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Job satisfaction and associated factors in Greek public hospitals

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Abstract. Background and aim: To investigate the level of job satisfaction of health care professionals in the public hospitals of the 1st Regional Health Authority of Attica and further to assess its determining factors. Methods: The Job Satisfaction Survey questionnaire was administered to health professionals in thirteenhospitals. The 36 items of the questionnaire are expressed on a Likert scale and are divided into nine dimensions. Additional questions were added covering the demographic and socio-economic characteristics. Results: The reliability of the tool was: α Cronbach = 0.89. The response rate was 81.95%, 3,278 questionnaires were collected overall, of which 52,96% (n=1,736) originated from the nursing staff, 24.50% (n=803) from the medical staff and 22.54% (n=739) from other health employees. The average overall job satisfaction is moderate (3.33 out of 6). The category with the lowest score in job satisfaction was that concerning salaries (2.12). Questions related to promotion (2.45), additional benefits (2.67), operating procedures (2.82) received low job satisfaction rates. Instead, the categories that garnered positive job satisfaction concerned questions related to the supervision (4.66), the nature of work (4.34), and co-workers (4.25). Questions related to communication received 3.79. Conclusions: The findings showed lowest satisfaction levels in pay, fringe benefits, contingent rewards, promotion and operating procedures dimensions of job satisfaction. Participants were more satisfied with the nature of work, supervision and co-workers. The findings can be used as a set of reference levels and indicators for the human resources development component of the quality management system in the public hospitals. (www.actabiomedica.it)

Key words: job satisfaction; public hospitals; hospital employees; Greece

Introduction

The quality of health care services is affected by various factors including the health infrastructure, human resources and health care system. Among these, human resources are the most important component in the provision of health care services. One of the main factors which impact the productivity of human resources is job satisfaction, as plays a prominent role in determining a person's intention to stay at an organization. Job satisfaction is defined as the positive response of professionals to working conditions that meet their needs, as a result of their assessment

of the value or fairness of their professional experience. Also, it is regarded as an indicator of working-life quality (1).

In the public health care sector, the job satisfaction of professionals plays an protrusive role in their performance and is further reflected in the health of the patients. Employees directly influence patient satisfaction because of their involvement and interaction with patients (2). In addition, job satisfaction has been closely associated with the effectiveness and sustainability of a health care system (3,4). Managers should concentrate on job satisfaction of employees because, if dissatisfied, they are more likely to provide inferior

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service. It is necessary to understand what motivates them and the extent to which the organization and other factors affect their job satisfaction in order to be more productive. Health care systems cannot function effectively without skilled, motivated and supported health workers (5,6).

Objectives

The research study attempted to assess the level of job satisfaction and its relationship with the personal and professional characteristics of the employees in public hospitals of 1st Regional Health Authority of Attica in Athens, Greece. Additionally, to identify the sources of satisfaction or dissatisfaction. For the Ministry of Health (MoH) the purpose of the study was to establish a system of indicators and reference levels for measurement of job satisfaction as a component of human resources development in public hospitals.

Materials and methods

Instrument

All organizations recognize the need to monitor the satisfaction levels of their employees, because employee dissatisfaction could be very costly and disruptive to organizational effectiveness and commitment. The Job Satisfaction Survey (JSS) questionnaire developed by Spector, is the most frequently used instrument and has the purpose of evaluating the individual's satisfaction (7,8).

The current research is based on the Greek JSS. The validity and reliability of which was documented by Tsounis and Sarafis (2018) and was tested with a sample of 239 employees of various specialties in drug addiction treatment (9). The study instrument consists of 36 items and nine dimensions of job satisfaction: pay, fringe benefits, promotion, co-workers, contingent rewards, nature of work, supervision, operating procedures and communication. The items are written in both directions, so about half of them must be reverse scored. The measurement scale was a six-point Likert, where 1=strongly disagree, 2=moderately disagree,

3=slightly disagree, 4=slightly agree, 5= moderately agree and 6=strongly agree – the higher the score, the greater the job satisfaction. The survey instrument also included socio-demographic data, like participants' age, gender, marital status, educational status and work-related information such as professional category, professional qualification and experience time.

Ethical considerations

The Ethical Committee of National and Kapodistrian University of Athens approved the study protocol. Additionally, the study was conducted after review and written approvals from relevant institutional ethics and research committees were secured from all thirteen hospitals and from the 1st Regional Health Authority of Attica (approval number: 31707-7/6/2019). The researcher informed each participant about the purpose of the study. Furthermore, participation of employees was voluntary and based on written informed consent prior to data collection. Anonymity of participants and confidentiality of data were assured.

Settings and participants

A pilot study was carried out with 30 volunteer participants to identify any problems. Since, all questionnaires were returned with no problems reported; no alterations were made. The reliability of the pilot study was checked, as Cronbach's alpha was 0.78 the reliability of the instrument was verified (10).

The survey was conducted between July 2019 and October 2020, in 13 hospitals out of a total of 24 in 1st Regional Health Authority of Attica. The region of Attiki with its capital Athens, is the largest region of Greece, has a total population of around 3,75 millions, approximately 35% of total Greece population. For those employees who agreed to participate in the study, an envelope containing the instruments and the consent form was delivered. Thus, the participants filled a personal and professional characterization form and answered the Greek version of the JSS. Of the 4,000 questionnaires distributed, 3,278 (81.95%) were returned. Respondents were informed that the study results would be used only for scientific purposes.

