

## Effect of internal & external motivation and Burnout levels of nurses on work performances: Cross-sectional Analysis

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### ABSTRACT

The crucial role of delivering health care services belongs to the health care providers. Among them, nurses have an important place both in regards to their numbers and the burden they take on. Therefore, the purpose of this research is to understand the relations between their work performances and their burnout level in conjunction with their internal& external motivation. The research is a cross-sectional observational study. Surveys were distributed to 600 nurses across the Asian part of İstanbul among 4 hospitals. The study included the volunteer nurses who were actively working in the institutions, who were given permission to participate in the study, except for the nurses who were on leave/had a report during the data collection period. Study demonstrated that (i) a statistically significant negative correlation between burnout and perceived performance, and (ii) a positive but statistically significant and low-level correlation between motivation (internal and external) and perceived performance, (iii) burnout caused by independent variables has a statistically significant and negative correlation between both internal and external motivation. Perceived work performance of nurses, one of the most important factors in delivering health care services, can be elevated by decreasing burnout level and by increasing their internal/external motivation. So, it is important for administrations to take appropriate measures to lower the burnout level and increase the motivation of nurses.

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## 1. Introduction

Organizations are structures that set certain goals to achieve. While reaching these goals, using the minimum input, maximum output principle is always a basic guideline to use the resources efficiently. (Özdaşlı and Akman, 2012). Health organizations aim to deliver health services. While doing so, efficiency again is one of the main topics. The expected outcome from health services are protection, healing and maintenance of the mental and physical health. (Karakurt and Ekinci, 2015). Expectations from the health services are patients being cured with appropriate methods, protection from illnesses, creating healthier societies and sustaining all these factors. (Somunoğlu, 2012). Various factors complicate the delivery of health services, such as: labor intensity, the non-substitutable and non-deferrable nature of said services, lack of demand-supply balance, high level asymmetric knowledge, and high-level specialization and randomized cases.

In addition to all of these, technological developments and globalization has resulted in the accessibility of health services, elevated awareness for healthier choices and increased demand for better health services. This increased demand requires more effective, efficient and higher quality services (Casto and Layman, 2013). All of these elements emphasize the importance of competent personals. Health providers carry out protective, therapeutic and rehabilitative services all together. Despite all the technological advancement, health services heavily rely on health providers, so much so that the demand for health providers is on the rise. The Turkish Republic's Health Ministry's release for Health Education and Health Personal Report indicates the change in number of nurses from 149.012 to 166.142 between 2014 and 2017. According to the same report; 80.951 specialist physicians, 27.889 dentists, 28.541 pharmacists and 53.741 midwives were employed in the health system. This by itself indicates the importance of nurses.

As is the case for every organization, increasing the efficiency could be achieved by motivating the most complex and important resource, the people themselves. Many scientific works have proved that motivation increases both efficiency and effectiveness of employees (Luthans, 1995). Motivation is defined as setting up an appropriate work atmosphere for employees to extract their knowledge, skills and experience into their work. Motivation stems from activating best actions needed for a better work outcome. However, this is not an easy task since the motivational factors vary from person to person (Koçel, 2005). Because of the complex nature of motivation, this could not be undermined. Therefore, it would be easier to separate internal and external motivation to make it simpler (Yurt and Bozer, 2015).

Internal motivation is the urge to pursue something because of his/her own desire. This can be explained as having no external impulse, only self-motivation (Ersarı and Naktiyok, 2012). Since the source of the motivation is internal; all of the actions are self-desired. One's satisfaction is higher when an action takes place by internal motivation (Nurcahyo, et al. 2011).

External motivation becomes a factor when an action takes place with an external impulse. Students being willing to learn for the sake of an award or punishment could be a very simplistic example (Ryan and Deci, 2000). Both internal and external motivation plays an important role in elevating work performance and efficiency.

