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RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT PROCESS PERFORMANCE AND BARRIERS TO KNOWLEDGE IN SHARING: THE NURSING EXAMPLE

Bilgi Yönetimi Süreç Performansı ile Bilgi Paylaşım Engelleri Arasındaki İlişki: Hemşire Örneklemi

Şehrinaz POLAT[1] Handan ALAN[2] Hanife TIRYAKI SEN[3] Fatma DEMIRKAYA[4]
[1]Istanbul University, Faculty of Nursing, Istanbul
[2]IUC Florence Nightingale Faculty of Nursing Department of Nursing Administration, Istanbul
[3,4]Istanbul Health Directorate, Health Services Presidency, Istanbul, Turkey

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ABSTRACT

To perform basic functions correctly in health services, healthcare employees need to carry out effective knowledge-sharing activities. Therefore, knowledge management is as important as other assets and resources for the survival and success of the organization the aim of this study is to define the main reasons that lead to barriers to knowledge sharing for nursing and whether there is a relationship between knowledge management performance and knowledge sharing barriers. The descriptive and correlational study was conducted on 562 nurses who work in university hospital. The data were collected using descriptive information form, Information Management Process Performance Evaluation Scale, Knowledge-Sharing Barriers Scale. There was a positive, low power and statistically very significant correlation between the knowledge management process performance evaluation of nurses and knowledge-sharing barriers (r = .358; p<.001). Additionally, the knowledge-sharing barriers were mainly correlated with the "information sharing" subdimension (r=.349; p<.001), while the knowledge management process performance was mainly correlated with the technological barrier subdimension (r=.287; p<.001). Based on the review, that knowledge-sharing barriers were knowledge management of nurses in healthcare organizations. It is evident that knowledge management and sharing are significant areas for future research in health services.

Keywords: Knowledge-sharing, Knowledge-sharing barriers, Knowledge management, Nurse.

ÖZ

Sağlık hizmetlerinde temel işlevleri doğru bir şekilde yerine getirmek için sağlık çalışanlarının etkin bilgi paylaşım faaliyetleri yürütmesi gerekmektedir. Bu nedenle, organizasyonun hayatta kalması ve başarısı için bilgi yönetimi, diğer varlıklar ve kaynaklar kadar önemlidir. Bu çalışmanın amacı, hemşirelik için bilgi paylaşımının önündeki engellere yol açan temel nedenleri ve bilgi yönetimi performansı ile bilgi paylaşım engelleri arasında bir ilişki olup olmadığını tanımlamaktır. Tanımlayıcı ve ilişki arayıcı bu araştırma, üniversite hastanesinde çalışan 562 hemşire üzerinde gerçekleştirildi. Veriler, Açıklayıcı Bilgi Formu, Bilgi Yönetim Süreci Performans Değerlendirme Ölçeği, Bilgi Paylaşım Engelleri Ölçeği kullanılarak toplandı. Hemşirelerin bilgi yönetim süreci performans değerlendirmesi ile bilgi paylaşım engelleri arasında pozitif, düşük güçlü ve istatistiksel olarak çok anlamlı bir ilişki vardı (r = .358; p<.001). Ayrıca bilgi paylaşım engelleri en fazla "bilgi paylaşımı" alt boyutu (r=.349; p<0.001), bilgi yönetim süreci performansı ise en fazla teknolojik engeller alt boyutu (r=.287; p<0.001) ile ilişkiliydi. İncelemeye göre, bilgi paylaşım engellerinin sağlık kuruluşlarında hemşirelerin bilgi yönetimi olduğu ortaya çıktı. Bilgi yönetimi ve paylaşımının sağlık hizmetlerinde gelecekteki araştırmalar için önemli alanlar olduğu açıktır.

Anahtar kelimeler: Bilgi paylaşımı, Bilgi paylaşım engelleri, Bilgi yönetimi, Hemşire.

Hanife TIRYAKI SEN ✉, hanifetiryaki@gmail.com
Istanbul Health Directorate, Health Services Presidency, Istanbul, Turkey,

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INTRODUCTION

Currently knowledge has become a strategic and indispensable resource (Alkan, 2003). In such an environment, the ability of organizations to achieve their planned aims and reach targeted success is linked to how well they manage knowledge. This is because knowledge has become the most important production factor today. In the past, knowledge was seen as a bureaucratic requirement to keep organizations operating and generally was a power that had to be owned. However, due to the very rapid change in this power currently, rather than owning knowledge, being able to use it and managing it has come to the fore. This situation requires organizations to have effective knowledge management processes and applications. In this context, knowledge management processes or concepts are currently encountered in every area of life in the present-day world, whether liked or not. This study aimed to reveal the correlation between knowledge management and barriers to knowledge-sharing for nurses in current conditions of increasing competition. In line with this, the correlations between the elements of the knowledge management process of obtaining knowledge, sharing obtained information, gathering information and preserving information and the individual, organizational and technological barriers to information sharing are investigated.