Statistical analysis

Descriptive statistics were used to report the job satisfaction of respondents. The 36 items of job satisfaction and other variables on ratio scales were expressed as means (M) and standard deviations (SD) and qualitative data as absolute and relative frequencies. Percentages of agreement/disagreement with different aspects of job satisfaction were also calculated. The Kolmogorov-Smirnov and Shapiro-Wilk tests were used for normality assessment. Kruskal Wallis test were used for comparisons according to gender, education, age and job-related variables. Spearman Rank Differences correlation analysis were developed to explore intercorrelations among subscales. Reliability analysis included Cronbach's Alpha for internal consistency. The level of statistical significance was set at 0.05. All statistical analyses were performed using the Statistical Package for Social Sciences, Version 26.0 for Windows.

Results

Normality analysis

The Kolmogorov-Smirnov and Shapiro-Wilk normality tests were used for normality. Based on the results, the data was determined as not normally distributed, since the p-value was less than 0.05 for both tests.

Sociodemographic analysis

The majority of the respondents were female (2,666; 81.33%) mostly due to the large number of female nursing staff (1,736; 52.96%). Men represented the minority (612; 18.67%). The age distribution was: 1.49% under 25 years old, 15.86% between 26-35, 33.25% between 36-45, 38.16% between 46-55, and 11.23% over 56. As far as the educational level is concerned, the majority was university graduates (59.55%), while 19.37% had post-graduate studies. Concerning employment status, the majority worked as permanent staff (2,655; 80.99%) and only 623 (19.01%) employees worked as temporary staff. As regards length of

service, 19.37% had under 5 years, 11.90% of study participants had worked from 6 to 10 years, 17.63% from 11 to 15 years, 22.45% from 16 to 20 years, while 28.65% had worked for more than 20 years. About half employees stated that they managed to cope with their financial obligations but without having much money left aside whereas 4 out 10 faced greater economic problems (Table 1).

On a scale of 1 to 6, male respondents were a little more satisfied with their jobs than were female staff. The overall score was 3.49, indicating neither satisfaction nor dissatisfaction among the staff. The overall female job satisfaction score was 3.30. Both male and female employees were most satisfied with "Co-workers": 4.37/4.23 and "Nature of work": 4.34/4.34 respectively. Both genders were least satisfied with "Pay": 2.42/2.05 and "Promotion": 2.77/2.38 respectively. Only on the "Supervision" job satisfaction facets did female respondents report being slightly more satisfied than their male counterparts: 4.61/4.67 respectively. The results indicate a weak relationship between respondents' gender and facets of job satisfaction. In a more detailed analysis of age, it was possible to detect differences in job satisfaction by age group. Although the differences were small (M=3.30-3.60), youngest respondents in the range ≤ 25 years old (M=3.60), showed a higher satisfaction level compared to the intermediate age groups. Respondents who were between 46 to 55 years old (M=3.30) expressed lower satisfaction levels (Table 2).

Bivariate Correlation Analysis

In Table 2, Kruskal Wallis Test shows that there is a significant difference in dimensions of pay, promotion, fringe benefits and contingent rewards of respondents with respect to gender, age, level of education, marital and employment status, professional experience and economic situation (p=0.000) at 0.05 level of significance. Similarly, there is a significant difference in supervision of respondents with respect to age, professional experience, marital and employment status (p=0.000), but no significant difference with respect to gender (p=0.287) and level of education (p=0.166). Yet, a significant difference there is in operating conditions of respondents with respect to level

Table 1. Sociodemographic characteristics of the sample per professional category.

				Profession	al Categori	es		
Characteristics	Do	ctors	Nur		Other Profes	Health	Overall	Sample
	N=803	%	N=1,736	%	N=739	%	N=3,278	%
Gender		•						
Male	294	36.61%	150	8.64%	168	22.73%	612	18.67%
Female	509	63.39%	1,586	91.36%	571	77.27%	2,666	81.33%
Age		•	•					
< 25 years	5	0.62%	32	1.84%	12	1.62%	49	1.49%
26-35 years	236	29.39%	243	14.00%	41	5.55%	520	15.86%
36-45 years	273	34.00%	612	35.25%	205	27.74%	1,090	33.25%
46-55 years	210	26.15%	723	41.65%	318	43.03%	1,251	38.16%
56 > years	79	9.84%	126	7.26%	163	22.06%	368	11.23%
Marital Status	1							
Married	385	47.95%	1,170	67.40%	499	67.52%	2,054	62.66%
Single	393	48.94%	431	24.83%	152	20.57%	976	29.77%
Divorced	24	2.99%	124	7.14%	62	8.39%	210	6.41%
Widowed	1	0.12%	11	0.63%	26	3.52%	38	1.16%
Level of Education								
Compulsory	0	0.00%	7	0.40%	43	5.82%	50	1.53%
Secondary	0	0.00%	313	18.03%	328	44.38%	641	19.55%
Bachelor	559	69.61%	1,099	63.31%	294	39.78%	1,952	59.55%
Master's / PhD	244	30.39%	317	18.26%	74	10.01%	635	19.37%
Employment status	'							
Permanent	425	52.93%	1,590	91.59%	640	86.60%	2,655	80.99%
Temporary	378	47.07%	146	8.41%	99	13.40%	623	19.01%
Professional Experience								
< 5 years	290	36.11%	221	12.73%	124	16.78%	635	19.37%
6-10 years	158	19.68%	158	9.10%	74	10.01%	390	11.90%
11-15 years	114	14.20%	376	21.66%	88	11.91%	578	17.63%
16-20 years	135	16.81%	457	26.32%	144	19.49%	736	22.45%
20 > years	106	13.20%	524	30.18%	309	41.81%	939	28.65%
Economic situation	'					'		
I cannot cope with my financial obligations	2	0.25%	70	4.03%	55	7.44%	127	3.87%
I manage financially with great difficulties	108	13.45%	716	41.24%	363	49.12%	1,187	36.21%
I manage financially but I do not have much left aside	570	70.98%	871	50.17%	274	37.08%	1,715	52.32%
I am financially comfortable	105	13.08%	31	1.79%	25	3.38%	161	4.91%
I do not know / I do not answer	18	2.24%	48	2.76%	22	2.98%	88	2.68%

Table 2. Mean scores and Standard Deviations (SD) by demographic and job related variables for Job Satisfaction.

