



Organizational Variables on Nurses' Job Performance in Turkey: Nursing Assessments

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Abstract

Background: The purpose of this study was to describe the influence of organizational variables on hospital staff nurses' job performance as reported by staff nurses in two cities in Turkey. Hospital ownership status, employment status were examined for their effect on this influence.

Methods: The reported influence of organizational variables on job performance was measured by a questionnaire developed for this study. Nurses were asked to evaluate the influence of 28 organizational variables on their job performance using a five-point Likert-type scale (1- Never effective, 5- Very effective). The study used comparative and descriptive study design. The staff nurses who were included in this study were 831 hospital staff nurses. Descriptive statistics, frequencies, *t*-test, ANOVA and factor analysis were used for data analysis.

Results: The study showed the relative importance of the 28 organizational variables in influencing nurses' job performance. Nurses in this study reported that workload and technological support are the most influential organizational variables on their job performance. Factor analysis yielded a five-factor model that explained 53.99% of total variance.

Conclusion: Administratively controllable influence job organizational variables influence job performance of nurses in different magnitude.

Keywords: Job performance, Management, Nursing, Turkey

Introduction

The performances of the doctors and the nurses are especially important in accomplishing health care in a continuous and effective way. When the literature about job performances is examined, it is seen that certain number of investigations has been conducted about the factors influencing job performances in hospitals and all the factors affecting job performances have not usually been analyzed (1). Thus, it is important to examine all organizational, individual, social factors that especially affect the performances of the doctors and nurses holistically (2). Based on this, in this study it was aimed to define the influence degree the

factors that are probable to affect the performances of nurses.

In this part, a literature summary about the concept of job performance and the organizational factors affecting this performance will be tried to be made. In this study, it is assumed that there are organizational (institutional) factors influencing job performance and variables that are controllable or manageable by the organizations. Apart from organizational variables, many individual and social variables may also affect the job performance (3-5). The investigators that made research about nursery, nursing services and nursing ser-

vices management in 1970s and 1980s often focused on the job performance of nurses (5). However, in 1990s it was seen that there had been an important decrease in the number of the research and publications about job performance of nurses, the factors affecting this performance and nurses' job performance management. Therefore, a universal definition of "job performance" has not been made in the nursing literature recently (4, 6). Borst defines the job performance as "the way and the process how the nurses serve nursing for the patients and other people". Bloch also similarly suggests that "the job performance as the way and process of serving". Thus, the common point of these two definitions is that job performance is regarded as the way the job is performed and its process (4).

In literature, there is limited information about satisfactorily conceptual defining of the nursing job performance. Little research, domestically or internationally, has been conducted on the organizational factors on job performance of nurses in Turkey. So, this study was planned and conducted on the factors on job performance of nurses in Turkey.

To sum up generally, descriptive literature that indicates the effect degree of the organizational variables on job performance and the relationship between job performance and these variables is limited. As a result of literature review, it is under-

stood that the studies searching the relationship between job performance and some organizational variables are not holistic in developing countries such as Turkey, but they focus on some certain variables or variable groups.

In this study, the assessment about the effects, which are perceived by the nurses, of 28 organizational variables affecting the nurses' job performance was made in two cities, Turkey.

Methods

The investigation was made at two public university hospitals in cities of Kocaeli and Kayseri, three public hospitals owned by Ministry of Health and one private hospital in city of Kayseri. The study was conducted on the nurses working in a public university hospital, two public /state hospitals, and a private hospital in Kayseri and a public university hospital in Kocaeli. In the study, samples were not selected and it was aimed to reach the total field. Totally 831 nurses were accessed in the study. The number of the nurses which was received from management of the hospitals that were investigated and the proportion of the nurses who were given the questionnaires and the number of accessed nurses were presented according to hospital names as a table below.