Conceptual Framework

Currently in markets focused on knowledge and technology, knowledge plays an important role in obtaining and maintaining competitive advantages over businesses and developing organizational performance. As knowledge is the most important tool providing competitive superiority, effective management of information will increase organizational performance.

Knowledge management focuses on “doing the correct work” rather than “working correctly”. Knowledge management is a framework encompassing the knowledge processes of all processes in an organization (Lee & Yang, 2000). Knowledge management is necessary not just to be effective in terms of cost, but also to solve problems, make decisions, be innovative and preserve and develop competitiveness (Gupta, Iyer & Aronson, 2000). There are many definitions dealing with knowledge management separately in the literature. According to King, knowledge management ensures development and effective use of assets related to knowledge in an organization, and plans, organizes and controls the people, processes and systems in an organization. Studies about knowledge management by Darroch, defined knowledge managements as the process of managing the distribution and use of knowledge created or located within an organization or between organizations (Darroch,

2003; King, 2009). Wiig, stated that, knowledge management processes involved; collection of knowledge from a variety of sources, production, transformation into different knowledge, distribution and an awareness of value within the business (Wiig, 1997). Ruggles, dealt with knowledge management as a construct involving three processes. Accordingly, the first process is formation, the second process is obtaining knowledge and the final process is sharing (Ruggles, 1997). Liebowitz and Beckman, stated that, knowledge management processes were collection of knowledge, differentiation and selection, organization, storage, sharing and application. In short, knowledge management processes involve activities related to systematically obtaining, transforming, sharing and preserving knowledge to better achieve the organizational aims (Liebowitz & Beckman, 1998).

In this process the success or failure of knowledge management is related to how efficiently workers share and use information (Guptill, 2005; Ozdemirci & Aydın, 2007; Lee, Kim & Kim, 2014). If there is a culture supporting learning and information sharing in the organization, this eases operation of the knowledge management process (Lunden, Teras, Kvist & Laitila, 2017).

When beneficial knowledge obtained within the organization is used within organizational processes, when necessary knowledge reaches the required places and is shared by organizational workers, it becomes valuable (Altindis, 2010; Demircan Çakar, Yıldız & Dur, 2010; Ipcioglu & Kahya, 2016).

In planning knowledge-sharing; which knowledge, and how, why, when and to what extent it is shared is important for the organization. However, it is not easy to motivate knowledge- sharing behavior. Individuals may be encouraged in knowledge-sharing behavior; however, they cannot be forced because this is considered to increase or destroy power in sharing situations (Huang & Davison, 2008). Efficient knowledge-sharing is stated to be related to a variety of factors. As a result, it is predicted that some factors may prevent sharing (Koseoglu, Gider & Ocak, 2011). The reasons for people keeping knowledge to themselves instead of sharing it are generally multidimensional (Riege, 2005). While these dimensions are dealt with in two main groups as individual and organizational by some researchers (Jain, Sandhu & Sidhu, 2007; Khakpour, Ghahremani & Pardakhtchi, 2009; Rego, Pinho, Pedrosa & Cunha, 2009), some deal with three main headings as; individual, organizational and technological (Riege, 2005; Riege, 2007; Subramaniam, 2007).

Keyes, assessed factors that prevent knowledge-sharing in three different categories as; “cultural background” like ethnic background, age and education level, “organization culture” and “knowledge technology support” (Keyes, 2019).

The sector formed by organizations providing health services is a sector based on knowledge and knowledge is required in each stage of processes related to health service activities. Health care organizations providing services directly involving human life, have increased importance for knowledge management processes and knowledge-sharing compared to other organizations. The use of this knowledge in basic processes like planning, deciding, applying, checking and assessing health services or completing these functions properly requires health care professionals to perform knowledge-sharing activities within an effective knowledge management process. As a result, knowledge management is accepted as the core of clinical processes in the health care service. For clinicians, nurses, health managers and other service personnel in these organizations to achieve the best patient care, they must maintain activities in coordination as a team (Stefl, 2001). In other words, for hospitals to succeed in their aims, the necessary activities must be completed with simultaneous effort by personnel with very different knowledge and different professional orientations. The mix of knowledge and skills required to solve problems related to the medical care process is very broad so no single professional group has all the knowledge and skills, and knowledge management and knowledge-sharing is encountered as an unavoidable necessity. When knowledge management is performed well and knowledge-sharing is ensured, it is considered that along with health care becoming more accessible, affordable, transparent and error-free, this will be reflected in organizational performance leading to patients receiving high-quality health care.