Demographic variables			P.	Pay	Promotion	otion	Supe	Supervision		Fringe Benefits	Cont	Contingent Rewards	Oper	Operating Conditions	Co-wa	Co-workers	Nature of work	e of	Commu	Communication	Overall Job Satisfaction	ll Job ction
Gender	z	%	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Male	612	18.67%	2.42	0.82	2.77	98.0	4.61	0.87	2.98	0.86	3.18	0.92	2.85	0.67	4.37	0.71	4.34	0.77	3.86	0.82	3.49	0.56
Female	2,666	81.33%	2.05	0.78	2.38	0.82	4.67	0.88	2.59	0.82	2.85	0.90	2.81	69.0	4.23	0.70	4.34	0.76	3.77	0.82	3.30	0.50
Overall	3,278	100%	2.12	0.80	2.45	0.84	4.66	0.88	2.67	0.84	2.91	0.92	2.82	69.0	4.25	0.71	4.34	0.76	3.79	0.82	3.33	0.52
P-sig			0.000		0.000		0.143		0.000		0.000		0.149		0.000		0.877		0.014			
Age	Z	%	Mean	SD	Mean	QS	Mean	o l	Mean	υ SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
< 25 years	49	1.50%	2.44	1.07	2.79	1.04	4.97	86.0	2.84	1.20	3.23	1.19	3.27	0.79	4.37	0.91	4.65	1.02	3.85	0.89	3.60	0.74
26-35 years	520	15.86%	2.31	0.82	2.49	0.84	4.69	0.86	2.78	0.86	3.01	0.92	2.79	0.77	4.32	0.73	4.35	0.77	3.77	0.82	3.39	0.54
36-45 years	1,090	33.25%	2.12	0.78	2.39	0.79	4.71	0.81	2.63	0.81	2.88	0.87	2.82	0.63	4.23	69.0	4.25	0.78	3.73	0.78	3.31	0.49
46-55 years	1,251	38.16%	2.02	0.79	2.43	0.85	4.60	0.95	2.61	0.85	2.85	0.93	2.80	0.70	4.25	0.71	4.36	92.0	3.79	0.85	3.30	0.52
56 > years	368	11.23%	2.18	080	2.60	0.89	4.60	0.81	2.76	0.80	3.06	0.92	2.82	89.0	4.26	69.0	4.48	69.0	3.96	0.80	3.41	0.51
Overall	3,278	100%	2.12	08.0	2.45	0.84	4.66	0.88	2.67	0.84	2.91	0.92	2.82	69.0	4.25	0.71	4.34	92.0	3.79	0.82	3.33	0.51
P-sig			0.000		0.000		0.002		0.000		0.000		0.000		0.112		0.000		0.000			
Level of Education	Z	%	Mean	SD	Mean	αs	Mean	SD	Mean	u SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Compulsory	20	1.53%	2.30	0.88	2.47	0.73	4.53	0.86	2.69	0.76	3.02	0.84	3.19	0.59	4.09	99.0	4.41	0.61	4.06	0.61	3.42	0.74
Secondary	641	19.55%	1.92	0.74	2.31	0.82	4.66	1.03	2.49	0.82	2.75	0.95	2.82	92.0	4.19	08.0	4.37	98.0	3.76	0.91	3.25	0.54
Bachelor	1,952	59.55%	2.16	0.79	2.48	0.82	4.69	0.78	2.71	0.83	2.95	0.86	2.84	0.65	4.30	0.65	4.32	0.70	3.80	0.75	3.36	0.49
Master's /PhD	635	19.37%	2.20	0.85	2.49	0.92	4.58	1,00	2.72	0.91	2.95	1.02	2.72	0.71	4.21	0.77	4.34	98.0	3.73	0.94	3.32	0.52
Overall	3,278	100%	2.12	0.80	2.45	0.84	4.66	0.88	2.67	0.84	2.91	0.92	2.82	69.0	4.25	0.71	4.34	0.76	3.79	0.82	3.33	0.52
P-sig			0.000		0.000		0.046		0.000		0.000		0.000		0.000		0.536		0.021			
Marital Status	Z	%	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Married	2,054	62.66%	2.07	0.75	2.45	0.84	4.63	0.85	2.63	0.80	2.89	0.87	2.83	99.0	4.25	0.67	4.35	0.71	3.80	0.79	3.32	0.49
Unmarried	926	29.77%	2.28	98.0	2.51	0.83	4.69	06.0	2.78	0.90	3.02	0.97	2.80	0.74	4.30	0.76	4.33	0.82	3.76	0.85	3.39	0.57
Divorced	210	6.41%	1.87	0.81	2.22	0.83	4.78	1.06	2.46	0.91	2.64	1.02	2.70	0.74	4.15	0.82	4.30	66.0	3.69	0.94	3.20	0.54
Widowed	38	1.16%	2.06	0.82	2.42	1.00	4.55	0.81	2.68	0.75	2.84	0.78	2.93	0.56	4.09	0.46	4.20	0.65	3.95	99.0	3.30	0.44
Overall	3,278	100%	2.12	0.80	2.45	0.84	4.66	0.88	2.67	0.84	2.91	0.92	2.82	69.0	4.25	0.71	4.34	92.0	3.79	0.82	3.33	0.52
P-sig			0.000		0.000		0.052		0.000	_	0.000		0.025		0.015		0.523		0.085			
																					`	•

