A UNIVERSITY HOSPITAL PRACTISE: IS THERE ANY RELATIONSHIP BETWEEN WORKPLACE SAFETY AND PATIENT SAFETY?

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ABSTRACT

This study investigates the relationship between workplace safety perceptions and patient safety perceptions of hospital staff . Along with job safety decrease, occupational accidents, occupational diseases increase and this may lead to detrimental consequences. Besides, Patient safety is one of the most important factors affecting the quality of health care provided in hospitals. In this study, a survey study containing Hayes' workplace safety scale and generally consisting of statements that measure the perception of patient safety was conducted to the employees of Research and Application Hospital of Kocaeli University. it is found out that there are statistically significant relationship between patient safety the workplace job safety dimensions. It is also revealed that Patient Safety has statistically significant positive relationship among Supervisor Safety (0,250), job Safety (0,216), job Safety Policies (0,283), Safe Work Environment (0,299) and Improving Job Safety (0,313), respectively. In other words, as the supervisor safety, job safety, job safety policies, safe work environment and improving job safety increase perceptions of patient safety in hospitals increase as well.

Keywords: Workplace Safety, Patient Safety, Hospital, Healthcare

Jel Codes: M12,M14

İŞ GÜVENLİĞİ İLE HASTA GÜVENLİĞİ ARASINDA İLİŞKİ VAR MI?: BİR ÜNİVERSİTE HASTANESİ UYGULAMASI

ÖZ

Bu çalışma hastane çalışanlarının iş güvenliği ve hasta güvenliği algıları arasındaki ilişkiyi araştırmaktadır. Bulgular iş güvenliği azalırken meslek kazaları ve hastalıklarının arttığı yönündedir. Bu durum olumsuz sonuçlara yol açabilir. Ayrıca hasta güvenliği, hastanelerde verilen sağlık hizmetinin kalitesini etkileyen en önemli faktörlerden birisidir. Bu çalışmada Kocaeli Üniversitesi Araştırma ve Uygulama Hastanesinde Hayes'in iş güvenliği ölçeği test edilmiştir. Bulgulara göre hasta güvenliği ve iş güvenliği boyutları arasında istatistiki olarak anlamlı ilişki tespit edilmiştir. Ayrıca hasta güvenliği ve denetimci güvenliği (0,250), iş güvenliği (0,216), iş güvenliği politikaları (0,238), güvenli çalışma ortamı (0,299), ve iş güvenliğini iyileştirme (0,313) arasında istatistiki olarak anlamlı pozitif ilişki tespit edilmiştir. Diğer bir ifade ile hasta

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güvenliği arttıkça denetimci güvenliği, iş güvenliği, iş güvenliği politikaları, güvenli çalışma ortamı ve iş güvenliğini iyileştirme artmaktadır.

Anahtar Kelimeler: *İş Güvenliği, Hasta Güvenliği, Hastane, Sağlık Hizmeti*

Jel Kodları: *M12,M14*

1.   INTRODUCTION

The employee's health and safety constitute one of the most important elements of human sources management process. Because, the efficiency of staff is determined by their strength of soul, mind and heart. The protection function of workplace health and safety's objectives are, ensuring the necessary human behavior in organizations for the creation of a safe working environment, causes of occupational diseases and work accidents are determined and eliminated and to increase productivity by reducing the time loss that they cause. For providing such an environment at workplaces, both employers and workers need to adopt the role which given priority to health and safety also having the faith of safety culture to ensure the establishment in institutions as well as relating the matter legislative harmonization. On this subject, it is expected that both sides should demonstrate the necessary attitude and have social responsibility (Özgen et.al., 2002: 289-290, Sabuncuoğlu, 2005: 310-311).

When the literature is examined, it is stated that the events which threaten patient safety arises from system rather than the individual and the patients are often damaged because of the unfavorable regulation of the system. It is also expressed that instead of today's personal approach in order to prevent error in service delivery, it is necessary to evaluate with system approach which take totally humanistic factors such as defective equipment, system design, fatigue, inadequacy of human memory and carelessness. The effective methods of ensuring patient safety is, learning the elements that caused an error and using these information on arranging the system and to use medical error prevention in addition to them when the error occurs, create monitoring mechanisms to provide at least damage the patient when exposed an error. Considering to business design, equipment, communication and information technology, human factor-the procedures in the new health care system; when errors occur, there are mechanisms to ensure that they are minimally prevalent and least damaging (CQC, 2001: 78).

