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Research paper

Job satisfaction among emergency department staff

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ABSTRACT

Objective: To compare job satisfaction among nurses, physicians and administrative staff in an emergency department (ED). To analyse the relationship of job satisfaction with demographic and professional characteristics of these personnel.
Methods: We performed a descriptive, cross-sectional study in an ED in Barcelona (Spain). Job satisfaction was evaluated by means of the Font-Roja questionnaire. Multivariate analysis determined relationship between the overall job satisfaction and the variables collected.
Results: Fifty-two nurses, 22 physicians and 30 administrative staff were included. Administrative staff were significantly more satisfied than physicians and nurses: 3.42 ± 0.32 vs. 2.87 ± 0.42 and 3.06 ± 0.36, respectively. Multivariate analysis showed the following variables to be associated with job satisfaction: rotation among the different ED acuity levels (OR: 2.34; 95%CI: 0.93–5.89) and being an administrative staff (OR: 0.27; 95%CI: 0.09–0.80). Nurses and physicians reported greater stress and work pressure than administrative staff and described a worse physical working environment. Interpersonal relationships obtained the highest score among the three groups of professionals.
Conclusions: Job satisfaction of nurses and physicians in an ED is lower than that of administrative staff with the former perceiving greater stress and work pressure. Conversely, interpersonal relationships are identified as strength. Being nurse or physician and not rotating among the different ED acuity levels increase dissatisfaction.

What is known

- Job satisfaction is a key element that is closely related to the quality of the healthcare service provided. Regardless of specialty and position, nurses seem to be less satisfied than physicians, but no comparisons between these two professions has been analysed so far.

What this paper adds?

- This study provides evidence of the level of job satisfaction among emergency department staff. The level of job satisfaction is not especially high, being lower among physicians and nurses who perceive greater healthcare pressure, workload and burnout than administrative staff. Job rotation among the different acuity levels in the ED seems to play a protective effect against job dissatisfaction. These findings should be the first step to both promote studies about the causes of these differences and establish interventions for its correction.

Introduction

In 1976 job satisfaction was defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304) [1]. From a management perspective, job satisfaction is believed to be a key factor that influences performance of individuals and organisations, and is closely related to the quality of the services provided [2]. Thus, it is not surprising that managers, supervisors, human resource specialists, employees, and citizens in general are concerned with improving job satisfaction [3].

Medical practice in the emergency department (ED) involves the management of diagnostic and therapeutic uncertainties within a generally stressful and sometimes even hostile setting. In addition, the frequent overcrowding that occurs in hospital EDs, and the scarcity of resources lead to notable physical and mental distress of the healthcare workers, and may produce professional burnout and

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work dissatisfaction [4]. However, no previous studies have been performed comparing the level of job satisfaction among different healthcare providers, such as physicians, nurses and administrative staff, in an ED in Spain.

Many tools have been used to measure job satisfaction [5]. In Spain, one of the most commonly used is the Font-Roja questionnaire. The Font-Roja job satisfaction questionnaire [6] has been validated [7] and applied in different healthcare work settings in Spain [8–11]. The extended version [12] contains 10 dimensions related to job satisfaction and allows the multidimensional approach recommended by Locke [1].

The objectives of the present study were to compare the level of job satisfaction among physicians, nurses and administrative staff in an ED, and analyse the possible relationship between demographic and professional characteristics of these ED personnel and satisfaction reported.

Patients and methods

Study design

The design was a descriptive, cross-sectional cohort study about the level of job satisfaction of the ED healthcare professionals that consented to answer the Font-Roja questionnaire from March to May 2015.

Ethic approval

The study was approved by the Ethic Committee of the Hospital Clinic of Barcelona (Spain) (Reg. HCB/2015/0512).

Study setting

The study was undertaken in the ED of the Hospital Clínic of Barcelona (Spain), a high technology, 700-bed university hospital with a reference population of 550,000 inhabitants. It sees more than 90,000 general emergencies annually, excluding the specialties of obstetrics and gynaecology, paediatrics and ophthalmology which are seen at another site. The ED has four main areas in where patients are sent and seen in accordance with our 5-level of acuity triage system [13]: Resuscitation area (level 1 patients), emergent area (level 2 patients), urgent area (level 3 patients), and less urgent or "minors" area (level 4 and 5 patients). Resuscitation area works on a demand basis, so it shares staff with emergent area. Apart from this exception, each area works independently and has its own staff every shift, including physicians, nurses, nursing assistants, hospital porters, administrative staff, and cleaning personnel. Because of their employment contract, some nurses and nursing assistants are always assigned to the same ED area, while others are rostered to the different clinical areas. All medical and administrative staff are rostered to the different clinical areas. Finally, regarding shift schedule, some staff has a fixed schedule, while others work rotating shifts among morning, afternoon and night on a weekly basis.