(continues)

Demographic variables			Pay	ıy	Promo	otion	Promotion Supervision	rision	Fringe Benefits	ige fits	Contingent Rewards	ngent ırds	Operating Conditions		Co-workers	rkers	Nature of work		Overall Job Communication Satisfaction	ication	Overall Job Satisfaction	l Job ction
Professional Experience	Z	%	Mean SD	SD	Mean	SD	Mean	SD	Mean SD Mean	SD	Mean	SD	Mean	SD	Mean	SD Mean SD	Mean	SD	Mean	SD	Mean	SD
< 5 years	635	635 19.37% 2.44 0.87 2.62 0.86 4.84 0.89	2.44	0.87	2.62	98.0	4.84	0.89	2.93 0.95	0.95	3.18	1.02	2.84	0.78	2.84 0.78 4.40 0.78 4.41 0.85 3.77	0.78	4.41	0.85	3.77	0.91	3.49 0.60	09.0
6-10 years	390	390 11.90% 2.25 0.84	2.25	0.84	2.50 0.81	-	4.74	0.79	2.79	0.83	3.03	98.0	2.89	89.0	4.30	69.0	4.33 0.77	0.77	3.81	0.74	3.40	0.50
11-15 years	578	578 17.63% 2.04 0.73	2.04	0.73	2.35 0.78	0.78	4.62	0.79	2.62 0.78		2.83	0.83	2.87	0.59	4.21	99.0	4.27 0.70	0.70	3.79	92.0	3.29	0.49
16-20 years	736	736 22.45% 2.02 0.68	2.02	89.0	2.39 0.80		4.62 0.77	0.77	2.60 0.76 2.85	0.76	2.85	0.81	2.84	0.61	2.84 0.61 4.21 0.59 4.28 0.66 3.82	0.59	4.28	99.0	3.82	0.71	3.29 0.44	0.44
20 > years	939	939 28.65% 1.99 0.79	1.99	0.79	2.42 0.88		4.56	1,01	2.51 0.81		2.79	0.95	2.72	0.73	4.21	0.75	4.37 0.81		3.75	06.0	3.26	0.51
Overall	3,278	3,278 100% 2.12 0.80 2.45 0.84	2.12	08.0	2.45			0.88	4.66 0.88 2.67 0.84 2.91	0.84	2.91	0.92	2.82 0.69	69.0	4.25 0.71 4.34 0.76	0.71	4.34	92.0	3.79	0.82	3.33 0.52	0.52
P-sig			0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.002		0.421			

Notes: N=3,278, p<0.001, p<0.05

of education, professional experience, economic situation (p=0.000), marital status (p=0.012), employment status (p=0.003), gender (p=0.020). Again, a significant difference observed in co-workers of respondents with respect to gender, level of education, professional experience, marital and employment status, economic situation (p=0.000), but no significant difference with respect to age (p=0.040). Moreover, there is a significant difference in nature of work of respondents with respect to age, professional experience, employment status (p=0.000) and economic situation (p=0.002), but no significant difference with respect to gender (p=0.236), level of education (p=0.279) and marital status (p=0.291). Additionally, there is a significant difference in communication of respondents with respect to age, economic situation, gender (p=0.000) and marital status (p=0.043), but no significant difference with respect to professional experience (p=0.601), employment status (p=0.838) and level of education (p=0.153).

Correlation Analysis

We calculated the correlations between dimensions using the pair wise Spearman's correlation coefficient. Positive intercorrelations among subscales ranged between 0.059 to 0.636. Only one intercorrelation among subscales (supervision-operating procedures) founded. Cohen (1988) proposed the following

interpretation for correlations: if the r-value equals 0.10 to 0.29 (positive) or -0.29 to -0.10 (negative), there is a weak correlation between the two independent variables. If the r-value is 0.30 to 0.49 (positive) or -0.49 to -0.30 (negative), there is a moderate correlation. If the r-value equals 0.50 to 1.00 (positive) or -1.00 to -0.50 (negative), a strong correlation is indicated (11). Correlations were strong in seven cases, while there were also eleven moderate and sixteen weak intercorrelations (Table 3).

Reliability analysis

The overall job satisfaction was 0.89. The internal consistency values of each dimension of Spector's Job Satisfaction Survey range from 0.41 to 0.81. Two subscales, supervision and contingent rewards have alpha values in the range of 0.74 to 0.81. Six other subscales have the alpha values slightly lower than the mark of α =0.70. More specifically, fringe benefits (α =0.68), pay (α =0.66), promotion (α =0.65), communication (α =0.64), co-workers (α =0.62), nature of work (α =0.62). Exceptionally, the subscale operating conditions reports an outstandingly low value of Cronbach's alpha (α =0.41). This subscale also reported a very low internal consistency in the Greek Sample of Tsounis and Sarafis (0.48). Despite that, the whole Spector's Job Satisfaction Survey show cases a very high level of internal consistency

Table	3. Spearman	correlation	among JSS	dimensions	٠.

