather) have been connected



to presence of allergic diseases ($\chi^2 = 6.734$; $p = 0.03448$) and duration of the main disease ($\chi^2 = 31.6$; $p = 0.00002$) of the ill. In the absence of allergic diseases the right answers to this question have been provided by the ill in 61.49 %, wrong – in 20.27 % of cases, in the presence of these diseases the right answers have been provided in 9.46 %, wrong – in 8.79 % of cases. The ill with duration of the main disease up to 5 years including have provided the right answers to this question in 30.61 % and wrong answers – in 8.84 % of cases, with the duration of the main disease within the framework of 6–20 years the right answers have been given in 38.78 % and wrong ones – in 13.60 % of cases, with the duration of the main disease 21 or more years the right answers have been given in 1.36 % and wrong ones – in 6.80 % of cases. Thus, the ill have mainly given the right answers to the 17th question in the absence of allergic diseases and in cases of shorter duration of the disease.

The answers to the 18th question (about female spirituality) have been connected to quantity of affected organs ($\chi^2 = 26.25$; $p = 0.00988$), presence of diseases of inflammatory character ($\chi^2 = 8.26$; $p = 0.04085$), nervous system diseases ($\chi^2 = 15.72$; $p = 0.00129$) and oncologic diseases ($\chi^2 = 16.18$; $p = 0.00104$), with complications ($\chi^2 = 25.84$; $p = 0.00216$) and relapse rate of the main disease ($\chi^2 = 42.55$; $p = 0.00357$) of the examined. The ill with 1 to 3 including affected organs have provided the right answers to this question in 2.70 % and wrong answers – 83.11 % of cases, people with affections of 4 or more organs have given the right answers in 2.03 % and wrong ones – in 12.06 % of cases. In the absence of diseases of inflammatory character the right answers have been provided by the ill in 0.68 %, wrong – in 62.15 % of cases, in the presence of these diseases the right answers have been provided in 4.05 %, wrong – in 33.11 % of cases. In the absence of nervous system diseases the right answers to this question have been provided by the ill in 1.35 %, wrong – in 77.02 % of cases, in the presence of these diseases the right answers have been provided in 3.38 %, wrong – in 18.24 % of cases. In the absence of oncologic diseases the right answers have been provided in 4.05 %, wrong – in 91.21 % of cases, in the presence of these diseases the right answers have been marked in 0.68 %, wrong – in 4.05 % of cases. In the absence of

diseases complications the right answers have been provided by the ill in 3.38 % and wrong answers – in 46.62 % of cases, in the presence of moderately expressed complications the right answers are discovered in 1.35 % and wrong ones – in 43.92 % of cases, in the presence of significantly expressed complications the right answers have been absent, while wrong ones have been met in 4.73 % of cases. The ill with the absence of complications of the main disease or with the relapse rate 1–2 times a year have provided the right answers in 3.40 % and wrong answers – in 82.30 % of cases, people with the relapse rate of the main disease 3 or more times a year have given the right answers in 1.36 % and wrong – in 12.92 % of cases. Thus, the ill have mainly given wrong answers to the 18th question in the presence of affections of 4 or more organs, in the presence of diseases of inflammatory character and nervous system diseases, with more frequent relapses of the main disease.

The answers to the 19th question (about male spirituality) have been connected to severity of the patient's condition ($\chi^2 = 26.13$; $p = 0.03660$). In the absence of manifestations of a disease or with the insignificant severity of the condition the right answers to this question have been absent, while wrong answers have been provided in 20.28 % of cases, people with moderate severity of condition have marked the right answers in 0.68 %, wrong – in 57.43 % of cases, in the expressed severity of the condition the right answers have been discovered in 1.36 %, wrong – 20.28 % of cases. Thus, the ill have mainly given wrong answers to the 19th question in the presence of more expressed degree of severity of their condition.

Finally, the level of spiritual health (5 scales) has been associated to the presence of nervous system diseases ($\chi^2 = 12.18$; $p = 0.01602$) of the examined. The individuals with the absence of nervous system diseases in 21.62 % of cases have had very low or low levels of spirituality, in 27.70 % of cases – average level of spirituality and in 29.06 % of cases – high or very high levels of spirituality. In the presence of nervous system diseases, 4.73 % of the ill have been diagnosed with very low or low levels of spirituality, 7.43 % of the ill – average level of spirituality and 9.46 % of the ill – high or very high levels of spirituality.

In generalized prospect, the clinical interpretation of the discovered dependencies of distribution of spiritual health parameters of the ill

on the distribution of their medical conclusions is presented in Table 2.

