



## HEALTH AND WELL-BEING OF ARMENIAN PHYSICIANS

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### Abstract

The purpose of the research was to study health status in physicians of different specialties. The survey involved 1050 physicians from different medical institutions of Armenia. The Questionnaire included general questions (age, gender, marital status, years at the current workplace, workplace, working conditions), as well as questions relating to the physician's health and the Maslach Burnout Inventory (MBI).

Totally 832 physicians (203 men and 629 women) responded to the survey (response rate: 79.2%). Amongst all, 71.1% of respondents currently had any diseases or health problems and 1/3 of them had simultaneously two and more pathologies. The most part of physicians with diseases or health problems (48.2%) were self-prescribed and 21.1% physicians did not receive any treatment.

In terms of burnout, 25.4% of respondents had a high score for emotional exhaustion (EE), 51.3% had a high score for depersonalization (DP) and 46.2% had a low score for professional accomplishment (PA). As revealed, 25.0% of respondents scored high for burnout in all three dimensions. The mean score on the EE subscale was  $23.1 \pm 5.9$ , DP subscale mean value was  $10.2 \pm 3.3$ , while PA subscale averaged  $33.9 \pm 5.2$ .

The results of this research have shown that physicians had not only a high level of morbidity, but a high level of burnout as well.

**Key words:** health, prevalence, Armenian physicians, burnout.

### INTRODUCTION

Nowadays the problem of healthcare professional's health, in particular physicians, is included into a number of priorities in connection with their high rate of morbidity and the huge social and economic importance. The literature data testify that parameters of a health status of physicians, duration of their life differ from average parameters to the worse part. In general, physicians are not health-maintenance oriented. They dread being patients, because they feel helpless and vulnerable. Physicians do want to be taken care of, but feel guilty at accepting care and shame for needing it. Accordingly, physicians tend to be overcontrolling and noncompliant patients, and as a result, they often get poor quality, on-the-fly care from colleagues. Among them there are high rate of stress, depression and drug abuse [CMA Guide, 2003; Adshear G., 2005; Firth-Cozens J., 2007; Sotiropoulos A. et al., 2007].

Therefore we attempted to study the health state of physicians who are working at different levels of healthcare system of Armenia.

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### MATERIAL AND METHOD

To evaluate the health state of Armenian physicians, a survey was conducted among 1050 doctors. The sample was randomly selected among physicians from all specialities and 80 healthcare settings across Armenia: 14 polyclinics, 10, rural medical ambulatory, 22, hospitals and the medical centers, 5 ambulance centers, 7 dentistry clinics, 4 territorial anti-epidemic centers, 18 drugstores. The study was carried out between September 2009 and June 2010. Data were collected using a self-completed Questionnaire. The Questionnaire included questions regarding the age, gender, marital status, years since qualification as a doctor, years in current workplace, workplace, working conditions (working hours per day, patients per day). This survey instrument also contained a section consisting of questions relating to the physician's lifestyle and self-estimation of health. All diseases, symptoms, and syndromes revealed by the survey were classified and estimated according to the "International statistical classification of illnesses and the problems connected to health -10".

The third part of the Questionnaire involved the Maslach Burnout Inventory (MBI), which was used to measure burnout [Maslach C., Jackson S., 1986]. The MBI consists of 22 items each scored from 0 to 6. These items contribute to three subscales, namely:

Table.

## Characteristics of physicians participating in the study

Characteristic features	Male (n=203)		Female (n=629)		Total (n=832)	
	n	%	n	%	n	%
<b>Age (years)</b>						
<35	49	24.1	135	21.5	184	22.1
35-44	55	27.1	151	24.0	206	24.8
>44	99	48.8	343	54.5	442	53.1
<b>Marital status</b>						
Married	158	77.8	430	68.3	588	70.7
Unmarried	35	17.2	116	18.4	151	18.1
Divorced	7	3.4	41	6.5	48	5.8
Widowed	3	1.5	42	6.7	45	5.4
<b>Work place</b>						
Primary health care level	25	12.3	263	41.8	288	34.6
Secondary health care level	125	61.6	226	35.9	351	42.2
Ambulance service	14	6.9	28	4.5	42	5.0
Drugstores	5	2.5	23	3.7	28	3.4
Territorial anti-epidemic centers	6	3.0	43	6.8	49	5.9
Dentistry clinics	26	12.8	38	6.0	64	7.7
Pathology center	2	1.0	8	1.3	10	1.2

emotional exhaustion (EE; nine questions, maximal score 54), depersonalization (DP; five questions, maximal score 30), and personal accomplishment (PA; eight questions, maximal score 48).

The score of each subscale was considered separately, three scores were calculated for each respondent. Up to one missing response per dimension of burnout in the MBI instrument was replaced with the average score of the rest of that respondent's responses for that dimension. If more than two responses were missing for any dimension, the score for that dimension was replaced with a "missing value" code recognized as such by SPSS (Statistical Package for Social Sciences).

Data were analyzed using Microsoft Excel XP, Biostat and SPSS software version 12.0.

*Ethical approval:* The purpose of research and the voluntary basis of participation were explained to each participant, and his/her verbal consent was obtained.

The study received approval from the ethics committee of YSMU.