Besides the motivation required for the employees in delivering the health services, several other factors need to be taken into consideration; human life being at stake and working on a 24/7 base. The feeling of burnout could be listed at the top of the list. The notion of emotional burnout was first used by Fredudenberg. It is explained as an employee who could not fulfill basic duties at work because of long hours of his or her working schedule (Italia and ark., 2008). In other words, low self-confidence, as well as emotional, physical and mental inability caused by working under high stress (Seta and ark., 2000).

Problems due to burnout and motivation also highlight other difficulties in delivering health services. Hence in this paper, effect of internal & external motivation and burnout levels of Nurses on their work performance are to be measured. This study also examines the correlation between demographic variables and perceived work performance.

## 2. Materials and methods

The primary goal of this paper is to examine the relations between nurses' work performances and burnout level in conjunction with internal& external motivation. This is cross sectional and observational study. The main hypothesis is that "There is a direct relation of internal & external motivation and burnout level of nurses and their perceived work performance."

In this research, data collecting measures are perceived work performance, burnout and motivation. Perceived work performance is measured on a 7-point scale established by Şehitoğlu (2010) after validity and reliability tests were done. It showed single factor and Cronbach alfa (0,878) for internal reliability indicating the scale has a high degree of internal reliability (Şehitoğlu, 2010). The burnout scale used was developed by Pines (2005) as a short form scale. Its Turkish version was established by Çapri (2013). The scale is a 10-point scale with single factor. A third scale used in this research paper was for motivation. This scale was established by Dündar et al. (2007) after much research and work with various scales. The scale is a 24-point scale with two factors: internal and external motivation. Both factors have high levels of reliability. All three scales were likert scales, and limited demographic information was collected. This research started with the permission of Istanbul Medipol University Ethic Commission (Verdict-Karar No:348).

Research data was collected between 1st of April 2019 and 30th of May 2019 from 4 different hospitals located in the Asian part of Istanbul. Surveys were distributed to 600 nurses across the Asian part of Istanbul at 4 hospitals. The data is collected from voluntarily nurses while on duty with the permission of the health institutions. Minimum required example size was determined from the generic charts as 384. The example size 384 participant is also considered enough sampling even for wider research studies (Gürbüz and Şahin, 2017). Therefore, the aim was 384 participants. In total 600 surveys were distributed, while data was collected from 458 participants, and 439 of those used for the research study. Rate of return is calculated as 76.33 %.

All the data was analyzed at SPSS 22.0 version, with the mean, standard deviation, range and such descriptive statistics being used with  $p < 0.05$  significance level. Before the hypothesis testing, distribution of the data was investigated. At standard distribution analysis, both Kolmogorov-Smirnov and

Shapiro-Wilk testing were used. Both testing results indicated that the data does not fit for standard distribution testing ( $p < 0.05$ ). Therefore, non-parametric hypothesis tests Mann Whitney U, Kruskal Wallis and Spearman Correlation with  $p < 0.05$  significance level was used for analysis.

### 3. Findings

Descriptive statistics have been calculated to identify the characteristics of participants. Categorical variables have been listed as numbers and percent, and quantitative variables have been listed as mean and standard deviation.

**Table 1:** Categorical variables for the participants

VARIABLE		n	%
GENDER	Woman	382	87
	Man	57	13
MARITAL STATUS	Married	259	59
	Single	180	41
EDUCATION	High school	38	8,7
	College	60	13,7
	Bachelor degree	301	68,6
	Master degree	40	9,1
TOTAL		439	100

Source: Authors' Compilation

As seen at **table 1**, majority of the participants are female (87%), married (59%), and have bachelor degree (68.6 %).

**Table 2:** Quantitative variables for the participants

VARIABLE *	Min	Max	Med	$\bar{x}$	SD
Age	16	83	29	32,15	8,17
Total Experience	2	556	50	93,48	97,26
Current Organizational Experience	1	372	22	53,95	65,26

\* For ease of expression, the age variable is expressed as year, the total experience and the current organizational experience as months

Source: Authors' Compilation

The mean age of the participants is  $32.15 \pm 8.17$ , the mean of their total experience in their professions is  $93.48 \pm 97.26$  and the experience in their current institutions is  $53.95 \pm 65.26$  months.