Sample population

The study population included a group of 131 ED workers (68 nurses, 23 physicians, 40 administrative workers) voluntarily interested in quality issues and process improvement. The remaining staff was excluded as their motivation to answer the questionnaire was very low.

Three emails were sent to the personnel at different times in March and April 2015. These emails explained the interest of the study, guaranteeing the confidentiality of the responses and attaching a link to a web site (http://www.e-encuesta.com) in which the demographic and professional data and the responses to the Font-Roja questionnaire could be made.

Table 1
Dimensions explored in the Font Roja Questionnaire.

Dimension	Definition
Job satisfaction	Grade of satisfaction conditioned by the work position.
Work-related stress	Grade of stress induced by the profession of the worker, and reflected by fatigue and the grade of responsibility perceived.
Professional competence	Grade of coincidence between professional training and work position.
Job pressure	Grade of overburden due to the work position.
Professional promotion	Grade of ability to achieve professional promotion
Interpersonal relationship with their superiors	Grade of consciousness about what is expected of the worker by their superiors.
Interpersonal relationship with co-workers	Grade of satisfaction produced by relationships with co-workers.
Extrinsic characteristics of status	Grade of work recognition in terms of salary, confidence and independence.
Job monotony	Grade of routine of the relationships with co-workers, and grade of lack of variety in the work performed.
Physical work setting	Grade of satisfaction with the physical and ergonomic characteristics of the work place.

Font-Roja questionnaire

The original Font-Roja questionnaire, a version derived from a tool used in the Tecumseh Community Health Study [14] in 1988, was made up of 24 questions grouped into nine different dimensions related to job satisfaction [6]. It was subsequently validated in 1994 [7]. In 2006, the questionnaire was revised, and two new questions were added and grouped into a new dimension [12]. This extended questionnaire is able to explain 61.81% of the variance of job satisfaction, and has an internal consistency of 0.791. The dimensions are enumerated and defined in Table 1. The 26 questions are assessed by Likert scale from highly disagree (1) to highly agree (5). The score obtained in each dimension is equivalent to the addition of the scores of the questions it is composed of, divided by the number of questions. The overall job satisfaction is obtained from the addition of the scores of the 26 responses divided by 26. The result theoretically ranges from 1 to 5 points, and 3 is the cut-off point. Thus, staff scoring equal or greater than 3 are considered "satisfied", while those scoring less than 3 are considered "no satisfied".

Statistical analyses

The following variables of each participant were collected: age, gender, current marital status (single, married/stable partner, separated/divorced, widow/widower), children, distance in kilometres from home to the hospital, means of transportation used (public, own vehicle, on foot), years working in the ED, profession (physician, nurse, administrative staff), type of employment contract (indefinite, part time, occasional), usual shift (mornings, afternoons, night, rotating), usual acuity level allocation (level 1–2, level 3, level 4–5, rotating). Demographic and professional quantitative variables are expressed as mean and standard deviation, while categorical variables as absolute values and percentages. To compare the three study groups the Student's t test or the non parametric Mann–Whitney test were used. Chi square was used for categorical data. If the number of values calculated was less than five, the Fisher exact test was used. To compare the three study groups in the Font-Roja questionnaire the one-way ANOVA test was used.

Table 2
Demographic and professional characteristics, and scores in the ten dimensions of the Font-Roja questionnaire as well as overall job satisfaction of the three groups studied.

