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Social Health and Adaptation of Armenian Physicians

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***Abstract*—**Ability of adaptation of the organism is considered as an important component of health in maintaining relative dynamic constancy of the hemostasis and functioning of all organs and systems. Among the various forms of adaptation (individual, species and mental), social adaptation of the organism has a particular role. The aim of this study was to evaluate the subjective perception of social factors, social welfare and the level of adaptability of Armenian physicians. The survey involved 2,167 physicians (592 men and 1,575 women). According to the survey, most physicians (75.1%) were married. It was found that 88.6% of respondents had harmonious family relationships, 7.6% of respondents – tense relationships, and 1.0% – marginal relationships. The results showed that the average monthly salary with all premium payments amounted to 88 263.6±5.0 drams, and 16.7% of physicians heavily relied on the material support of parents or other relatives. Low material welfare was also confirmed by the analysis of the living conditions. Analysis of the results showed that the degree of subjective perception of social factors of different specialties averaged 11.3±3.1 points, which corresponds to satisfactory results (a very good result – 4.0 points). The degree of social adaptation of physicians on average makes 4.13±1.9 points, which corresponds to poor results (allowable less than 3.0 points). The distribution of the results of social adaptation severity revealed that the majority of physicians (58.6%) showed low social adaptation, average social adaptation is observed in 22.4% of the physicians and high adaptation – in only 17.4% of physicians. In conclusions, the findings of this study suggest that the degree of social adaptation of currently practicing physicians is low.

***Keywords*—**Physician's health, social adaptation, social factor, social health.

I. Backgrounds

THE human body is a multi-structured system, the functioning of which is influenced by many factors of a biological, psychological and social nature. Socio-economic changes and stress load make it difficult for the population to organize and solve survival problems.

To sustain dynamic constancy of hemostasis and well-functioning organs and systems, organisms need a range of adaptation forms; among which social adaptation should be prioritized [3], [10]. The level of social health is determined by the individual's ability to lead an active life, by opportunities and needs of creative activity, attitude to love, friendship, and family, allowing the individual to realize inherent potential and organize leisure activities [11].

Increased demands on the body's ability to adapt are imposing for those professionals whose work involves communicating with a large number of people. One of these specialties is the medical profession, an important quality of which is their own physical, mental and social well-being, since the inability to manage their condition and to find the best way out of challenging situations can lead to non-adaptation of personality and professional deformations. It is expressed either in various forms of anxiety and aggression, or in the form of emotional coldness and aloofness, which ultimately affect the health care quality and safety [1], [2], [4].

The creative nature of health care personnel differs in terms of constant contact with people, increased responsibility, permanent lack of time and information. This hampers making right decisions, which can lead to overstress and rapid depletion of the nervous system and development of "professional burnout" syndrome. Occupational factors combined with the adverse effect of social conditions contribute to the formation and development of professional and common diseases [6]-[8].

Loss of health and disability is the basis of a plurality of medical, social, economic and demographic problems. Based on the abovementioned, we have attempted to study certain components of physicians' quality of life.

II. The Purpose and Methods

Our study was carried out to evaluate the subjective response to social factors, social welfare and the degree of adaptability of physicians in Armenia in changing social-economic circumstances.

Research material was obtained in the course of a sociological survey with a special questionnaire which was developed by the authors and pre-tested in advance.

The sample size was formed based on a random sample of the total number of physicians. According to the National Statistical Service of Armenia, 2014 [9], the entire number of physicians with higher medical education (including all specialties) engaged in medical treatment, sanitary organizations, social security, scientific-research, personnel training and in the public health service is 12,896. This indicator takes into account both stomatologists with complete higher education and dentists with secondary specialization. The number of medical institutions is 1,017 (hospitals – 130, out-patient and dispensary aid medical institutions – 509, antenatal clinics and children's polyclinics – 378). Given the wide network of health care facilities and sufficient supply of physicians, it is urgent to analyze the health status of physicians and implement mechanisms to preserve their health. It is the guarantee to provide one of the most important state functions – health protection and working ability of the population.

The study has been conducted in 235 different medical institutions of the country (polyclinics – 41, rural medical institutions – 80 hospitals and medical centers – 63, ambulance substations – four, dental clinics – 10, territorial anti-epidemic centers – six, and pharmacies – 31).