MATERIALS AND METHOD

Study Design and Purpose

This study had descriptive design with the aim of determining the knowledge management performance and barriers to knowledge-sharing for nurses, and used correlative seeking design with the aim of revealing whether there is a significant correlation between knowledge management performance and knowledge-sharing barriers.

Research Questions

Based on the aims of the research, the answers to the following research questions were sought;

- Which personal and professional traits create significant differences in nurses' knowledge management performance?

- Which personal and professional traits create significant differences in barriers to nurses' sharing knowledge?
- Is there a correlation between nurses' knowledge management performance and knowledge-sharing barriers?
- Which dimension of nurses' knowledge-sharing barriers most affects knowledge management performance?
- Which dimension of knowledge management performance most affects nurses' knowledge-sharing barriers?

Participants and Settings

The population of the research comprised 877 nurses working in a public university hospital in Istanbul province. Data were collected from 574 nurses who accepted participation in the research with the convenient sampling method. Twelve surveys that were not appropriately completed were not included in the assessment and data from 562 nurses were appropriate for assessment. With 64.1% of the population reachment ratio, the return rate in the research was 97.9%.

Ethical Considerations

To conduct this study on nurses who work in university hospital affiliated in the city centre of Istanbul, ethical approval was received (Decision number: 08/06/2018-879) from the Istanbul University Istanbul Faculty of Medicine Clinical Research Ethics Committee. Permission was received from the managers and nursing service manager of organization where the data would be collected. Finally, the participants were informed about the aim of the study and the process, and their written consents were obtained.

Instruments

Data for the research were collected by visiting the hospital between July-September 2018 and meeting with nurses. Data collection tools included the descriptive information form, the Information Management Process Performance Evaluation Scale and the Knowledge-Sharing Barriers' Scale.

Descriptive information form: This contained a total of five questions to determine the socio-demographic characteristics of the nurses (age, gender, and unit of employment, total working duration in the organization and in the profession).

Information Management Process Performance Evaluation Scale (IMPPES): Developed by Cetinkaya, the scale comprises a total of 21 items in four subdimensions of;

Information Sharing, Information Gathering, Information Production and Information Storing. The statements on the scale are 5-point Likert type, with one point for "never" and 5 points for "always". Points on the scale are calculated with the mean item points. The internal consistency coefficients for the sub-dimensions on the scale are reported as 0.90 for information sharing, 0.87 for information gathering, 0.88 for information production and 0.88 for information storing (Cetinkaya, 2012).

Knowledge-Sharing Barriers' Scale (KSBS): Developed by Altindis and Agca, to determine barriers and dimensions of knowledge-sharing in health organizations, the scale comprises a total of 42 statements with three subdimensions. Responses to the scale are again 5-point Likert type. The internal consistence coefficients for the scale were determined as 0.87 for individual barriers, 0.89 for organizational barriers and 0.88 for technological barriers (Altindis & Agca, 2011).

Data Collection

The study was conducted with nurses at a university hospital during September 2018. The researchers interviewed the administrators of the hospitals and prepared the study schedule. Two researchers visited the hospital. The surveys were distributed to the nurses in the clinics who agreed to provide data and were collected after nurses completed them.

Data Analysis

Data were analyzed with the IBM SPSS Statistics program version 21 (licensed to Istanbul University). Data analysis used; descriptive analyses (number, percentage, mean, standard deviation), the Mann Whitney U test and one-way ANOVA test for comparisons of mean points for independent variables, Person moment two-way correlation analysis to identify correlations between scale and internal consistency analysis (Cronbach alpha). The results are assessed at $p<0.05$ significance level.

RESULTS

Table 1 gives the descriptive characteristics of nurses participating in the study. According to the table, the mean age of participants was 36.75±3.26 years, the majority were female (91.6%) and were nurses working in inpatient wards (55.9%). Most participants had 10 years or less experience in their organization (53.6%), with professional experience of 10 years or less (46.8%).