**Table 3:** Participants' Scores from Scales.

VARIABLE	$\bar{x}$	SD
Burnout	3,51	1,24
Internal Motivation	2,92	0,19
External Motivation	2,87	0,21
Performance	5,52	0,95

**Source:** Authors' Compilation

Participants have been collected  $3,51 \pm 1,24$  on burnout scale,  $2,92 \pm 0,19$  on internal motivation scale,  $2,87 \pm 0,21$  on external motivation scale. The mean score obtained from the perceived performance scale is  $5.52 \pm 0.95$ . Burnout level of the participants have resulted at below 4 which is the average on the 7 point scale. This shows the burnout level of the participants are low. The average score of the motivation scale is 2. Participants have scored above average in both internal and external motivation sub-dimensions. The average score of the perceived performance scale is 4 and the participants have scored above the average.

In the research, after the descriptive statistics, hypothesis tests have been conducted. Effects of burnout levels and motivations of nurses on their work performances have been examined by correlation analysis. Outcomes of the analysis are displayed on the table below, table 4.

**Table 4:** Correlation between the variables

	M	SD	Perceived Performance	Burnout	Internal Motivation	External Motivation
Perceived Performance	5,52	0,95	-			
Burnout	3,51	1,24	-,422*	-		
Internal Motivation	2,92	0,19	,173*	-,155*	-	
External Motivation	2,87	0,21	,226*	-,186*	,379*	-

\* $p < 0.01$

**Source:** Authors' Compilation

As a result of the analysis, statistically significant, negative and medium relationship has been found between burnout and perceived performance ( $p < 0.01$ ,  $r = -,422$ ). In addition, a statistically significant, positive and weak correlation has been found between both internal and external motivation tools and perceived performance ( $p < 0.01$ ,  $r = ,173$ ;  $,226$ ). Regression analysis could not be performed because the normal distribution assumption, which is one of the regression assumptions, is not valid. On the other hand, it has been found that there is statistically significant, negative and weak correlation between independent variables (burnout, internal and external motivation tools) ( $p < 0.01$ ).

After the relations between the variables have been tested, perceived work performance has been examined regarding demographic variables. Firstly, gender, marital status and education level variables have been included into the analysis. Results are displayed on the table 5.

**Table 5:** Perceived work performance according to gender, marital status and education.

VARIABLE		M	U	X2	p
Gender*	Woman	221,01	10499,500	-	0,664
	Man	213,20			
Marital Status*	Married	232,22	20146	-	0,015
	Single	202,42			
Education Level**	High school	198,53		-	0,037
	College		249,00		
	Bachelor's degree		212,24		
	Masters degree	255,29			

\*Mann Whitney U tests, \*\*Kruskal Wallis tests

**Source:** Authors' Compilation

Participants' perceived work performances have no significant differences based on the gender of the participants ( $p > 0.05$ ). However, perceived work performance have significant differences for both marital status and education levels ( $p < 0.05$ ).

When the mean ranks of the marital status variable has been examined, it has been found that married people have higher level of mean rank. When the educational status variable has been examined, it has been found that the group with the highest mean rank is the group with the bachelor's degree education level. As a result of the post hoc test, it has been found that there are statistically significant differences between bachelor's degree and both college and master's degree groups and between college and master's degree groups ( $p < 0.05$ ).

Relationships between perceived performance and age, total experience and current organizational experience have been examined with Spearman Correlation analysis. Results are displayed at Table 6.

**Table 6:** Relations between perceived work performance and age, total and organizational experience.

	M	SD	Burnout	Age	Total Experience	Org. Experience
Burnout	5,52	0,95	-			
Age	32,15	8,17	,160*	-		
Total Experience	93,48	97,26	,136*	,588*	-	
Org. Experience	53,95	65,26	,128*	,428*	,768*	-

\* $p < 0.01$

**Source:** Authors' Compilation

As a result of the analyzes, it has been found that there are statistically significant, positive and weak relationships between perceived working performance and age, total experience and organizational experience ( $p < 0.05$ ).