	All (n = 104)	A Physicians (n = 22)	B Nurses (n = 52)	C Administrative staff (n = 30)	ANOVA	p A vs. B	p A vs. C	p B vs. C
Age, mean ± SD	43.5 ± 9.8	44 ± 6	43.5 ± 11	42 ± 9				
Gender (woman), %	68.3	45.5	80.8	63.3				
Marital status, %								
Single	38.6	31.8	37.3	46.4				
Married/stable partner	46.5	63.6	45.1	35.7				
Separated/divorced	13.9	4.5	15.7	17.9				
Widow/widower	1	0	2	0				
Children (yes), %	55	45.5	57.7	53.3				
Distance from work (km), mean ± SD	11.4 ± 13.6	9 ± 9.9	9.1 ± 10.3	17.4 ± 18.4				
Means of transportation %								
Public	51	45.5	51.9	53.3				
Own vehicle	26.9	31.8	26.9	23.3				
On foot	22.1	22.7	21.2	23.3				
Years in the ED, mean ± SD	15.3 ± 9.5	14.4 ± 5.7	16.1 ± 10.3	14.1 ± 10.2				
Type of employment contract, %								
Indefinite	76.6	81.8	80.7	65.6				
Part time	9.9	0	12.3	12.5				
Occasional	13.5	18.2	7	21.9				
Work shift, %								
Mornings	25	9.1	26.9	33.3				
Afternoons	17.3	0	25	16.7				
Nights	24	0	32.7	26.7				
Rotating	33.7	90.9	15.4	23.3				
ED acuity level allocated, %								
Level 1–2	7.7	0	15.3	0				
Level 3	21.2	9.1	38.5	0				
Level 4–5	5.8	13.6	3.8	3.3				
Rotating	65.4	77.3	42.3	96.7				
Font-Roja questionnaire								
Job satisfaction	3.73 ± 0.60	3.53 ± 0.61	3.73 ± 0.61	3.88 ± 0.55	0.117	N/A	N/A	N/A
Work-related stress	2.80 ± 0.48	2.56 ± 0.40	2.74 ± 0.45	3.07 ± 0.49	**0.001**	0.217	**0.001**	**0.006**
Professional competence	3.53 ± 0.70	2.89 ± 0.83	3.52 ± 0.48	4 ± 0.54	**0.001**	**0.001**	**0.001**	**0.002**
Work pressure	2.63 ± 0.91	2.20 ± 0.83	2.37 ± 0.75	3.40 ± 0.61	**0.001**	0.599	**0.001**	**0.001**
Professional promotion	2.83 ± 0.82	2.88 ± 0.89	2.73 ± 0.85	2.98 ± 0.47	0.462	N/A	N/A	N/A
Interpersonal relationship with superiors	3.83 ± 0.55	3.75 ± 0.70	3.75 ± 0.51	4.03 ± 0.45	0.071	N/A	N/A	N/A
Interpersonal relationship with co-workers	4 ± 0.78	3.86 ± 0.83	3.86 ± 0.82	4.33 ± 0.55	**0.018**	1	0.071	**0.021**
Extrinsic characteristic of status	2.82 ± 0.74	2.59 ± 0.73	2.82 ± 0.75	3 ± 0.71	0.144	N/A	N/A	N/A
Job monotony	3.29 ± 0.47	3.05 ± 0.77	3.41 ± 0.62	3.27 ± 0.70	0.089	N/A	N/A	N/A
Physical work environment	2.04 ± 1	1.59 ± 0.83	1.83 ± 0.92	2.75 ± 0.92	**0.001**	0.463	**0.001**	**0.001**
Overall job satisfaction	3.12 ± 0.41	2.87 ± 0.42	3.06 ± 0.36	3.42 ± 0.32	**0.001**	0.089	**0.001**	**0.001**

SD: standard deviation; ED: emergency department.

To determine possible common factors associated with the overall job satisfaction, two univariate analyses were performed: one with all the individuals and the other including only the healthcare professionals (physicians and nurses). The categorical independent variables with more than two categories were converted into binary variables with the aim of not having categories with few individuals. Statistically significant independent variables <0.10 in the univariate analysis were included in a stepwise multiple logistic regression analysis. The goodness-of-fit was assessed with the Hosmer–Lemeshow test and discrimination with analysis of the receiver operating curve (ROC). All the results were considered statistically significant with a p value <0.05. The statistical analyses were performed with the statistical package SPSS (SPSS v20.0; SPSS Inc., Chicago, IL).

Results

A total of 104 (79.4%) individuals answered the questionnaire: 52 (76.5%) nurses, 22 (95.6%) physicians, 30 (75%) administrative staff. The demographic and professional characteristics of these three groups are shown in Table 2.

The overall job satisfaction was scored as 3.12 ± 0.41.