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The questionnaire was offered to 2,640 physicians, 276 of them have not returned the questionnaire, while 192 of them left some questions unanswered and five questionnaires were excluded from the analysis because respondents were nurses (response rate 82.0%).

To carry out the analysis, 2,167 physicians were surveyed (592 men and 1,575 women). To assess the level of social health and social adaptation of physicians a specially created questionnaire was used, with questions divided into three categories to detect the following patterns: features of the respondent's social status, respondent's subjective perception of the impact of social factors, as well as the degree of respondent's self-esteem in adapting to social conditions.

The questionnaire answer choice is placed in the order of deterioration, and the results of testing were assessed by calculating the sum of respondents' choices, with minimum values corresponding to the best situations.

Assessment of the degree of social adaptation was carried out by subtracting the sum of answer-question scores describing the subjective perception of social factors impact on respondents from the sum of answer-question scores describing the respondent's subjective evaluation of adaptation to social factors.

Each participant was informed about the purpose of the research carried out on the voluntary basis of participation. All of the participants were sent letters of agreement. The study was approved by the local ethics committee.

The statistical processing of the obtained data was done by using Microsoft Excel XP and SPSS software (Statistical Package for the Social sciences, version 16.0). Methods of descriptive statistics (significance is equal to 95%) and probability theory were used.

III. Results and Discussion

The questionnaire included questions regarding age, gender, marital status, years since qualification as a physician, years in current workplace, earning, workplace conditions, (rural/urban setting), working conditions (working hours per day, patients per day, night shifts). The second part of the questionnaire involved questions regarding social health (social status, subjective perception of the impact of social factors, and social adaptation).

More than half of the examined physicians (72.7%) were women and 27.3% – men (Table I). The average age of respondents was 47.4±12.3 years. Age structure of physicians was characterized by distinct predominance of the age 60 and older (21% of men and 17.8% women), physicians aged 40-44 accounted 13.8%, and the smallest part accounted persons under-29 (7.4%).

Analysis of the results of a sociological survey showed that 42.6% of physicians are employed in medical institutions of the capital and 57.4% of physicians – in medical institutions in different regions of the country. In terms of workplace, 794 physicians (36.6%) are employed at polyclinics, 138 physicians (6.4%) – in rural outpatient clinics, 939 physicians (43.3%) – in hospitals, 13 physicians (0.6%) – in pathological centers, 120 physicians (5.5%) – in dental clinics, 39 physicians (1.8%) – in pharmacy, 66 physicians (3.0%) – in substations ambulance, 54 physicians (2.5%) – in territorial anti-epidemic centers, and four physicians (0.2%) – in governing institutions.

Data analysis showed that according to professional staff, more than half of the physicians (1132 physicians – 52.2%) were of therapeutic profile, 513 physicians (23.7%) – surgical profile and 225 physicians (10.4%) – laboratory diagnostic profile (physicians of functional diagnostics, radiology and laboratory diagnostics). About half of the physicians (50.8%) had work experience of 20 years or more.

TABLE I
Characteristics of the Sample Studied Physicians

Index		All physicians (n=2167)
Gender	Male	592 (27.3%)
	Female	1575 (72.7%)
Age, years (mean ± SD)		47.4±12.3
Age groups	<29	160 (7.4%)
	30-34	192 (8.9%)
	35-39	263 (12.1%)
	40-44	300 (13.8%)
	45-49	279 (12.9%)
	50-54	296 (13.7%)
	55-59	239 (11.0%)
	>60	404 (18.6%)
	missed	34 (1.6%)
Marital status	Married	1628 (75.1%)
	Divorced	146 (6.7%)
	Widows (widowers)	114 (5.3%)
	Not married	279 (12.9%)
Children	Yes	1948 (89.9%)
	No	219 (10.1%)
Workplace	Policlinic	794 (36.6%)
	Rural outpatient clinic	138 (6.4%)
	Hospital	939 (43.3%)
	Pathological center	2 (3.4%)
	Dental clinic	120 (5.5%)
	Pharmacy	39 (1.8%)
	Substation ambulance	66 (3.0%)
	Anti-epidemic center	54 (2.5%)
	Governing institution	4 (0.2%)

According to the survey, most respondents (75.1%) were married (both registered and unregistered), and had two children (49.0%), 6.7% of physicians – divorced, 5.3% of physicians – widows and widowers. Persons who had never been married accounted for 12.9% physicians.