Table 1. Comparison of IMPPES and KSBS with Personal and Occupational Characteristics

			Information Management Process Performance Evaluation Scale					**Knowledge Sharing Barriers' Scale**			
		n (%)	**IMPPES**	**IS**	**IG**	**IP**	**IS**	**KSBS**	**IB**	**OB**	**TB**
			M±SD	M±SD	M±SD	M±SD	M±SD	M±SD	M±SD	M±SD	M±SD
Gender	Female	515(91.6)	3.59±.60	3.61±.68	3.64±.64	3.60±.68	3.49±.63	3.10±.36	3.08±.40	3.08±.38	3.19±.49
	Male	47(8.4)	3.54±.85	3.52±.97	3.60±.91	3.52±.91	3.52±.87	3.12±.48	3.11±.60	3.09±.52	3.21±.59
	Test and significance		z=12.013	z=11.975	z=11.944	z=11.904	z=12.608	z=11.866	z=12.106	z=12.559	z=11.788
			p=.932	p=.903	p=.880	p=.847	p=.626	p=.922	p=.997	p=.659	p=.758
Age	≤30	179(31.9)	3.53±.67	3.56±.76	3.59±.73	3.52±.79	3.44±.72	3.10±.44	3.08±.51	3.08±.46	3.17±.55
	31-40	188(33.5)	3.61±.62	3.63±.71	3.66±.67	3.62±.69	3.53±.65	3.17±.40	3.14±.43	3.14±.43	3.26±.53
	≥41	195(34.6)	3.61±.57	3.62±.65	3.67±.62	3.63±.62	3.51±.60	3.05±.25	3.02±.30	3.03±.27	3.15±.39
	Test and significance		F=1.003	F=.586	F=.808	F=1.388	F=.864	F=4.762	F=4.212	F=3.698	F=2.739
			p=.367	p=.557	p=.446	p=.251	p=.422	**p=.009**	**p=.015**	**p=.025**	p=.066
Tenure (in instution)	1-10 years	301(53.6)	3.59±.66	3.61±.75	3.65±.72	3.59±.76	3.50±.71	3.14±.44	3.13±.49	3.12±.46	3.22±.57
	11-20years	127(22.6)	3.58±.60	3.60±.68	3.62±.62	3.60±.67	3.50±.61	3.11±.31	3.07±.33	3.08±.33	3.24±.45
	≥21 years	134(23.8)	3.57±.55	3.59±.63	3.64±.61	3.58±.60	3.47±.56	3.01±.23	2.99±.30	2.00±.23	3.08±.33
	Test and significance		KW=.407	KW=.632	KW=.901	KW=.318	KW=.563	KW=22.280	KW=19.868	KW=15.091	KW=10.291
			p=.816	p=.729	p=.637	p=.853	p=.755	**p=.000**	**p=.000**	**p=.001**	**p=.063**
Tenure (in profession)	1-10 years	263(46.8)	3.57±.66	3.59±.74	3.63±.72	3.56±.76	3.49±.72	3.14±.46	3.12±.51	3.13±.48	3.21±.59
	11-20 years	134(23.8)	3.57±.60	3.59±.70	3.60±.62	3.60±.68	3.47±.61	3.10±.31	3.09±.36	3.06±.31	3.21±.40
	≥21 years	165(29.4)	3.62±.58	3.63±.65	3.68±.63	3.63±.62	3.53±.59	3.04±..25	3.00±.30	3.03±.28	3.14±.40
	Test and significance		KW=.519	KW=.134	KW=.704	KW=.652	KW=.369	KW=15.164	KW=15.095	KW=14.463	KW=4.492
			p=.771	p=.935	p=.703	p=.722	p=.831	**p=.001**	**p=.001**	**p=.001**	**p=**.106
Unit	Services	315(56.1)	3.62±.65	3.63±.74	3.67±.71	3.63±.71	3.53±.68	3.09±.41	3.05±.46	3.08±.42	3.21±.54
	Intensive Care Units	124(22.1)	3.72±.60	3.78±.69	3.79±.64	3.65±.74	3.61±.68	3.18±.36	3.17±.39	3.15±.42	3.27±.52
	Others	123(21.8)	3.37±.51	3.36±.55	3.39±.53	3.43±.61	3.29±.51	3.06±.27	3.08±.33	3.02±.24	3.07±.30
	Test and significance		KW=11.185	KW=11.638	KW=12.235	**KW=4.015**	**KW=8.643**	**KW=4.084**	**KW=3.466**	**KW=4.112**	**KW=5.259**
			p<001	**p<001**	**p<001**	**p<001**	**p<001**	**p<001**	**p=.009**	**p<001**	**p<001**

IMPPES: Information Management Process Performance Evaluation Scale, IS: Information Sharing, IG: Information Gathering, IP: Information Production, IS: Information Storing,
KSBS: Knowledge Sharing Barriers' Scale, IB: Individual Barriers, OB: Organizational Barriers, TB: Technological Barriers
M: Mean, SD: Standart Deviation, z=Mann Whitney U; F=OneWayAnova Testi; KW: Kruskal Wallis, * p<.05; **p<.01; ***p<.001