Table 1: Participants in this study

Hospitals	Number of Nurses	Number of the Nurses Completed the Questionnaires	Proportion of Returned Questionnaires (%)
Public University Hospital in Kayseri	440	316	71.82
Public / State Hospital in Kayseri	350	96	34.57
Public Maternity Hospital in Kayseri	130	71	54.61
Public Hospital of Pectoral Diseases in Kayseri	45	45	100.00
Kayseri Private Hospital in Kayseri	53	53	100.00
Public University Hospital in Kocaeli	350	225	64.28
TOTAL	1243	831	66.85

The questionnaires were delivered to the hospital nurses directly. The investigation was conducted in the public and private hospitals of Kayseri be-

tween April 2007 and June 2007, and in Kocaeli University Hospital between May 2007 and May 2007. A sampling technique was not used because

the researcher intended to conduct the questionnaire among all 1243 nurses. The questionnaire was given to supervisor nurses in the departments to distribute to the nurses in their departments. Nurses were asked to complete the questionnaires anonymously and return them to the nominated person. The study received approval from top management of the hospitals.

Based on a thorough review of the literature investigating the job performance of nurses, a 28-item questionnaire was developed for this study. In the preparation of the research questionnaire,

psychology and nursing literature were utilized, and Schwirian's Model of Nursing Performance and Herzberg's Motivation-Hygiene theory were utilized substantially (Hayajneh, 2000). In order to measure the effect of 28 organizational factors influencing nurses' job performance, related questions were asked to the nurses by making use of a five point Likert Scale (1- Never effective 2- Ineffective 3- No idea 4- Effective 5- Very effective). 28 organizational factors and their definitions were showed in Table 1.

Table 2 :Organizational variables used in this study and their summary definitions

Variables	Definitions
Clinical and Vocational Autonomy :	Amount of independence nurses have to make clinical decisions.
Compensation :	Remuneration for work (salary, pay, benefits, etc.).
Continuing Education :	Continuing education programs provided by employer.
Environmental Stability:	Extent to which unit operations are predictable, organized and smooth.
Supporting Clinical Decisions Opportunities:	Nurses participate in making clinical decisions and supporting clinical decisions opportunities.
Physical Work Conditions:	Appropriateness of work conditions for effective patient care.
Job Autonomy :	Amount of independence nurses have to make decisions about unit operations.
Job Security :	Extent to which nurses feel that they are secure about their job.
Malpractice Insurance Coverage :	Coverage for malpractice risk provided by organization.
Leadership Style :	Approach used by your direct supervisors to influence the behavior of nurses.
Managerial Style :	Manager's / managers' approach in using resources in to achieve organizational goals.
Noise Level :	Extent to which the nurses are exposed to background sounds.
Nursing Care Delivery System :	Structure and process by which responsibilities are assigned and work is arranged among nurses (primary, team, functional, etc.).
Nurse Job Performance Measurement and Evaluation:	Measuring nurse job performance, evaluation of results and informing nurses about measuring and evaluation job performance process.
Orientation Program :	Job-specific training offered to new nurses.
Patient Severity (disease severity) :	Level of dependency and acuity of patients.
Physical Work :	Proportion of your work requiring strenuous physical

Table 2: Cond...

Promotional Opportunity :	effort Extent to opportunity for upward movement in the organization's hierarchy.
Role clarity :	Extent to which nurses' responsibilities are clear, distinct and known.
Sexual harassment :	Extent to which sexual harassment is occurring in the work setting.
Shift Work :	Extent to which you are able to work your desired shifts.
Social Interaction and Nurses :	Quality of the relationship with other nurses, patients and physicians in the unit.
Stress :	Extent to which feel that job demands are beyond your abilities.
Supplies and Equipments :	Availability and convenient location of supplies and equipments necessary for work.
Technology support :	Extent to which technology (computerized support systems, pagers, monitors, etc.) is available in the work setting.
Unit size :	Number of patient beds in the unit.
Vacation System :	The manner in which vacation hours are granted.
Workload :	Number of patients for whom you usually are (were) responsible.

The questionnaire was made up of two sections. Organizational factors influencing nurses' job performance were stated in the first section, and information about some demographic features of the nurses was in the second section. The reliability parameter (alpha score) of the questionnaire used in the study was acceptability. The data gained from the study were transferred into the computer by using SPSS 11.5, and contrastive-descriptive statistical analysis, t-test, and factor analysis were applied for data analysis. T-Test analysis was used for comparing organizational variables according to hospitals' ownership status and nurses' employment status. Factor analysis was used for determining the factor structures of 28 organizational variables affecting on nurses' job performance.