## RESULTS

Out of 1050 distributed Questionnaires 120 were not returned, 98 had missing data and were not used; response rate was 79.2%. A total of 832 physicians participated in the survey (Table). Among the respondents 203 physicians (24.4%) were males and 629 physicians (75.6%) were females. The mean age of participants was  $45.3 \pm 0.4$  years with the age ranging from 22 to 79 years.

The analysis of data obtained due to the survey showed that 288 physicians were working at a primary health care level and 351 physicians at a secondary level of health services. Among the respondents, 42 physicians were working in the ambulance service, 28 physicians in drugstores, and 49 physicians in territorial anti-epidemic centers. In the given sample there were 64 dentists and 10 pathologists.

At the moment of filling in the questionnaire, most of the respondents (50.8%) had graduated 20 years ago and 15.9% had graduated 4 years ago. The

mean estimated time of physician's work was  $7.6 \pm 3.2$  hours per day; they handled  $9.7 \pm 7.8$  patients a day.

Among 766 physicians, the majority (51.6%) estimated the state of health as "satisfactory" and 41.0% of physicians considered their health status "good".

A survey of 832 physicians found that 71.1% of respondents (57.6% men and 75.5% women;  $z=4.8$ ,  $P<0.001$ ) currently had any diseases or health problems and  $\frac{1}{3}$  of them had simultaneously two and more pathologies. Of those, who required help only 18.1% of respondents said, they followed instructions of their polyclinics physicians and 11.7% followed their hospital physicians' instructions. Meanwhile, the most part of physicians with diseases or health problems (48.2%) were self-prescribed, and 21.1% physicians did not receive treatment.

Among physicians the most frequent illnesses were impairment of endocrine systems (55.9%), eyes (46.6%), cardio-vascular system (14.8%), respiratory system (10.3%), digestive system (9.1%) and musculoskeletal system (8.8%). The prevalence of illnesses of urogenital system (2.7%), skin (5.8%), nervous system (2.5%) and mental problems (1.4%) were less.

The study on allergy frequency in doctors has shown that 201 (25.2 %) physicians among 797 respondents had various forms of allergy. Mixed forms of allergy were recorded in 6.5% physicians. Allergic rhinitis (7.0 %), urticaria (1.8%) and dermatitis (1.8%) were the most often forms of allergy. Professional contact dermatitis was revealed in 0.4% of physicians. The difference in prevalence of allergy connected to specificity of work was not statistically significant ( $P>0.05$ ).

The physicians' record of healthy lifestyle basis was also poor. It was revealed that only 5.0% of physicians visited sports halls, 5.2% of physicians visited pools and 6.8 % regularly did physical exercises ( $n=634$ ). Only 0.9% of physicians went in for sports. It is necessary to note that 36.3 % of respondents noted that they were not engaged in physical activity at all.

The analysis of cigarette smoking prevalence in the surveyed sample has shown that 18.1% physicians were current smokers, 6.9% physicians smoke occasionally and 4.8% were former smokers ( $n=786$ ). Among the smokers 59.0% reported their smoking habits to be more than 10 years. The survey also

found that 0.5% of physicians regularly (every day) took alcoholic drinks, and 4.6 % of physicians ( $n=624$ ) used them frequently (1-2 times a week). During the work time, 0.7% of physicians always used alcoholic drinks, while 13.3% sometimes used them.

Job-related "burnout" was identified as an occupational hazard for various professionals involved in people-oriented services. Burnout is frequent among physicians, with rate ranging from 25% to 76%, depending on the work conditions and medical specialty [Kirwan M., Armstrong D., 1995; Goebing C. et al., 2005; Soler J. et al., 2008].

The mean score on the EE subscale of MBI scores was  $23.1 \pm 5.9$ , on the DP subscale it was  $10.2 \pm 3.3$ , on the PA subscale  $33.9 \pm 5.2$ .

The three dimensions of burnout were transformed into dummy categorical variables for high, average and low burnout in the dimensions of EE, DP and PA as recommended by C. Maslach and co-authors (EE: low burnout  $\leq 13$ , average burnout 14-26, high burnout  $\geq 27$ ; DP: low burnout  $\leq 5$ , average burnout 6-9, high burnout  $\geq 10$ ; PA: high burnout  $\leq 33$ , average burnout 34-39, low burnout  $\geq 40$ ) [Maslach C. et al., 2001].

Distribution of respondents by degree of burnout (high, average or low) in the three dimensions (EE, DP, PA) showed that 25.4% of respondents scored high for EE, 51.3% for high DP and 46.2% for high PA.

The analysis on frequency distribution of respondents by presence of high burnout score in none (0), one or more of the three dimensions revealed that 12.1% of respondents scored high for burnout in all three dimensions. Only 23.1% of physicians did not score high for burnout in any dimension, whilst 25.0% scored high for burnout in at least two dimensions [Margaryan A., 2010].

## DISCUSSION

The results of the survey among Armenian physicians signify to not only a high level of morbidity, but also a high level of burnout in physicians. One of necessary conditions of a health care professional trade is doctor's own physical, mental and social well-being. Implementation of physician's health programs, which include early identification, intervention, evaluation, treatment, and long-term monitoring is very important. In modern conditions of a

social and economic reorganization the analysis of psychosocial factors influencing the health of a physician, who devoted the professional life to the questions of prevention and treatment among the popula-

tion is not less important. Therefore, health of doctors should be in the sphere of attention of both administrations of healthcare establishments, and the government.

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