2.   LITERATURE SEARCH

2.1.   Workplace Safety

In terms of businesses, in a narrow sense workplace health and safety is the protection of workers health and safety against dangers that arising from work and workplace limits. In a broad sense, workplace health and safety, not only from the workplace, even outside the

workplace, refers to taking measures against risks that may adversely affect the worker's healthy and safety (Tüzüner and Ozarslan,2011 :139)

Workplace safety, organizational culture and organizational climate are frequently spoken during works related to workplace safety.(Hayes vb 1998:145-161-Gyekye,2002:291-302;Türen and others,2014:171-190).Organizational culture is defined as a system of norms, values, beliefs and habits that direct the behavior of people in an organization (Türen et.al., 2014:172). Safety culture is lower segment of whole organizational culture that especially represents belief and values related safety and health problems (Tüzüner and Ozaslan, 2011:138-154).

According to the definitions made in the literature; most of the time, workplace safety is defined as worker's perception of safety in a specific moment and it has been expressed that a psychogical fact due to the focusing of perception, may change at different times depending on environmental and situational conditions.(Holloway,2012:13).

It is important that taking precautions about determination of the position related job safety in businesses and making it better. The workplace safety scale used in this study was developed by Hayes and his colleague.

It is comprised of 5 dimension of workplace safety scale, fellow workers safety, controlling safety, management safety and job safety's program and policy safety (Hayes et.al., : 1998).

2.2. Patient Safety

Patient safety can be defined as adverse outcomes from originating health maintenance period or avoiding physical injury, preventing adverse outcomes and physical injury and making improvements in these results (Vincent, 2012).

One of the important factors at preventing and re-adjustmenting faults in health services is constituted patient safety culture in the institution. Patient safety culture is part of organizational culture.

The attitudes shared by employees, related patient safety has occurred beliefs, perceptions and values (Kaya, 2009:33).

In the literature, health managers, for high safe and reliable health service presentation, attracting attention to functionless implementations that are commonly seen in health services constitutes the first step in initiating organizational transformation. This first

step will reveal more effective alteration than many implementations that impose on\will be imposed on health institutions. In Lao Tzu's words, "the journey that will take thousands of miles begins with the first step" When you reveal the target, the biggest challenge is to take the first step. When it is that considered the manager has to prioritize and organizational sources is limited, "What is my organizational ability to provide the service for patient without undamaging and out of fault in clinic processes; which one of these abilities should I utilize first."

This question should constitute the first step. The answer that the manager will give to this question should be seen an organizational learning about patient safety and as an effective method of identification the most important areas of improvement (Edwards, 2016:8).

2.3. Patient Safety Relationship with Workplace Safety and Hypothesis of Work

As health services develop and patients learn their rights, the diversity and quality of the health service delivery gradually become prominent. One of the most important of these prominent issues is patient safety. This concept has included whole precautions that are taken by health institutions and their employees in order to prevent damage due to the health care services (Hatırnaz, 2007:28-36, Wendin, 2007:24-28, Sezgin, 2007).

For establishing patient safety culture in health institutions the following is necessary: determining the activities that can create error and have high risk, the creation of an open communication environment in which medical errors can be reported without fear and hesitation, and in which persons are not punished, event reporting systems are far from punitive approaches (from the blame culture), determining the real cause of the event and approaching the system aimed at improvement solutions can be produced at all levels in open risk applications, allocating resource for patient safety by institutions (Akalın,2004:12-38).

The research hypothesis has constituted as the following:

H$_1$: There is a positive relationship between workplace safety and patient safety.

3. METHOD OF THE RESEARCH

3.1. Aim of the Research

The aim of the research is to determine the relationship between workplace safety perception and patient safety perception of Kocaeli University Research and Practice Hospital's employees.