Results

Table 3 shows some characteristics of the respondents in frequency and percentage. The majority of the respondents (65.10 %) were at university hospitals, 56.80 % were working at clinics in the hospitals.

Table 3: Some characteristics of nurses

CHARACTERISTICS	Frequency	%
Ownership of Hospital		
--University Hospital	541	65.10
--Ministry of Health Hospital	237	28.50
--Private Hospital	53	6.40
Department		
--Clinical (Inpatient) Units	472	56.80
-- Polyclinic	168	20.20
--Administrative Units	11	1.32
--General Surgery Room	83	9.98
--Intensive Care Units	61	7.34
--Laboratory	36	4.36
Employment Status		
--Public Servant	579	69.67
--Temporally Status (contracting)	252	30.33
Educational Status		
--College Degree	199	23.94
--Pre - Bachelor Degree	279	33.56
--Bachelor and Above	353	42.50
Professional Tenue		
--0-1 Year	119	14.32
--2-5 Year	219	27.25
--6-30 Year	479	58.43

42.5 % of the subjects possessed a bachelor and above degree. Average mean of the respondents was 36.64 years. Also the majority of the respondents have a permanent employment statue. Table 4 indicates some descriptive statistics that are related to assessment of the nurses, who participated in the study, about the factors influencing nursing job performance. In the table, the factors effecting nurses' job performance were put in order from the most effective one to the least effective one in line with the nurses' assessment. According to this, the nurses participated in the study argue that the most effective factor is "work load" and the least effective one is "studies evaluating and measuring nurses' job performance". In the study, one of the remarkable findings is that

the nurses state that all 28 factors that are probable to affect nursing job performance affect their job performance significantly. The nurses evaluated the effect of some organizational factors influencing the nurses' job performance between 3.69 and 4.49. When this value is approaching to 5, it is assumed here that the effect of the factor on job performance is quite high. As a result, the nurses accepted that the factors given to them in the research affect their performances quite highly. Although it is expected that employee personal rights will be accepted as the most important factor influencing job performance, it was understood that even though the effect of employee personal rights was high, it was not on very high level.

Table 4: Reported influence of organizational variables on job performance

Organizational Variables	Mean	Std. Deviation
Workload	4.49	0.87
Technology Support	4.42	0.88
Vacation System	4.29	0.93
Job Security	4.29	1.03
Unit Size	4.29	0.99
Supplies and Equipments	4.24	0.90
Physical Work	4.21	0.97
Physical Work Conditions	4.26	0.93
Stress	4.23	1.00
Orientation Program	4.16	1.00
Patient Severity (disease severity)	4.15	0.91
Leadership Style	4.15	1.09
Noise Level	4.13	0.94
Compensation	4.11	1.16
Nursing Care Delivery System	4.07	0.94
Shift Work	4.09	0.97
Job Autonomy	4.05	1.11
Role Clarity	4.09	1.06
Management Style	4.05	1.06
Social Interaction and Nurses	3.92	1.11
Support for Making Clinical Decisions	3.94	1.06
Sexual Harassment	3.94	1.18
Environmental Stability	3.90	1.05
Malpractice Insurance Coverage	3.81	1.12
Clinical and Vocational Autonomy	3.85	1.06
Continuing Education	3.83	1.00
Promotional Opportunities	3.89	1.18
Nurse Job Performance Measurement and Evaluation	3.69	1.17

Additionally, it is noticed that technological support during the research is assumed to be a factor affecting the job performance highly. On the other hand, it is assessed by the nurses that the factors such as sexual harassment, in-service training, and promotion in job do not have so much effect on the nurses' job performance.

Table 5 indicates that the distribution of the nurses' own assessment about the effect degree of some organizational factors influencing their job performance according to employment status. In order to check whether there is a significant dif-

ference between the nurses' assessments statistically, *t*-test (test for significance of difference between two independent variables) was applied. As a result of statistical analysis, a significant difference between the assessments of the effect degree of the factors such as "Nursing Care Delivery System", "Social Interaction and Nurses", "Stress", and "Unit Size" on the nurses' job performance in terms of employment status ($P < 0.05$). As for other 24 variables, a significant difference could not be found.