	Dimensions	1	2	3	4	5	6	7	8	9
1	Pay	1	0.556**	0.034*	0.624**	0.547**	0.265**	0.220**	0.211**	0.288**
2	Promotion	0.556**	1	0.072**	0.576**	0.526**	0.194**	0.223**	0.241**	0.283**
3	Supervision	0.034*	0.072**	1	0.076**	0.230**	-0.01	0.401**	0.254**	0.229**
4	Fringe benefits	0.624**	0.576**	0.076**	1	0.617**	0.332**	0.282**	0.249**	0.318**
5	Contingent rewards	0.547**	0.526**	0.230**	0.617**	1	0.338**	0.389**	0.348**	0.470**
6	Operating procedures	0.265**	0.194**	-0.01	0.332**	0.338**	1	0.139**	0.132**	0.359**
7	Co-workers	0.220**	0.223**	0.401**	0.282**	0.389**	0.139**	1	0.360**	0.383**
8	Nature of work	0.211**	0.241**	0.254**	0.249**	0.348**	0.132**	0.360**	1	0.344**
9	Communication	0.288**	0.283**	0.229**	0.318**	0.470**	0.359**	0.383**	0.344**	1
Not	es: N=3,278.	*. Correla	tion is sign	ificant at th	e 0.05 leve	l (2-tailed)				
		**. Correla	tion is sign	ificant at th	ne 0.01 leve	l (2-tailed)				

(α =0.91), similar to the value achieved by Spector himself. Generally (12), if a Cronbach's alpha value is α <0.40 the scale is not reliable, if $0.40 \le \alpha$ <0.60 then the scale reliability is low, if $0.60 \le \alpha$ <0.80 then the size is quite reliable and if $0.80 \le \alpha$ <1.00 the scale is highly reliable (Table 4).

Split-half reliability (Table 5) was also assessed by dividing the measure into two halves; Part 1: consisted of first 18 items and Part 2: consisted of the remaining 18 items of the scale. The findings showed that JSS had good split-half reliability as assessed through the Guttman Split-Half Coefficient (0.77). A general accepted rule is that α value of 0.60-0.70 indicates an

acceptable level of reliability, and 0.80 or greater a very good level (13).

The mean score of overall perception of job satisfaction of healthcare staff who worked at the 1st Regional Health Authority of Attica was 3.33 on a one to six scale. The overall perception of job satisfaction exceeded slightly disagree (score 3) and approached slightly agree (score 4). Employees are thus neither satisfied nor dissatisfied with their job. The dimension associated with the highest levels of dissatisfaction was pay or remuneration. Additionally, the dimension associated with the highest levels of satisfaction was supervision. The findings reported that more respondents

Table 4. Internal consistency coefficients of JSS.

	United States	Greek Sample			Current Study	
Dimensions	Sample Spector (2007)	Tsounis & Sarafis (2018)	Doctors	Nurses	Other Health Professionals	Overall Job Satisfaction
Pay	0.75	0.62	0.71	0.58	0.57	0.66
Promotion	0.73	0.67	0.74	0.55	0.59	0.65
Supervision	0.82	0.87	0.78	0.80	0.83	0.81
Fringe Benefits	0.73	0.73	0.70	0.58	0.63	0.68
Contingent Rewards	0.76	0.71	0.75	0.65	0.80	0.74
Operating Conditions	0.62	0.48	0.48	0.38	0.41	0.41
Coworkers	0.60	0.67	0.59	0.58	0.62	0.62
Nature of work	0.78	0.74	0.64	0.58	0.69	0.62
Communication	0.71	0.71	0.66	0.59	0.68	0.64
The final score	0.91	0.87	0.91	0.85	0.90	0.89
The sample size	2,870	239	803	1,736	739	3,278

Table 5. Split-Half reliability analysis.

Cronbach's Alpha	Part 1	Value	0.81
		N of Items	18ª
	Part 2	Value	0.83
		N of Items	18 ^b
	Total N of Items		36
Correlation Between Forms			0.63
Spearman-Brown Coefficient		Equal Length	0.77
		Unequal Length	0.77
Guttman Split-Half Coefficient			0.77
a. The items are: Q1, Q2, Q3, Q5, Q7	7, Q9, Q11, Q13, Q15, Q17,	Q20, Q22, Q25, Q27, Q28, Q3	30, Q33, Q35.
b. The items are: Q4, Q6, Q8, Q10, Q)12, Q14, Q16, Q18, Q19, Q)21, Q23, Q24, Q26, Q29, Q31	, Q32, Q34, Q36.

were dissatisfied (52.3%) than those who were satisfied (47.7%). Regarding Doctors, more respondents were satisfied (57%) than those who were dissatisfied (43%). On the contrary, more nursing staff (57.8%) and other health professionals (56.2%) were dissatisfied than those who were satisfied (Table 6).

Discussion

In this study, the average level of overall job satisfaction was 3.33 out of 6 (Doctors 3.61, Nurses 3.23, Other Health Professionals 3.28). Our study findings discovered that most of the employees of the hospitals were neither satisfied nor dissatisfied, they were ambivalent regarding their job satisfaction. The professionals showed dissatisfaction with most JSS dimensions, namely pay (2.12), promotion (2.45), and fringe benefits (2.67). A perception of dissatisfaction was expressed regarding the operating procedures (2.82) and contingent rewards (2.91) dimensions. However, satisfaction was found with supervision (4.66), co-workers (4.25), and the nature of work (4.34). The results of this study are consistent with those of the research findings in the Greek Sample of Tsounis and Sarafis (2018)(9).