3.2. Universe and Sample

The universe of the work comprises of employees who work at Kocaeli University Research and Practice Hospital. There is a total of 743 permanent staff in the hospital and it comprises of 632 health, 182 office and 29 technical staff. No sample was chosen for representing the universe of work, voluntary participation was based on and survey form was sent to all employees. Survey form was distributed manually and 303 pieces were returned 26 pieces of survey form (8.58 %) were not included in analysis because they had deficient and unqualified information. Totally 277 survey that are 37.28 %of the universe were included in the analysis.

69.3% of respondents is married and 30.7% of respondents is single. 58.8% of the respondent is women and 41.2% is men. 54.5% of health personnel, 23.5% of office personnel, 15.9 % of technical personnel and 6.1% of other personnel has responded the survey. 14.4 % percent at clinic, 13.4% percent at outpatient clinic, 13.6% percent at technical studio, 15.2% percent in the office, 5.1% percent of laboratory, 16.1% percent at emergency service, 1.8% percent of intensive care unit, 15.5% percent of treatment units and 11.9% percent at other units.

The respondent work at the following units: The respondents' average of age is 38.2 and average of seniority is 8.2 years.

3.3. Variables Used in Research

Past studies that deal with concept of work place safety and patient safety in different perspectives were examined. The survey form that was created in order to test the validity of hypothesis in the data collection process consists of 51 items, except the questions related to working details and demographics.

These items are intended to measure the perception of workplace safety and patient safety within themselves.

The workplace safety scale used at the research that was developed by Hayes and his colleague, consists of 5 dimensions; workplace safety, fellow worker safety, controlling safety, management safety and programme and policy of workplace safety. There is a total of 50 questions, 10 questions for each dimension. The scale was created in the form of five point likert scale. The options are "strongly disagree", "disagree", "neither agree nor disagree", "agree" and "strongly agree". Employees' perception of patient safety in the hospital was

measured with five point likert scale that consists of 5 options, "very bad", "bad", "neither bad nor good", "good" and "very good". The scale of patient safety consists of sole questions.

3.4. Reliability of Research

Scales used in the research and calculated Cronbach's alpha coefficient for determining reliability of the study is presented in Table 1.

Questions 16,17,19,31,34,35,40 and 44 were taken out due to breaking reliability of factor for workplace safety. After the questions were taken out, factor analysis and reliability analyzes were made again and values shown in Table 1 were obtained. Accordingly, it is considered that the reliability of the research is high at a satisfactory level. Factor and reliability analyzes were not performed because patient safety scale has one question and average value of scale was calculated 3.0595 and standard deviation was calculated 0.086108.

Table 1: Cronbach's Alpha Values Related to the Scale Used in the Study

	Inventory	Factor Disclosure (%)	Cronbach's Alfa
Jop Safety	**Factor 1**	**67,412**	**0.911**
	Factor 1	26,450	0.930
	Factor 2	12,881	0.912
	Factor 3	8,124	0.828
	Factor 4	6,309	0.785
	Factor 5	4,368	0.900
	Factor 6	3,671	0.794
	Factor 7	2,907	0.710
	Factor 8	2,702	0.758

4. FINDINGS AND DISCUSSION

4.1. Factor Analysis of the Work Place Safety Scale

In this study, factor analysis was applied for scale of workplace safety since it is important to understand how many groups of factors can be formed in terms of health employees and calculations are preferred to be more sensitive. The scale of workplace safety KMO value was found to be respectively 0.975 and 0.879. Besides, inspected Bartlett's test statistics p value is below 0.05 and it shows that studying data for prior condition is appropriate for factor analysis. This information is given in Table 2.

Table 2: KMO and Bartlett's Test Conclusions

KMO and Bartlett's Test		Job Safety
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.884**
Approx. Chi-Square		**7356.769**
	Df	**820**
	Sig.	**0.000**

In the factor analysis explanation level of factors is %67,412, Cronbach's alpha is 0,911 and totally 8 factors were observed. The reliability of each factor was evaluated by Cronbach alpha. After the 16,17,19,34,35,40,41,46 and 50 numbered questions were eliminated, factor analysis and reliability analyzes were repeated. Inspector safety, workplace safety, fellow worker safety, safe working environment, workplace safety improvement, insecure working and workplace safety program constitute sub dimensions of workplace safety.