Table 5: The distribution of the factors affecting the nurses' job performance in terms of employment status and their comparison

Variables	Employment Status				<i>t</i>	<i>P</i>
	Permanent Staff (n=579)		Contractual Staff (n=252)			
	Mean	Std. Deviation	Mean	Std. Deviation		
Nursing Care Delivery System	4.13	0.90	3.94	1.02	2.767	0.006*
Social Interaction and Nurses	3.97	1.07	3.79	1.20	2.149	0.032*
Stress	4.30	0.93	4.06	1.13	3.282	0.001*
Unit Size	4.34	0.97	4.19	1.03	1.980	0.048*

Note. This table has only significantly different variables according to employment status of nurses.

**P* value was < 0.05

Table 6 presents the distribution of the assessment made by the nurses about the degree of some organizational factors' effect on the job performance in terms of property of the hospitals which they work and its statistical comparison. In respect of their property structures, the hospitals were evaluated as hospital of University, Health Care Ministry and Private hospitals. In order to control whether there is a significant statistical difference between the nurses' assessments, a unidirectional variance analysis test (*F* test) was carried out. As a result of statistical analysis, a significant difference has been found between the perceived effect degrees of the organizational 24 factors such as "Clinic and vocational autonomy", "Stability of the environment", "Support for making decisions about clinic", "Work autonomy", "Job security and work welfare", "Leadership style", "Management style", "Patient density" (disease density), "Dimension of work's physical effort", "Opportunities of job promotion", "Role

clarity", "Sexual harassment", "Social integration and the nurses' relationship", "Stress", "Tool, equipment, hardware, etc.", "The size of the unit which they work" on nursing job performance in respect of property of the hospital which they work ($P < 0.05$). Thus, it can be argued that the property structure of the hospital leads to statistically significant variances with respect to assessments about the effects of some organizational factors that are influential on the nursing job performance. In order to find from which group these variances are resulted, "the least significant difference test", which is a "post hoc multiple comparisons" test, was manipulated. As a result of the analysis applied, it was deduced that the differences resulted from the nurses working at the university and private hospitals. In order to clarify the factorial structures of the factors affecting nursing job performance or under which groups they can be classified, explanatory factor analysis was applied to research data.

Table 6: Distribution of factors influencing the nursing job performance in terms of hospital ownership status and its statistical comparison

Variables	Ownership of Hospitals						F *
	University (n= 541)		Ministry of Health (n= 237)		Private (n=53)		
	Mean	Std. De- viation	Mean	Std. De- viation	Mean	Std. De- viation	
Clinical and Vocational Autonomy	4.02	0.91	3.61	1.16	3.21	1.47	23.853
Compensation	4.26	1.10	3.83	1.26	3.79	1.04	13.854
Continuing Education	3.93	0.95	3.61	1.05	3.85	1.06	8.809
Physical Stability	4.11	1.00	3.52	1.06	3.49	0.86	33.063
Support for Making Clinical Decisions	4.11	0.98	3.65	1.11	3.47	1.18	22.485
Physical Work Conditions	4.30	0.91	4.05	1.10	4.02	0.88	6.629
Job Autonomy	4.19	1.02	3.82	1.27	3.70	1.08	11.953
Job Security	4.44	0.90	3.97	1.24	4.19	0.90	18.055
Leadership Style	4.26	1.00	4.00	1.18	3.60	1.23	11.841
Management Style	4.16	0.99	3.95	1.13	3.38	1.21	14.639
Nurse Job Performance Measurement and Evaluation	3.88	1.10	3.35	1.20	3.32	1.29	20.639
Orientation Program	4.28	0.93	3.92	1.14	4.02	0.93	11.036
Patient Severity (disease severity)	4.23	0.86	3.94	1.00	4.28	0.71	9.148
Physical Work	4.37	0.89	4.07	0.97	4.00	0.92	11.115
Promotional Opportunities	4.08	1.07	3.52	1.34	3.57	1.04	21.420
Role Clarity	4.24	0.96	3.86	1.21	3.53	1.03	19.139
Sexual Harassment	4.18	0.99	3.64	1.30	2.87	1.41	44.653
Shift Work	4.18	0.93	3.91	1.04	4.00	1.03	6.419
Social Interaction and Nurses	4.03	1.02	3.81	1.17	3.26	1.41	13.227
Stress	4.44	0.83	4.01	1.06	3.02	1.30	64.079
Supplies and Equipments	4.31	0.85	4.15	1.00	3.92	0.82	6.337
Technology Support	4.40	0.88	4.13	0.99	3.92	0.91	11.788
Unit Size	4.42	0.88	4.15	1.13	3.58	1.08	21.423
Vacation System	4.54	0.77	4.20	1.07	4.17	0.72	14.668