Table 2

Clinical Interpretation of the Discovered Dependencies of Distribution of Spiritual Health Parameters of the Ill on the Distribution of Medical Conclusions and Somatic Health Characteristics

Number of Question	Crux of the Question from the Questionnaire on Estimation of Spiritual Health	Clinical Interpretation of the Discovered Dependencies
1	Selection of the main qualities which are the main manifestation of the human spirit	The ill with 4 or more affected organs mainly provide wrong answers to this question
2	Selection of human qualities, which are connected to spirituality	The ill with the presence of nervous system diseases mainly provide wrong answers to this question
3	Interrelation of the concepts of «intellectuality» and «spirituality»	Wrong answers to this question are usually given by the ill with the presence of metabolic disorders
4	What are the ways of spirituality manifestation (art, literature, cooking)	Right answers to this question have been given by the ill in the absence of nervous system diseases, metabolic disorders and with the absence or with the rate 1–2 times a year of the relapse of the main disease
6	Selection of motives for buying things	Wrong answers to this question are mainly given by the ill with the presence of nervous system diseases, affection of 4 or more organs and with the significant severity of their condition
9	About successful and unsuccessful events in life (attitude towards them)	The discovered dependencies on distribution of the quantity of diseases and the presence of nervous system diseases are difficult to interpret clinically
13	About happiness (attitude towards it)	The ill have mainly given wrong answers to this question in the presence of cardiosclerosis, with longer duration and higher relapse rate of the main disease
14	What to do prior to the beginning of a new necessary work	The discovered dependencies on distribution of presence of oncologic diseases and relapse rate of the main disease are difficult to interpret clinically
15	About secrets (keep or tell)	The discovered dependency on distribution of severity of the patient's condition is difficult to interpret clinically
16	About hand movements while explaining information	The ill mainly give wrong answers to this question in the presence of nervous system diseases
17	About attitude towards the weather	The ill with the absence of allergic diseases and in cases of shorter duration of the disease mainly give right answers to this question
18	About female spirituality (selection of the main qualities)	The ill mainly give wrong answers to this question in the presence of affections of 4 or more organs, in the presence of diseases of inflammatory character and nervous system diseases, with more frequent relapses of the main disease
19	About male spirituality (selection of the main qualities)	The ill mainly give wrong answers to this question in the presence of more expressed degree of severity of their condition
	Level of the spiritual health (5 scales)	The discovered dependency on distribution of nervous system diseases is difficult to interpret clinically

Note. The questions with the absence of statistically relevant dependencies with analyzed medical parameters have been withdrawn



Generalizing the obtained results, it is necessary to underline that the answers to following five questions of the questionnaire have had the biggest number of associations with medical parameters: about female spirituality – 6, about happiness – 3, concerning human qualities, which are connected to spirituality – 3, about the ways of spirituality manifestation – 3 and concerning selection of motives for buying things – 3 statistically relevant dependencies.

In general, the answers of the ill to the 19 questions of the questionnaire have been connected 29 times to the 14 studied medical characteristics of the ill. The biggest number of the associations to the answers to the questions of the questionnaire have been connected to the presence of nervous system diseases (6 dependencies), relapse rate of the main disease (5 dependencies), quantity of affected organs (3 dependencies), presence of oncologic diseases (3 dependencies), severity of the patient's condition (3 dependencies), duration of the main disease (2 dependencies) and presence of metabolic disorders (2 dependencies).

The obtained results point to the fact that giving health resort treatment requires the use of programs of formation and maintenance of the person's spiritual health.

To compare and to discuss the obtained results is not possible due to the absence of scientific papers in national literature on the stated topic (study of spiritual health of chronically ill people), though the importance of taking spirituality into account in somatic clinic is underlined [6]. The comparison with foreign sources has also not been conducted

in view of different possible images and representations concerning spiritual health of a person.

Conclusions

Unfavourable state (low and average levels) of spiritual health has been discovered in 61.5 % of the ill staying in the resort, who are suffering from chronic diseases.

The state of spirituality of chronically ill people to a certain extent depends on the state of their somatic health, which is indicated by the presence of dependencies of the answers to the questions series of the questionnaire that describes spiritual health with medical conclusions and characteristics. The answers to the 13 questions of the offered questionnaire are 29 times connected to the 14 studied medical characteristics of the ill.

The answers to the questions of the questionnaire are most commonly associated to the presence of nervous system diseases (6 dependencies), relapse rate of the main disease (5 dependencies), quantity of affected organs (3 dependencies), presence of oncologic diseases (3 dependencies), severity of the patient's condition (3 dependencies), duration of the main disease (2 dependencies) and presence of metabolic disorders (2 dependencies).

Giving health resort treatment requires the use of programs of formation and maintenance of the person's spiritual health.

Conflict of interest

The authors claim that there is no conflict of interest.

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