Regarding the three study groups, it was found that the administrative staff had significantly greater overall job satisfaction than physicians and nurses: 3.42 ± 0.32 vs. 2.87 ± 0.42 (p < 0.001) and 3.06 ± 0.36 (p < 0.001), respectively. The differences among the 3 study groups were greater on evaluating each of the 10 dimensions. Thus, nurses and physicians, compared to administrative staff, perceived significantly greater work-related stress (p < 0.001) and greater work pressure (p < 0.001), worse interpersonal relationship with co-workers (p < 0.018) and worse physical work environment (p < 0.001), and less professional competence (p < 0.001). Scores obtained in each dimension are shown in Table 2.

Fifty-six (53.8%) individuals reported being satisfied with their work (overall job satisfaction ≥3). Significant variables from the univariate analysis (Table 3, on the left hand side) were included in the multivariate analysis. The only variables remaining in the model were (Table 4): job rotation among the different acuity levels (OR 2.34 [95%CI 0.93–5.89]; p < 0.071) and being an administrative staff (OR 0.27 [95%CI 0.09–0.80]; p < 0.017). The Hosmer–Lemeshow test was 0.62 (p = 0.73). On evaluation by analysis of the ROC, the behaviour of the model achieved an area under the curve of 0.71 (95%CI 0.61–0.81).

Among the healthcare personnel (Table 3, on the right hand side) more individuals were dissatisfied (42 [56.8%]) than satisfied (32 [43.2%]). On determining which factors were related to overall job satisfaction, the only significant finding was that staff rotating among the different acuity levels were more satisfied than those not rotating (65.6% vs. 42.9%; p < 0.049).

Table 3
Comparison of demographic and professional variables after grouping all the personnel (to the left) and the healthcare personnel (to the right) as satisfied or not satisfied.

	All the personnel			Healthcare personnel		
	Dissatisfied ($n=48$)	Satisfied ($n=56$)	p	Dissatisfied ($n=42$)	Satisfied ($n=32$)	p
Age, mean ± SD	43 ± 7.6	43.3 ± 11.3	0.846	43.2 ± 7.6	44.1 ± 11.9	0.710
Gender, %			0.111			0.197
Woman	60.4	75		64.3	78.1	
Man	39.6	25		35.7	21.9	
Marital status, %			0.791			0.892
Married/stable partner	47.9	45.3		50	51.6	
Not married/stable partner	52.1	54.7		50	48.4	
Children, %			0.466			0.741
Yes	50	42.9		52.4	56.2	
No	50	57.1		47.6	43.8	
Distance to work (km), mean ± SD	9.7 ± 13	12.8 ± 14.1	0.250	9 ± 11.6	9.2 ± 9.1	0.955
Means of transportation, %			0.545			0.159
Public transportation	54.2	48.2		57.1	40.6	
No public transportation	45.8	51.8		42.9	59.4	
Years in the ED, mean ± SD	16.9 ± 7.2	13.5 ± 10.7	0.060	16.7 ± 7.3	13.8 ± 10.6	0.201
Type of contract, %			0.037			0.244
Indefinite	85.4	67.9		85.7	75	
Not indefinite	14.6	32.1		14.3	25	
Work shift, %			0.725			0.592
Rotating	35.4	32.1		0.5	34.4	
Not rotating	64.6	67.9		59.5	65.6	
ED acuity level allocated, %			0.002			0.049
Rotating	50	78.6		42.9	65.6	
Not rotating	50	21.4		57.1	34.4	
Profession, %			0.001			0.151
Healthcare	87.5	57.1		35.7	21.9	
Non healthcare	12.5	42.9		64.3	78.1	

SD: standard deviation; ED: emergency department.

Table 4
Multivariate analysis showing the variables associated with overall job satisfaction of all the professionals included in the study.

Variables included	Multivariate analysis		
	β coefficient	Odds ratio (95%CI)	p
Job rotation among the different acuity levels	0.850	2.339 (0.929–5.888)	0.071
Healthcare professional	−1.304	0.271 (0.093–0.796)	0.017
Constant	0.572		

CI: confidence interval.

Discussion

This is the first study in our country to evaluate and compare the grade of job satisfaction among the different professional groups in an ED. It is well known that the ED is a stressful place and source of burnout for the personnel [4]. However, less is known about its impact on job satisfaction. The present study identified some relevant findings. First, the administrative staff perceived greater job satisfaction than nurses and physicians, with physicians describing a clear trend to greater dissatisfaction. Second, the greater dissatisfaction reported by the healthcare personnel was largely related to the perception of high stress (greater fatigue and stress) and high work pressure (excessive work load) within an inappropriate physical work setting. Third, despite the previous adverse circumstances, the work environment was good or very good, obtaining the highest scores from the dimensions referring to interpersonal relationships with both co-workers and superiors. And fourth, the job rotation among the different levels of acuity seemed to have a protective effect and was associated with a higher job satisfaction.