Note. This table has only significantly different variables according to employment status of nurses.

*: For all cases P value was < 0.0001

Table 7 indicates the factors and their load obtained as a result of factor analysis. In the analysis, “basic component analysis” and “equamax rotation method” were selected as the extraction method. As a result of the research, it was found that 28 factors affecting nurses’ job performance were gathered under five factors. These five factors explain 53.99 %

of the total variance. The first factor clarifies 37.59 % of the total variance and it is defined as “work conditions and work characteristics”. “Physical Work”, “Supplies and Equipments”, “Technology Support”, “Unit Size”, “Physical Work Conditions”, “Physical Stability”, “Workload”, and “Noise Level, Stress” (9 variables) are grouped under the first factor.

Table 7: Rotated Factorial Loads of the factors affecting the nurses' job performance (*)

Variables	Factors and Factorial Loads				
	1. Factor	2. Factor	3. Factor	4. Factor	5. Factor
	“Work Conditions and Work Characteristics”	“Employee Personal Rights / Job Security”	“Social Integration, Disease Severity and Harassment”	“Management and Leadership”	“Conditions of Work Environment”
Physical Work	0.603				
Supplies and Equipments	0.581				
Technology Support	0.539				
Unit Size	0.526				
Physical Work Conditions	0.514				
Physical Stability	0.511				
Worload	0.479				
Noise Level	0.443				
Stress	0.426				
Promotional Opportunities		0.580			
Compensation		0.554			
Vacation System		0.552			
Shift Work		0.496			
Job Security		0.490			
Malpractice Insurance Coverage		0.384			
Patient Severity (disease severity)			0.500		
Sexual Harassment			0.460		
Social Interaction and Nurses			0.454		
Role Clarity			0.422		
Clinical and Vocational Autonomy				0.559	
Leadership Style				0.496	
Management Style				0.495	
Job Autonomy				0.392	
Nursing Care Delivery System				0.491	
Support for Making Clinical Decisions					0.462
Continuing Education					0.448
Orientation Program					0.433
Nurse Job Performance Measurement and Evaluation					0.398

(*) Extraction Method: Principal Component Analysis. Rotation Method: Equamax with Kaiser Normalization. Rotation converged in 18 iterations. Kaiser Meyer Olkin (KMO) = 0.883
Barlett's Test Of Sphericity---- $\chi^2= 9445.547$; $P= 0.000$; $P<0.001$

The second factor clarifies 5.07% of the total variance and it is defined as “employee personal rights” and “job security”. 6 variables such as “Promotional Opportunities”, “Compensation”, “Vacation System”, “Shift Work”, “Job Security”, and “Malpractice Insurance Coverage” are grouped

under the second factor. The third factor clarifies 4.08 % of the total variance and it is defined as “social integration, disease severity and harassment”. Four variables such as “Patient Severity (disease severity)”, “Sexual Harassment”, “Social Interaction and Nurses”, and “Role Clarity” are

grouped under this factor. The fourth factor clarifies 3.37 % of the total variance and it is defined as “management and leadership”. Five variables such as “Clinical and Vocational Autonomy”, “Leadership Style”, “Management Style”, “Job Autonomy”, and “Nursing Care Delivery System” are grouped under fourth factor. The fifth factor clarifies 3.15 % of the total variance and it is defined as “conditions of work environment”. The fifth factor compasses the variables like “Support for Making Clinical Decisions”, “Continuing Education”, “Orientation Program”, “Nurse Job Performance Measurement and Evaluation”.