Still, salary and fringe benefits negatively influenced the perception of job satisfaction (14,15). Bratton and Gold (2009) define fringe benefit as that part of the total reward package provided to employees in addition to base or performance pay (16). Low salaries and unjust payments of doctors and nurses pose a threat, mainly because this does not seem to be the case in other professional sectors (17). As result of the economic crisis in Greece, the salaries of Greek hospital professionals decreased or remained frozen for over a decade (2008–2019). Salary levels in other EU countries and the US seem rather unreachable for hospital employees in Greece.

Further, a large number of the respondents in our study were mostly dissatisfied with promotion (78.2%). The average level of job satisfaction was 2.45 (Doctors 2.87, Nurses 2.26, Other Health Professionals 2.44). Various other researches indicated that job satisfaction is highly related to opportunities for promotion (18,19).

In addition, supervision (87.6%) was a source of satisfaction for the healthcare workers in our study, as the average level of job satisfaction was 4.66 (Doctors 4.73, Nurses 4.66, Other Health Professionals 4.57). Some studies have shown that supervision plays a decisive influence on the quality and safety of care provided to patients (20-22). Three-fourths of the respondents (74.3%) reported that they were satisfied with their colleagues. Employees who lack support at work are generally less satisfied. Job satisfaction is higher in a work environment in which supervisors and subordinates consult each other and individuals are involved with peers in decision making and task definition (23,24); therefore, satisfaction due to supervision was found to be critical. Lack of feedback and insufficient clarity of demands from supervisors are associated with low levels of job satisfaction. Yet, supervision is also important to coping with demands, job clarity and stress (25-27).

In this analysis, respondents to our survey considered the tasks and duties of helping others (79.4%) as the major source of their satisfaction, the average level of job satisfaction being 4.34 (Doctors 4.47, Nurses 4.32, Other Health Professionals 4.24). Several relative studies found that the most important for healthcare workers' job satisfaction is the 'nature of work'. The study confirmed that health professionals were dissatisfied with operating procedures (73.3%), the average level of job satisfaction being 2.82 (Doctors 2.81, Nurses 2.86, Other Health Professionals 2.72). Robbins (2009) defines operating procedures as the organization policy and the work itself (28-30). Additionally, professionals reported ambivalence concerning only for the communication domain.

According to our study, males were found to have slightly higher job satisfaction scores in several aspects than females. Young health workers were more satisfied with salary, supervision, and co-workers rather than old health workers. Marital status did not have significant relationship with job satisfaction. The lower job satisfaction scores were reported among nurses. What is more, health workers in this study have various qualifications, mostly physicians and nurses with significant proportion of medicine doctors and public health bachelors.

Table 6. Scores and percentages of satisfaction levels for dimensions of job satisfaction.

			Doctors				Nurses		O	ther He	Other Health Professionals	ssionals		O	Overall Sample	ple
			N=803				N=1,736				N=739				N=3,278	
Dimensions	Mean	SD	Satisfied	Satisfied Dissatisfied Mean	Mean	SD	Satisfied	Satisfied Dissatisfied	Mean	SD	Satisfied	Dissatisfied Mean	Mean	SD	Satisfied	Dissatisfied
Pay	2.60	0.79	22.3%	77.7%	1.90	69.0	7.1%	92.9%	2.13	0.81	13.4%	%9.98	2.12	0.80	14.3%	85.7%
Promotion	2.87	0.87	34.0%	%0.99	2.26	0.75	13.2%	%8'98	2.44	0.85	18.1%	81.9%	2.45	0.84	21.8%	78.2%
Supervision	4.73	0.70	91.4%	%9.8	4.66	0.88	87.5%	12.5%	4.57	1.02	83.8%	16.2%	4.66	0.88	82.6%	12.4%
Fringe Benefits	3.17	0.80	45.9%	54.1%	2.41	0.73	14.0%	%0.98	2.73	0.87	23.7%	76.3%	2.67	0.84	27.9%	72.2%
Contingent Rewards	3.38	0.84	53.7%	46.3%	2.70	0.82	20.2%	%8'62	2.90	1.02	28.3%	71.7%	2.91	0.92	34.1%	%6:29
Operating Procedures	2.81	0.64	27.0%	73.0%	2.86	0.67	28.4%	71.6%	2.72	0.77	24.9%	75.1%	2.82	69:0	26.7%	73.3%
Coworkers	4.50	0.62	83.3%	16.7%	4.18	69.0	%0.02	30.0%	4.16	0.77	%9.69	30.5%	4.25	0.71	74.3%	25.7%
Nature of work	4.47	0.65	86.4%	13.6%	4.32	0.74	75.7%	24.3%	4.24	0.90	76.1%	23.9%	4.34	0.76	79.4%	20.6%
Communication	3.94	0.74	69.4%	30.6%	3.79	0.79	63.4%	36.3%	3.60	0.94	56.8%	43.2%	3.79	0.82	63.2%	36.7%
Overall Job Satisfaction	3.61	0.51	57.0%	43.0%	3.23	0.44	42.2%	57.8%	3.28	0.58	43.8%	56.2%	3.33	0.52	47.7%	52.3%

Table 6a. Scores and percentages of satisfaction levels for dimensions of job satisfaction before of March 13, 2020.