Job satisfaction is one of the indicators to determine people's attitudes towards their work life. Attitudes influence the quantity and quality of work that individuals will develop as well as other variables such as absenteeism, tendency to leave the organisation, and high rotation rates, among others [15]. In the healthcare setting most studies have been focused on measuring job satisfaction and analyzing its components [16–26]. All of those studies, albeit methodologically different, usually present similar results: medium-high satisfaction among physicians [16–19] and somewhat lower among nurses [20–24], justified by the lack of personnel, elevated healthcare burden and scarce professional recognition [25]. In studies performed in EDs, the results are very similar among physicians [16], but nurses seem to be more dissatisfied on comparison with nurses of other specialties [26]. The present study, the first carried out in an ED in Spain, has found that more than 50% of the healthcare personnel are dissatisfied. When compared between them, our results show a trend to greater dissatisfaction among physicians that should not be ignored. Although not statistically significant, it should be taken into account when designing strategies to correct and prevent dissatisfaction. This trend, however, may not be universal, and inadequacy of the number of physicians and nurses might explain the local differences. The lack of previous studies comparing these two groups in the ED does not allow conclusions to be drawn. Evaluations of the physical work setting merit special attention. It was even considered inappropriate by the administrative staff. As it can happen in other places, the ED studied is a small, old, inconvenient setting that produces ergonomic difficulties, discomfort and sensation of overcrowding.

As previously reported [27], it is not surprising that the interpersonal relationships between both co-workers and managers received the highest scores. This emphasizes the importance of personal relationships in the workplace as a protective factor against stress and professional burnout [27].

Some authors [16–26] have also attempted to relate the results to determined demographic variables such as age, gender, salary, type of hospital, specialty and even country. In the present study two principal variables were related to job satisfaction. The first is positive: job rotation among the different acuity levels of emergency care. Although this characteristic may be intrinsic to the ED studied, it should be taken into account that, whenever possible, satisfaction might be greater if the personnel are allowed to rotate

among different levels of emergency care. Some similar conclusions were reached in previous studies in where this protective effect of job rotation was already noted [25,29–32]. This finding should also be an important aid for managers and directors in the organisation of work tasks. The second variable is negative: being healthcare personnel. Future studies need to clarify this association. Indeed it was detected because this was the first time that healthcare personnel were compared to non healthcare personnel within the same ED. As a result of this comparison, it seems that healthcare personnel are more vulnerable to suffer from job dissatisfaction. Recognizing this finding is the first step to undertake further studies to both unmask the causes of this dissatisfaction and establish interventions for its correction.

Limitations

The present study has some limitations. First, despite the high percentage of participation which was higher than usual for this type of study, not all the professionals in the ED were included. This suggests that if the responders were those who were more motivated, the grade of satisfaction may actually have been lower and could, moreover, be overestimated. Second, in some comparisons, the sample size may have impeded the differences from achieving statistical significance. The scarcity of previous studies has limited the interpretation of our results. Third, it is always difficult to manage Likert scales as quantitative variables. In the calculation of the results of the job satisfaction dimensions included in the Font-Roja questionnaire the methodology of previous studies was followed according to the instructions of the authors [6]. In the univariate and multivariate analysis, the overall job satisfaction was used as a categorical variable (satisfied/dissatisfied). Lastly, only one ED was included which, together with the lack of previous studies, makes it difficult to generalise the results in terms of external validity.

Conclusion

The findings of this study highlight that job satisfaction of healthcare professionals in an ED is not especially high, being lower among nurses and physicians who perceive greater healthcare pressure, workload and burnout than administrative staff. Whenever possible, job rotation among the different acuity levels within the ED seems to play a protective effect against dissatisfaction.

Author contributions

M. Suárez: field work performing the questionnaires and making the database, participation in the drafting of the manuscript and the final version.

M. Asenjo: field work performing the questionnaires and critical review of the manuscript. Elaboration of the database.

M. Sánchez: design of the study and analysis of the results. Critical review of the manuscript.

Research ethics statement

This paper reports the findings of a research study that has been approved by the Ethic Committee of the Hospital Clinic of Barcelona (Spain) (Reg. HCB/2015/0512).

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Conflict of interests

The authors declare no conflict of interest.

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