#### 4. Conclusion

Despite the high technology involved in health services, it continues to be labor intensive and therefore, the human factor has an important role in service delivery processes. It is known that nurses occupy a large proportion in health manpower. It is clear that all health care professionals play an important role in health service delivery processes and that each health profession plays a vital role in the proper maintenance of these processes. Nevertheless, nurses are the primary partners of physicians who play a major role in the diagnosis and treatment processes and are involved in a large part of the service delivery with physicians. In this context, nurses play an active role in important points such as achieving the desired level of outputs in the health institutions, proper service delivery and ensuring customer satisfaction.

Nurses, among all other health service providers, require individual attention for following reasons: their vital role in providing health services, non-tolerable nature of the work, addressing the health and life of patients, timing pressure, and heavy work load. Giving importance to their tasks, the work performance of nurses effects health service outcomes. Therefore, any stimulant to push nurses towards higher motivation is just as important. On the other hand, it is known that nurses may have burnout problems due to the tasks they perform. In this context; the relationship between internal and external motivation tools and burnout levels of nurses and perceived working performance has been investigated.

Both descriptive statistics and hypothesis tests have been performed within the scope of the research. Accordingly, it has been found that the overall burnout levels of the participants are lower than average, both internal and external motivations are higher than average. Also perceived performance scores are higher than average. Besides, there is a statistically significant relationship between internal and external motivation levels, burnout levels and perceived performances of nurses ( $p < 0.05$ ). The relationship between burnout level and perceived performance is negative and moderate ( $r = 0, -422$ ), while the relationship between internal and external motivation tools and perceived performance is positive and weak ( $r = 173, 226$ ). The findings of the study indicate that the increase in burnout level of nurses may lead to a decrease the working performance, and the increase in internal and external motivation will increase the perceived performance.

Various studies have been done individually about health service providers' burnout levels, motivations and performances. However, no studies have been conducted with all three variables together. Therefore, this study is considered distinctive.

In a study conducted by Akbolat and Işık (2009), it was found that there are burnout status among health workers in different sizes and levels. In a study examining the relationship between burnout level and perceived and actual performance; It was found that there is a relationship between burnout and perceived performance but there is no statistically significant relationship between burnout and actual performance (Garden, 1991). The conclusion of the aforementioned study and our study coincide with each other. In other research about health service providers, it concluded that each service provider has different motivating factors (Özer ve Bakır, 2003). In another stud, some of the motivating factors were found to reduce the intention to leave and increase work performance (Yıldız vd., 2014). Similarly, in another study, it was concluded that individual motivation has a positive effect on performance (Altındağ and Akgün, 2015). The results of a meta-analysis study (16 studies included), which examined the relationship between burnout and objective performance, it was concluded that burnout affect objective performance negatively (Taris, 2006). The results of this study supports the results of the present study. In their study, Kılınç and Paksoy (2017) found that perceived work performance is higher than average. The results obtained in this study coincide with the findings of the present study.

One of the most important constituents, nurses' burnout level should be lowered with a goal of increasing their work performance. For this reason, it is recommended to examine the factors that cause burnout in the future. Thus, health managers will be able to eliminate these elements or minimize their effects. It has been concluded that increasing both internal and external motivation of nurses affect perceived work performance positively. Therefore, there should be efforts conducted to increase internal and external motivation of nurses. Future studies can focus on possible factors of burnout and motivation, and other variables which have effect on performance can be included in the study. In this sense, this study is expected to be a reference source for future studies.

This research is limited to 4 hospitals which have given permission and located in Istanbul and their active nurses. The nurses who agreed to participate voluntarily were included in the study, except for the nurses who were on leave during the data collection period. Because of time and financial constraints, a sample have been chosen to conduct the study. The research has not been funded by any institution. During the research process, related literature could be examined in Turkish and English languages. The research is limited to the scales used to collect data and responses to these scales. The sample size of the study is of no concern about the external validity of the study and indicates the generalizability of the study.

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