Discussion

In this study, it was aimed to make the nurses to assess the effect degree of some organizational factors affecting nursing job performance. It may not be possible to generalize the results to the all nurses working in Turkey as this study was implemented in only University, Ministry of Health and private hospitals of Kayseri and Kocaeli. However, it has an importance in the assessment of 28 organizational factors affecting nursing job performance although it is a small-scale descriptive study. This study fulfils a research gap in the area of nursing performance, and its relationship with organizational factors in Turkey. The paper also highlights the impact of workload on job performance in Turkey, and other countries facing the issue of multi-national work force (4).

As a result of the study, it was understood that the nurses perceive the effects of 28 organizational factors, which were asked to them, on their own job performance highly. The nurses especially regard “work load” as an organizational factor influencing their job performances on the most level. This issue can be seen especially as the reflection of the staff shortage that has been experienced in the hospitals. In the study, significant differences were found as to some organizational variables such as especially hospital property, the unit worked, educational status, employment status in the nurses’ assessments and perception of effect degree of the factors influencing their job per-

formance. The management of hospitals will be responsible for measuring nurses’ job performance, evaluation, dealing with the organizational variables that show differences in order to increase the nurses’ job performance and managing them for increasing the job performance (7).

The studies, which hospital management and especially Health Ministry and other state institutions will make, about decreasing the nurses’ work load in hospitals, more contribution to the decisions of the clinic, increasing the autonomy of vocation and work, openness of the work and roles that are expected from the nurses (openness in work definitions), increasing in the social activities among the nurses, justice in the application of rotation and permit system, improvement in employee personal rights, increasing and justice in the opportunities for promotion, will provide important benefits in terms of nurses’ job performance. At this point, at least the hospital management should make the necessary organization and amendment on the factors that they can control and change on their own (2, 4, 7, 8-12)

Schwirian’s tool of measuring job performance measures the quality degree of the health care services that the nurses serve in terms of 52 variables. This measurement tool is commonly used in measuring nursing job performance. After examining the existent literature about nursing services and nursing performance in 1978, Schwirian developed a measurement tool that can measure nursing performance generally (job performance is included in nursing performance). This scale was named as “Schwirian Six Dimension Scale of Nursing Performance”. Leadership, planning and assessment, education and support, social interaction, vocational development and crucial care are six dimensions of the scale (13). According to this model, the variables affecting nurses’ job performance are divided into seven main categories. These are academic success, the family in which the nurse was brought up (origin family) and this family’s features, demographic features of the nurse, personal characteristics, employment qualifications and behaviour of nursing career. There are six subcategories under these seven main categories. In the literature review he made, Schwirian

points out that the features of the family in which the nurse was brought up, academic success and the nurse's personal characteristics have been substantially investigated. Moreover, Schwirian emphasizes that the factors affecting job performance such as clinic autonomy, responsibility, personal development, and acceptance are still being searched (4, 13, 14).

The results gained from the study may contribute to present some suggestions to the hospital management and the management of nursing services in the hospital. It is especially inevitable to apply some implementations and politics that reduce the work load of the hospital nurses. Additionally, the points such as management's being participatory and democratic, equal treatment of the staff, provision of equal promotion opportunities, increasing the clinical autonomy of the nurses, increasing the in-service training, prevention violence at work, being fairer and more transparent in the applications of rotation and permit system can be suggested in order to increase nurses' job performance.

Conclusion

This study is largely of exploratory nature. The findings of this study have a limited generalisability due to the fact that all measures used are based on self-reports. Future research may be directed to other objective measures of performance. Future research may be conducted and planned on physicians, nurses and other health personnel in primary health organizations and hospitals.

This study suggests a model that is rooted in empirical data. The model illustrates one way in which organizational variables cluster in five blocks to influence job performance among Turkish nurses working in hospitals. A replication study to test this model is recommended. A replication study of this investigation among nurses in the same setting (hospitals) can be done to find out whether the results of this study, including the derived model, will hold among other samples of the same population. Another replication study of this investigation among nurses in other settings

(community, home, hospice, and long term care) is needed to find out how nurses in these settings perceive the influence of organizational variables pertaining to their setting on their job performance.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the author.

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