4.2. Findings of Hypothesis Testing

Normal distribution analysis for factors was made before deciding which analysis technique to be used as a result of factor analysis. Histogram and Q-Q graph were examined for each factor and it is observed that distribution is close to normal.

It was decided that parametric techniques will be used in the analyzes because sample number is above 30 that is the accepted lower limit for parametric analysis and both of normal distribution graphs are close to normal distribution.

Pearson Correlation analysis results which are calculated for the hypothesis analysis of the research "There are positive relationship between workplace security and patient security" are presented in Table 3. For the r-value it is interpreted as indicating relationship; 0-29 range is low, 30-69 range is medium, 70-100 range is high-level relationship.

Table 3: Sub-dimensions of Workplace Safety and Patient Safety

	İnspector Safety	Workplaces Safety	Workplaces Safety Policies	Colleague Safety	Safe Working Environent	Workplace Safety Improvement	Unsecure Work	Workplaces Safety Program
Patient Safety	0,250**	0,216**	0,283**	0,004	0,299**	0,313**	0,015	0,064

** Correlation is significant at 0.01 level (two-way).

"There is positive relationship between workplace safety and patient safety." H_1, it has been accepted.

When table 3 is examined, it is understood that there is a positive relationship between employees's perception of patient safety and inspector safety(r=.250, p=0.01), workplace safety (r=.216, p=0.01), policies of workplace safety (r=-.283, p=0.01), safe working environment (r=.299, p=0.01) and workplace safety improvement (r=.313, p=0.01). In other words,as perceptions of inspector safety, workplace safety, policies of workplace safety, safe working environment and workplace safety improvement increase, perception of patient safety in the hospital also increases .There is no statistically significant relationship between employees's perception of patient safety and fellow worker safety(r=.004, p=0.05), insecure working (r=.015, p=0.05),workplace safety programme (r=-.064, p=0.05)

When domestic and foreign studies are examined, in a study on workplace safety, they focused on the factors that determine safety perception (Dejoya et all.,2004:87).The research that made in Finland it was determined that employees with more seniority have higher safety perceptions than those with less seniority (Gyekye ,2006:365).In a study on health employees, safety climate perceptions differ significantly according to employees' worker groups and departments, on the contrary it was determined that there was no significant difference according to gender, age groups, educational levels, total work experience and work experience in the institution (Tüzüner and Ozaslan,2011:152).

5. CONCLUSION AND SUGGESTION

Just as in all businesses, workplace safety must be given necessary importance in order to establish a healthy and safe working environment in hospitals. If workplace safety in hospital is not at the required level, occupational diseases, stress, occupational accidents may increase directly so it negatively affects patient safety indirectly increased negligence and mistakes of employees. In addition, the level of workplace safety can negatively affect patient safety in order to come for getting service.

In our study, it was seen that there is a statistically significant positive relationship between hospital employees' perception of workplace safety and perception of patient safety. According to this result, statistically significant relationship between workplace safety dimension and patient safety were determined in general. There is a statistically significant relationship between patient safety and controlling safety (0.250), workplace safety (0.216), policies of workplace safety (0.283), safe working environment (0.299), improvement of workplace safety (0.313) respectively. In other words, as perceptions of controlling safety,

workplace safety, policies of workplace safety, safe working environment, improvement of workplace safety increase, perception of patient safety in the hospital also increases.

The hospital manager should develop policies and implementation that can prevent potential accidents at workplace, reduce risks and increase workplace safety. Besides, they should take measures such as re-adjustment of working hours, stress reduction measures, training for creating workplace safety culture, creating safety awareness for employees, arrangement of the working environment, enabling employees to improve their occupational and individual abilities and reduction of employees' exhaustion. As a result, the level of patient safety is positively correlated with the level of workplace safety in hospitals.

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