Table 2 gives the mean points for the scales and sub-dimensions related to nurses' IMPPES and KSBS and the internal consistency obtained for the scales. According to the knowledge in the table, the internal consistency for IMPPES of nurses was 0.92, while it was 0.91 for the total KSBS with sub-dimensions varying from 0.80 to 0.94. Nurses were determined to have highest points for the "information gathering" sub-dimension of the information management process performance (3.64±.67). The lowest points were obtained for the "information storing" sub-dimension (3.49±.66). However, nurses had highest mean points for the technological barriers sub-dimension on the barriers to knowledge-sharing scale (3.19±0.49). Nurses obtained equal mean points for the other two sub-dimensions (3.08).

Table 2. Measures and Internal Consistency Analysis of Scales

Scales	α	M±SD
Information Management Process Performance Evaluation Scale	**0.92**	**3.59±.62**
• Information Sharing	0.93	3.60±.71
• Information Gathering	0.94	3.64±.67
• Information Production	0.92	3.49±.66
• Information Storing	0.94	3.54±.70
Knowledge Sharing Barriers' Scale	**0.91**	**3.10±.37**
• Individual Barriers	0.85	3.08±.42
• Organizational Barriers	0.80	3.08±.39
• Technological Barriers	0.82	3.19±.49

M: Mean, SD: Standart Deviation, α: Cronbach's Alpha

Results of the comparison of mean points obtained by nurses on the IMPPES and KSBS according to personal and professional traits are given in Table 1. According to data in the table, there was no statistically significant difference for Mann Whitney U test results for the scale according to the gender variable ($p>.05$). There were statistically significant differences for the age and professional experience variables with the total points on the knowledge-sharing barriers scale and the individual and organizational sub-dimensions ($p<.05$). Advanced analyses observed by nurses in the 31-40-year age group had significantly higher mean points compared to nurses aged 41 years and older. This difference for the professional experience variable was due to the mean points for nurses with 1-10-years' experience being statistically significantly higher than nurses with 21-30-years' experience. For nurses' organizational experience, there were statistically significant differences with the total points on the barriers to knowledge-sharing scale and the individual, organizational and technological sub-dimensions ($p<0.05$). This difference was identified to be due to the nurses working in the same organization for 1-10 years and 21-30 years for the total points, individual and organizational sub-dimensions. Those working in the organization for 11-20

years were found to have statistically significantly higher mean points for the technological barriers sub-dimension than those working for 1-10 years and 21-30 years. There was a statistically significant difference found between the units where nurses worked and scales and all sub-dimensions ($p<0.05$). In the working unit group, nurses working in inpatient clinics and intensive care units had low mean points with statistically significant difference for "information sharing", "information gathering", "information production" and "information storing" sub-dimensions. For individual barriers sub-dimension, nurses working in the intensive care unit had statistically significantly high mean points compared to those working in inpatient clinics. In terms of organizational barriers, those working in the intensive care unit had statistically significantly high points compared to nurses working in other units. For the technological barriers sub-dimension, the mean points for nurses working in other units were statistically significantly low compared to nurses working in inpatient clinics and the intensive care unit.

Table 3. Correlations between IMPPES and KSBS (n:562)

	KSBS	Individual Barriers	Organizational Barriers	Technological Barriers
IMPPES	**.358***	.271*	.336*	**.363***
Information Sharing	**.349***	.274*	.313*	.359*
Information Gathering	.327*	.238*	.313*	.342*
Information Production	.287*	.225*	.259*	.294*
Information Storing	.325*	.242*	.326*	.310*

IMPPES: Information Management Process Performance Evaluation Scale, KSBS: Knowledge Sharing Barriers' Scale, *p<0.001

With the aim of determining the correlation between the IMPPES assessment and KSBS of the study group of nurses in the research, two-way correlation analysis was performed with results presented in Table 3. When knowledge in the table is investigated, there was a positive, low power and statistically very significant correlation observed between the IMPPES evaluation of nurses and KSBS ($r=.358$; $p<.001$). Additionally, the KSBS were mainly correlated with the "information sharing" subdimension ($r=.349$; $p<.001$), while the IMPPES was mainly correlated with the technological barrier sub-dimension ($r=.287$; $p<.001$).

DISCUSSION

This study was carried out with the aim of identifying in knowledge management performance and sharing of knowledge barriers in nurses. To the best of our knowledge, the relationship between these two variables in the nurse sample has not been studied before.

Thus, this study is important as it is the first study to examine the barriers of knowledge management performance and knowledge-sharing in nurses.