			Doctors				Nurses		Ot	herH	Other Health Professionals	sionals		Ov	Overall Sample	ole
		n=761	n=761 - 94,8% of Total	Total	ü	=1,55	n=1,553 - 89,5% of Total	f Total		n=659	n=659 - 89,2% of Total	Total	u	1=2,973	n=2,973 - 90,7% of Total	fTotal
Dimensions	Mean	SD	Satisfied	Mean SD Satisfied Dissatisfied Mean	Mean	SD	Satisfied	SD Satisfied Dissatisfied	Mean	SD	Satisfied	Satisfied Dissatisfied Mean	Mean	_	Satisfied	SD Satisfied Dissatisfied
Pay	2.60	0.80	22.6%	77.4%	1.88	0.72	8.0%	92.0%	2.14	0.85	14.9%	85.1%	2.12	0.83	13.3%	%2'98
Promotion	2.85	0.88	33.7%	96.3%	2.24	0.77	14.0%	%0.98	2.44	0.88	19.7%	80.3%	2.44	98.0	20.3%	79.7%
Supervision	4.74	0.72	91.0%	9.0%	4.71	0.91	%2.98	13.3%	4.60	1.08	82.1%	17.9%	4.69	0.91	86.7%	13.3%
Fringe Benefits	3.16	0.82	45.7%	54.3%	2.39	92.0	15.1%	84.9%	2.72	06.0	25.0%	75.0%	2.66	0.87	25.1%	74.9%
Contingent Rewards	3.36	0.85	51.4%	48.6%	2.67	0.85	21.2%	78.8%	2.88	1.07	29.2%	70.8%	2.90	0.95	30.7%	69.3%
Operating Procedures	2.80	99.0	26.7%	73.3%	2.82	0.70	28.0%	72.0%	2.68	0.80	24.9%	75.1%	2.79	0.71	27.0%	73.0%
Co-workers	4.50	4.50 0.63	82.8%	17.2%	4.20	0.72	%9.69	30.4%	4.19	0.81	%0.69	31.0%	4.27	0.73	72.8%	27.2%
Nature of work	4.46	0.67	%0.98	14.0%	4.33	0.77	75.0%	25.0%	4.23	0.95	74.4%	25.6%	4.34	0.80	77.7%	22.3%
Communication	3.92	0.75	68.4%	31.6%	3.74	0.81	29.7%	40.3%	3.53	0.97	52.7%	47.3%	3.74	0.84	60.4%	39.6%
Overall Job Satisfaction	3.60	0.52	26.5%	43.5%	3.22	0.46	41.9%	58.1%	3.27	0.61	43.5%	26.5%	3.33	0.54	46.0%	54.0%

Table 6b. Scores and percentages of satisfaction levels for dimensions of job satisfaction after of March 14, 2020.

			Doctors				Nurses		Ot	her He	Other Health Professionals	ssionals		Ŏ	Overall Sample	ple
		n=42	n=42 - 5,2% of Total	Total	I	1=183	n=183 - 10,5% of Total	[Total		n=80 -	n=80 - 10,8% of Total	Fotal		n=305	n=305 - 9,3% of Total	Total
Dimensions	Mean	SD	Satisfied	Mean SD Satisfied Dissatisfied	Mean	SD	Satisfied	Satisfied Dissatisfied	Mean	SD	Satisfied	Dissatisfied	Mean	SD	Satisfied	Dissatisfied
Pay	2.74	0.58	2.74 0.58 16.7%	83.3%	2.06	0.33	0.0%	100.0%	2.01	0.67	0.9%	99.1%	2.15	0.45	2.5%	97.5%
Promotion	3.22	0.50	%8.68	%2'09	2.46	0.48	7.1%	92.9%	2.42	0.81	2.6%	94.4%	2.56	95.0	11.1%	88.9%
Supervision	4.60	4.60 0.36	%0'66	1.0%	4.24	0.28	94.9%	5.1%	4.36	1.45	%8.76	2.2%	4.32	0.32	%8.96	3.7%
Fringe Benefits	3.40	3.40 0.49	%4.64	9.05	2.56	0.36	4.4%	92.6%	2.75	0.92	12.8%	87.2%	2.74	0.49	27.7%	72.3%
Contingent Rewards	3.69	3.69 0.45	54.9%	35.1%	2.95	0.36	11.9%	88.1%	3.07	1.02	20.6%	79.4%	3.09	0.45	21.5%	78.5%
Operating Procedures	2.99	2.99 0.22	31.6%	68.4%	3.16	0.27	32.0%	%0.89	3.06	1.02	24.7%	75.3%	3.10	0.28	30.0%	%0:02
Co-workers	4.48	4.48 0.27	91.7%	8.3%	4.01	0.27	78.7%	21.3%	3.96	1.32	74.4%	25.6%	4.07 0.33	0.33	76.2%	23.8%
Nature of work	4.57	4.57 0.24	%9.46	5.4%	4.22	0.31	80.9%	19.1%	4.23	1.41	%0.06	10.0%	4.28	0.32	85.2%	14.8%
Communication	4.23	4.23 0.26	%6:98	13.1%	4.23	0.30	94.9%	5.1%	4.12	1.37	90.0%	10.0%	4.21	0.29	92.5%	7.5%
Overall Job Satisfaction	3.77	3.77 0.26	63.8%	36.2%	3.32	0.19	45.0%	55.0%	3.33	1.11	46.3%	53.7%	3.39	0.26	49.2%	50.8%

Notes: As of March 13, 2020, the World Health Organization (WHO) has declared Europe as the center of the coronavirus pandemic 2019–2020 [31]