The main criterion of social health is the presence of harmonious family relations. Dysfunctions and disorders in family life activity can be the source and background for deviations in the health of family members.

It was found that 88.6% of respondents experienced harmonious family relationship, 7.6% of respondents – tense, and 1.0% – painful, and 1.8% of cases accounted for everyday family brawls for various reasons (material, personal and organizational). Among the respondents, 0.3% of physicians live in dormitories, 3.7% rent apartments, and 93.4% of

physicians have their own accommodation. The proportion of those who noted that they were living with their parents is 20.5% and 7.2% of physicians live alone.

In identifying social well-being and level of adaptation some factors were taken into account: general social conditions, satisfaction with the environment and life sustainability (material security, social protection and social well-being).

The results showed that the average monthly salary including all premium payments amounted to 88 263.6±5.0 drams (about 200 dollars), with 16.7% of physicians indicating their heavy reliance on material support from parents or other relatives, 38.7% of physicians – partial reliance, and 40.7% of physicians – no reliance and no opportunities. At the same time, 21.7% of physicians are greatly concerned about money, 11.4% – less concerned, and only 2.4% of them – not concerned at all.

Low material welfare was also confirmed by the analysis of housing and living conditions. Living conditions are well appreciated by 40.7% of physicians, satisfactorily appreciated by 47.9% of physicians and perfectly appreciated only by 4.9% of physicians. It should be noted that a significant relationship was found between the place of work and material security ($P < 0.001$).

The second part of the questionnaire contains questions to assess the level of social health of the subjects. Satisfactory results approximating 11.3±3.1 points (with 4 as a top point) were revealed in identifying the degree of subjective perception of social factors in different specialties. The data in the current study of the physicians' level of life showed that 46.3% of physicians "live from paycheck to paycheck", 25.9% of physicians are "living well", 10.1% of physicians – "barely make ends meet (almost in poverty)", and physicians who "live in prosperity, and within the reach of anything", account for only 2.2%.

Among the respondents, 28.1% of physicians feel that their life has somewhat improved in recent years, 29.4% – has not changed, and 15.3% of physicians indicated that their life has somewhat deteriorated, 10.8% – has greatly changed for the worse, and 10.1% were undecided. It should be noted that a change in their life for the better is more characteristic of primary care physicians, while the majority of the secondary health care physicians believe that their life has not changed.

In relation to the conditions of their life activity, most physicians (60.7%) believe that "things are not going as well as I would like, but I manage to overcome difficulties", 27.4% of physicians believe that "life is very difficult, but it can still be tolerated" and 3.6% of physicians claim that to "tolerate such a distressful situation is no longer possible." In addition, 31.9% of physicians are unsure about the future, and 39.2% of the physicians hope to stabilize the situation. Based on our data, direct correlation was established among the exponent of social adaptation and age, work experience, gender and workplace. Statistical dependence is revealed among age, quality of life and current state of events ($P<0.001$).

The results of the subjective assessment of physicians to adapt to social factors showed that more than half of the physicians (56.6%) are partially able to adapt to today's life, 18.7% of physicians – fully able to find their place and to adapt to today's life and 13.1% of physicians – are complete failure (Fig. 1). The low level of social adaptation may lead to an increase of general and professional incidences of disorder among health workers.

TABLE II
ASSESSMENT OF SUBJECTIVE PERCEPTION OF SOCIAL FACTORS BY PHYSICIANS

Indices of Social Health	Both Genders (n=2167)
Level of life	
"Live in prosperity, and within reach of anything"	47 (2.2%)
"Living well"	561 (25.9%)
"Live from paycheck to paycheck"	1004 (46.3%)
"Barely make ends meet (almost in poverty)"	218 (10.1%)
" Hard to answer"	306 (14.1%)
missed	31 (1.4%)
Life in recent years	
"Much improved"	102 (4.7%)
"Life has somewhat improved "	610 (28.1)
"Has not changed"	637 (29.4)
"Life has somewhat deteriorated"	331 (15.3%)
"Has greatly changed for the worse"	233 (10.8%)
"Hard to answer"	218 (10.1%)
missed	36 (1.7%)
Current state of events	
"All goes well	85 (3.9%)
"Not all is as good as I would like, but I manage to overcome the difficulties"	1316 (60.7%)
"Life is very difficult, but it can still be tolerated"	593 (27.4%)
"Tolerate such a distressful situation is no longer possible"	78 (3.6%)
"Hard to answer	79 (3.6%)
missed	16 (0.7%)
Mood	
"Confidence in the future"	323 (14.9%)
"Hopes for the stabilization of the situation"	850 (39.2%)
"Uncertainty about the future"	691 (31.9%)
"Indifference"	62 (2.9%)
"Sense of hopelessness"	52 (2.4%)
"Hard to answer"	167 (7.7)
missed	22 (1.0)