Comparison of the personal and professional characteristics of nurses with the scales found that there was no significant difference for information management process performance evaluation and knowledge-sharing barriers with the gender variable. Ojha, in a study encompassing business workers identified no correlation between opinions about knowledge-sharing with the genders (Ojha, 2005). Additionally, other research in Turkey stated that opinions about knowledge-sharing did not display differences according to gender, similar to this research (Bozkurt & Bal, 2006; Demirel & Durna, 2006; Yeniceri & Demirel, 2007; Demirhan & Bozkurt, 2010). However, contrary to this study, there are studies found which stated that one of the individual factors which prevents knowledge-sharing is gender differences (Riege, 2007; Altindis & Agca, 2011). A study by Tutar, Fettahlioglu, Sayin and Yasan, identified no significant difference between information management and sub-dimension with gender (Tutar, Fettahlioglu, Sayin & Yasan, 2017).

It was found that knowledge-sharing barriers varied according to the age variable. There were statistically significant differences for the individual and organizational barriers sub-dimension on the knowledge-sharing barriers scale with the age variable for nurses from 31-40 years old perceiving more individual and organizational barriers compared to nurses aged 41 years and older. Middle-aged nurses combine experience with knowledge to estimate which is more beneficial to themselves and to their organization and may be unwilling to share their information considering it may affect their careers. Older nurses have more positive approach compared to middle-aged and young workers and may display higher levels of organizational citizenship (Perry, Kulik & Zhou, 1999). Studies by Reige and Altındis and Agca did not mention such a difference (Riege, 2005; Altındis & Agca, 2011), but some research in our country has identified that factors preventing information sharing do not vary according to age (Bozkurt & Bal, 2006; Demirel & Durna, 2006; Yeniceri & Demirel, 2007; Demirhan & Bozkurt, 2010). Ojha, stated in their research that opinions about knowledge-sharing had no significant correlation with age (Ojha, 2005).

The results of the analyses found no significant difference between age groups and knowledge management process. The study by Tutar, Fettahlıoglu, Sayın & Yasan, in parallel with this study, identified no significant difference in the IMPPES variable and sub-dimension due to age differences (Tutar, Fettahlioglu, Sayin & Yasan, 2017).

When the organizational experience of nurses is compared with the knowledge barriers scale, nurses with 1-10 years of experience had higher individual and technological barrier

attitudes than nurses with 21 years or more organizational experience. It was found that for technological barriers, nurses with 11-20 years' experience had higher attitudes compared to nurses with 1-10 years and 21 years or more experience. If workers work in a single business for long periods, their knowledge needs reduce compared to others and they may not feel much requirements for knowledge-sharing (Ojha, 2005). Research in India, observed a correlation between knowledge-sharing and organizational experience (Ojha, 2005), while other studies observed no difference in elements preventing knowledge-sharing according to organizational experience of workers (Demirel & Durna, 2006; Durna, Ardıç & Uzun, 2006; Yeniceri & Demirel, 2007). When nurses professional experience is compared with the sub-dimensions of the scales, there were statistically significant differences in the individual and organizational barriers sub-dimensions of the knowledge-sharing barriers. Nurses with 1-10 years professional experience had statistically significantly higher mean points compared to nurses with 21 years or more professional experience. The study by Karadal and Ozcinar, stated that workers with less seniority in the work place stated that managers showed more interest in their ideas, recommendations and innovations compared to those with more seniority (Karadal & Özçinar, 2003). Studies by Demirel and Durna and Yeniceri and Demirel, stated that there was no difference in knowledge-sharing barriers based on workplace experience (Demirel & Durna, 2006; Yeniceri & Demirel, 2007).

When the unit nurses worked in was compared with the information management process performance evaluation scale and the barriers to knowledge-sharing scale subdimensions, there were statistically significant differences for all subdimensions ($p<.005$). The statistical results show that nurses working in other units (surgery and daily care clinics etc.) had significantly lower mean points compared to those working in inpatient clinics and intensive care units for information sharing, information collection, information production and information storing sub-dimensions. While offering health services, nurses are at first place among health workers requiring knowledge support or sharing during the stage of giving knowledge or support to the patient and relatives, especially during care processes. Additionally, due to the intense and variable tempo of health services, working with many different health professionals, and the complicated structure of health services, problems may occur in relation to access and sharing of knowledge needed to act as a team. Nurses working in inpatient clinics and intensive care units are considered to have higher mean points due to efforts to increase the care quality in their units, to bring communication up to a certain level and increase their own knowledge. The differences between units may be represented by

requirements for advanced technology and continuous renewal of information in the health field in intensive care units.