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This survey was carried out in the midst of the pandemic crisis of COVID-19, as on 13 March 2020 the WHO declared Europe as the epicentre of the pandemic (31). As a result, our survey was dichotomized in two periods, before and after March 13, 2020. Regarding the data in Table 6a, was found that a great number of the respondents were mostly before the 13th of March 2020, pre-COVID period, employees (2,973; 90,7% of total) were mostly dissatisfied (54.0%) and the average level of overall job satisfaction was 3.33 out of 6 (Doctors 3.60, Nurses 3.22, Other Health Professionals 3.27). After the 13th of March 2020 (Table 6b), first wave of the COVID-19 pandemic, employees (305; 9,3% of total) remained dissatisfied, but to a lesser extent (50.8%), as the average level of overall job satisfaction was 3.39 out of 6 (Doctors 3.77, Nurses 3.32, Other Health Professionals 3.33), slightly improved compared to the pre-COVID period. Therefore, the study findings revealed improvements in most of the dimensions of job satisfaction, as supervision, fringe benefits, operating procedures, co-workers, nature of work, communication but the results concerning the pay, promotion and contingent rewards remained low. During this period, Greece and its public health system were still struggling to recover from the multiyear global financial crisis of the past decade, hospitals' staff worked longer hours than usual, with no days off. The findings reveals that the strict protocols and procedures were implemented, the recognition and trust of society and the collaboration of employees seems that affected positively in job satisfaction of employees in hospitals.

Our findings are in alignment with prior studies. According to 61 studies conducted in European Union countries, in which enrolled a total of 50,001 physicians working in hospitals among 17 different countries, the majority of whom were conducted in Germany (13 studies), Sweden (7 studies), the UK (6 studies), Spain (5 studies), Italy (5 studies) and the Netherlands (5 studies), the level of satisfaction of physicians was moderate. Low levels of satisfaction connected with salaries, increasing workloads, working conditions as well as migration and ageing of doctors (32). Moreover, it was found Italian female physicians perceived a lower level of procedural justice related to their work situation (career path, type of activities, workload and level of remuneration) and their levels of anxiety, depression

and psychological problems were higher than in males. In this same vein, in a sample of 1,304 nurses from 15 different wards working in Italian public hospitals the results show a low level of job satisfaction. From data were gathered in 2013, revealed dissatisfaction with task requirements, organizational policies and advance in career - although to a lesser extent - with the relationship with colleagues and physicians (33). Similarly, in Bulgaria 60% of respondents expressed general dissatisfaction with their work and over 44% would not recommend their profession to young people; 90% were dissatisfied with healthcare reforms. Job satisfaction in the nursing profession is also important. Remuneration was the biggest reason for dissatisfaction, followed by poor working conditions and poor interpersonal relationships. In a survey of 31,627 nursing staff distributed between 2009-2010, in 2,170 general medical/ surgical units within 488 hospitals across 12 European countries: Belgium, England, Finland, Germany, Greece, Ireland, Netherlands, Norway, Poland, Spain, Switzerland and Sweden, overall 8,666 nurses (27%) experienced high emotional exhaustion, 3,127 nurses (10%) experienced high depersonalization and 5,300 nurses (17%) experienced low feeling of personal accomplishment. Still, a total of 8,268 nurses reported being very or a little dissatisfied with their job (26%). Hence, a total of 8,016 nurses (25%) reported being greatly or a little dissatisfied with work schedule flexibility and 10,440 (33%) reported intention to leave their current job (34). In Spain, within 5,654 respondents that collected between 2009-2010, about 55% of nurses (3,080) showed moderate job satisfaction, 26% of nurses (1,468) showed their intention to leave the hospital, as the work environment was unfavorable for 48% (2,729) of nurses. 22% (1,091) showed high burnout levels (35). Lastly, in a survey was conducted in 2013 among 494 nurses working in 5 hospitals in the prefecture of Achaia, West-Greece (36). The results indicate that further stress increasing and satisfaction reducing factors were connected with the limited decision latitude and autonomy, low participation in decision making and low supervisors' support. The lack of support and respect and lack of communication and collaboration between doctors and colleagues affect negatively the quality of the provided nursing care. The present study revealed higher stress levels in nurses with

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regular working hours. This paradox could be explained by the lower salary they receive and the difficulties to cover their everyday family expenses.

This study was conducted in Athens the capital of Greece, where there are several hospitals, future research needs to expand the scope of this study by focusing on a large and geographically more diverse sample so that its results can be generalized to the entire public health care sector of Greece.

Conclusion

Research findings showed that the job satisfaction of employees in general is on the decline. In hospitals, job dissatisfaction is strongly associated with staff's intention to quit, suboptimal healthcare delivery and poor clinical outcomes. Hospital employees will demonstrate pleasurable positive attitudes when they are satisfied with their job.

Can any steps be taken to improve job satisfaction? In our view, now, even more than in the past, increasing pay and perks may not be easy in days of shrinking budgets. As job satisfaction is affected by many variables to different degrees and public hospitals in Greece are under the supervision of the Ministry of Health (MoH), emphasis should be placed straight away on positive factors (supervision, communication, favorable conditions of work) that can enhance employees' satisfaction and organizational commitment. Negative factors (promotion, operating procedures, contingent rewards) should be addressed to assist in increasing the satisfaction level and diminishing staff turnover, tardiness, absenteeism and low productivity. There is a need to innovate and come up with low/no cost measures. Appreciation and recognition of staff can be one of the easiest, cost-effective strategies to retain experienced mature staff. Job satisfaction significantly influenced by factors such as opportunities to develop and responsibility. Moreover, job satisfaction can be higher in a work environment in which there are health and safety measures, supervisors and subordinates consult together and individuals are involved with peers in decision making and task definition. Encouragement from management and organizational support are remarkable factors when there are exist.

In summary, an employee's overall satisfaction with his job is the result of a combination of factors. The findings of this study clearly suggest that implementing career plans and benefits, as well as readjustment of staff and improvement of working conditions may result in job satisfaction.

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