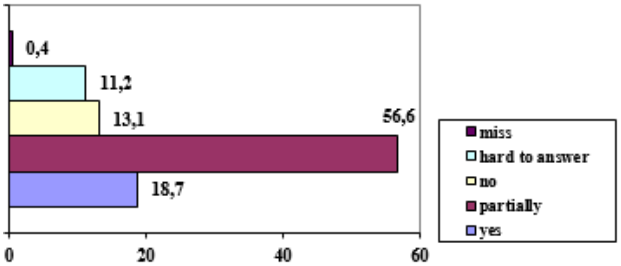

Fig. 1 Assessment of social adaptation among physicians (%)

Adaptability is the property of the organism, characterized by the success of human adaptation to different situations, and their changes, as well as emotional (internal or external) adaptation to the environment, is the main parameter of the harmonious nature. It is regarded as an aggregate of individual

psychological behavior that contributes to the harmonization of interpersonal relations and prevents the possibility of interpersonal and intrapersonal conflicts [12]. By H. Hartmann's definition (2002): "Human beings are well-adapted if the productivity of their activities, their mental balance, and their ability to enjoy life remain undisturbed" [5].

In the end, we calculate the degree of social adaptation among physicians using the sum of the scores of answers to questions, describing the subjective perception and the sum of scores of answers to questions, describing the respondent's subjective evaluation of adaptation to social factors.

TABLE III
AVERAGE VALUES OF INDICES OF SOCIAL HEALTH AMONG PHYSICIANS (M±SD)

Indices of Social Health	Male (n=592)	Female (n=1575)	Both Genders (n=2167)
Subjective perception of Social factors	11.04±3.1	11.36±3.2	11.27±3.1
Social welfare	7.05±2.2	7.25±2.2	7.19±2.2
Level of adaptability	4.03±1.8	4.17±1.9	4.13±1.9

TABLE IV
DISTRIBUTION OF PHYSICIANS ACCORDING TO DEGREE OF SOCIAL ADAPTATION

Degree of Social Adaptation	Male (n=592)	Female (n=1575)	Both Genders (n=2167)
Relevant (<3)	111 (18.8%)	266 (16.9%)	377 (17.4%)
Satisfactory (3-3.9)	138 (23.3%)	348 (22.1%)	486 (22.4%)
Poor (>4)	335 (56.6%)	935 (59.4%)	1270 (58.6%)
Missed	8 (1.4%)	26 (1.7%)	34 (1.6%)

According to our data (Tables III and IV), poor results averaging 4.13+_1.9 points (with less than 3 as allowable points) were obtained in identifying the degree of social adaptation of physicians. Distribution of social adaptation results in severity showed that the majority of physicians (58.6%) experienced poor social adaptation, 22.4% of the physicians – satisfactory social adaptation, and 17.4% of physicians – relevant social adaptation. No statistical difference was found between genders (P>0.05).

IV. CONCLUSION

In the final analysis, the degree of social adaptation of physicians under question remains low. Social adaptation is much better among primary care physicians, than that of the secondary health care physicians. At the same time, low wages and poor living conditions are reflected in health status, attitudes to work and patients, and the quality of care.

The study demonstrates the need for the development and implementation of organizational technologies to promote good health for physician. Giving adequate attention to the health of physicians and promoting preventative behaviors can help reduce the number of professional errors in health care and improve the quality of medical services. An equally important requirement is the optimization of working conditions for those physicians who are conscious of healthy lifestyle, and who aim at being healthy and efficient at work. A professional group of physicians is part of the population and strengthening and preservation of their health should also be given careful attention.

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