For the individual barriers sub-dimension, nurses working in inpatient clinics had lower mean points compared to those working in the intensive care unit, while those working in other units had low mean points compared to nurses working in the intensive care unit for the organizational barriers subdimension. For the technological barriers subdimension, nurses working in other units had statistically significantly low mean points compared to nurses working in inpatient clinics and intensive care units. In the literature, it is stated that perceptions of barriers to knowledge-sharing vary according to unit. Husted and Michailova, stated that cultural factors may be a basic barrier to knowledge-sharing. The province where this study was performed has high inward migration causing cultural and educational differences between nurses, which may have caused this result to occur (Husted & Michailova, 2002). Cheng, Yeh and Tu, in a study in Taiwan stated that trust led the factors affecting knowledge-sharing between workers in organizations, and emphasized that participation, communication, learning capacity, resource appropriateness and power affected knowledge-sharing (Cheng, Yeh & Tu, 2008).

Analyses with the aim of determining the correlation between information management process performance assessment and knowledge-sharing barriers of nurses concluded there was a positive, low power and statistically very significant correlation present. Additionally, knowledge-sharing barriers were mainly affected by the “information sharing” sub-dimension. As the barriers to knowledge-sharing increase, performance in information management increases. Because knowledge management is a discipline effectively organizing individual and organizational knowledge sources, integrating all types of knowledge sources with the organization to add these sources to the organization at the highest level and achieve the aims of the organization (Fedor, Ghosh, Caldwell & Maurer, 2003). The key point of knowledge management is to effectively share knowledge present in the organization efficiently to benefit the organization. Individuals adding new meanings to all types of knowledge sources they have and reinterpreting them for knowledge production is important for the use of this knowledge and sharing with the environment. Effective sharing of knowledge aids in increasing the efficacy of the business and lowering costs (Allameh, Zare & Davoodi, 2011). A variety of research has shown that there are powerful and positive links between obtaining information and organizational performance (Emadzade, Mashayekhi & Abdar, 2012). A study by Chang and Lee, stated that the ability to obtain knowledge positively and significantly affected knowledge management and technical innovation (Chang

& Lee, 2008). Many studies have shown that low attitudes to knowledge-sharing and the resulting desire that knowledge have a single owner (Gray, 2001), indicate fear of losing superiority due to having this knowledge (Szulanski,1996), and the thought that the trait of irreplace ability will be lost (Kankanhalli, Tan & Wei, 2005).

Limitations

The study was limited to nurses who work in one of the university hospital. Therefore, it did not involve nurses who work in private and public hospitals, which are growing in size in health sector. The lack of current publications in this field is another important limitation of the study.

CONCLUSION

As a whole, this study found that knowledge-sharing barriers were knowledge management of nurses in healthcare organizations. The evaluation of the situation, management of the knowledge and the elimination of the individual, organizational and technological knowledge barriers are important for the managers of the hospitals. Clinical nursing managers must recognize employees and know knowledge-sharing barriers. Because, when workers access knowledge they feel valuable in the organization and display performances that increase organizational productivity and quality. For organizations providing health care with the aim of monitoring processes like patient care and treatment, achieving the best applications, accessing appropriate and sufficient resources and competing with other organizations, it is necessary to use knowledge-sharing effectively.

It is hoped that research about these topics in organizations providing health care will, in addition to ensuring healthy knowledge-sharing, contribute to understanding how these barriers occur and creation of an environment and policies to encourage managers and workers to be able to display new behavior and to successfully complete the applied processes. The evaluation of the situation, management of the knowledge and the elimination of the individual, organizational and technological knowledge barriers are important for the managers of the hospitals. Clinical nursing managers must recognize employees and know knowledge-sharing barriers. Because, when workers access information they feel valuable in the organization and display performances that increase organizational productivity and quality. For organizations providing health care with the aim of monitoring processes like patient care and treatment, achieving the best applications, accessing appropriate and

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REFERENCES

Alkan, N. (2003). Knowledge management in medical and health care organizations. *Knowledge World*, 4(2), 22-145.

Allameh, S. M., Zare, S. M. & Davoodi, S. M. R. (2011). Examining the impact of KM enablers on knowledge management processes. *Procedia Computer Science*, 3, 1211-1223.

Altındis, S. (2010). The Contribution of knowledge management applications on the patient safety: A conceptual framework. *Suleyman Demirel University the Journal of Faculty of Economics and Administrative Sciences*, 15(3), 325-352.

Altındis, S. & Agca, V. (2011). Organizational knowledge sharing barriers: An empirical study in health care services. *Selcuk University Journal of the Institute of Social Sciences*, 26, 45-61.

Bozkurt, S. & Bal, Y. A (2006). Study on the perception of information sharing behavior of bank employees. *Internatıonal 5th Knowledge, Economy& Management Congress Proceedıngs.* Kocaeli, Turkey, 2, 603-612. (In Turkish)

Cetinkaya, A. (2012). Dimensions of information management performance in organizational information management processes: A research of scale development. *Marmara University Open Archive System*, 10(38), 157-162. (cited: 2019 sep 26) Available from: http://dspace.marmara.edu.tr/ bitstream/handle/11424/1209

Chang, S. C. & Lee, M. S. (2008). The link age between knowledge accumulation capability and organizational innovation. *Journal of Knowledge Management*, 12(1), 3-20.

Cheng, J. H., Yeh, J. H. & Tu, C. W. (2008). Trust and knowledge sharing in gren supply chains. *Supply Chain Management: An International Journal*, 13(4), 283–295.

Darroch, J. (2003). Developing a measure of knowledge management behaviors and practices. *Journal of Knowledge Management*, 7(5), 41-54.

Demircan Çakar, N., Yıldız, S. & Dur, S. (2010). The relationship between knowledge management and organizational effectiveness: The effects of organizational culture and structure. *Ege Akademic Review*, 10 (1), 71-93.

Demirel, Y. & Durna, U. (2006). The effects of business conditions on the barriers to information sharing in Turkish banking sector, *Internatıonal 5th Knowledge, Economy& Management CongressProceedıngs.* Kocaeli, Turkey 2006; 2: 999-1013. (In Turkish)

Demirhan, A. & Bozkurt, S. (2010). A research on factors affecting the attitudes of bank employees to information sharing behavior. *Journal of Yasar University*, 18(5), 3016-3027.

Durna, D., Ardıç, K. & Uzun, H. (2006). A study on perceptions and behaviors of managers about knowledge management. *Internatıonal 5th Knowledge, Economy& Management Congress Proceedıngs.* Kocaeli, Turkey, 2: 641-655. (In Turkish)

Emadzade, M. K., Mashayekhi, B. & Abdar, E. (2012). Knowledge management capabilities and organizational performance. *Inter disciplinary Journal of Contemporary Research in Business*, 3(11), 781-790.

Fedor, D. B., Ghosh, S., Caldwell, S. D. & Maurer, T. J. (2003). The effects of knowledge management on team members' ratings. *Decision Sciences*, 34(3), 513-539.

Gray, P. H. (2001). The impact of knowledge repositories on power and control in the workplace. *Information Technology & People*, 14(4), 368-384. d

Gupta, B., Iyer, L. S. & Aronson, J. E. (2000). Knowledge management: Practices and challenges. *Industrial Management and Data Systems*, 100(1), 17-21.

Guptill, J. (2005). Knowledge management in healthcare, *J HealthCare Finance*, 31(3), 10–14.

Huang, Q. & Davison, R. (2008). *Knowledge sharing barriers at the individual level in a chinese bank (p. 150)*. Pacıs, Proceedings.

Husted, K. & Michailova, S. (2002). Diagnosing and fighting knowledge sharing hostility. *Organizational Dynamics*, 31(1), 60-73.

Ipcioglu, I. & Kahya, D. (2016). The effect of knowledge management process on organizational performance and a research in automotive industry, *Journal of Süleyman Demirel University Institute of Social Science*, 25(3), 179-204.

Jain, K K., Sandhu, M. S. & Sidhu, G.K. (2007). Knowledge sharing among academic staff: A case study of business schools in Klang Valley, Malaysia. Research Papers. *JASA*. 2, 23-29.

Kankanhalli, A., Tan, B C. & Wei K.K. (2005). *Contributing knowledge to electronic knowledge repositories: An empirical investigation*. MısQuarterly, 113-143.

Karadal, H. & Özçınar, F. (2003). Organizational information sharing: A case study. *National 2th Information, Economics and Management Congress Proceedings*, 499–510. (In Turkish)

Keyes, J. (2019). Identifying the barriers to knowledge sharing in knowledge intensive organizations. Identifying the Barriersto Knowledge Sharing in Knowledge Intensive Organizations 2008 (cited: 2019 Sep 19) Available from: http://www.newarttech.com

Khakpour, A., Ghahremani, M. & Pardakhtchi, M. H. (2009). The relationship between organizational culture and knowledge management (cultural barriers and challenges of knowledge sharing). *The Journal Of Knowledge Economy & Knowledge Management*, 4(2), 43-58.

King, W.R. (2009). Knowledge management and organizational learning. (Ed.) W. R. King, *Knowledge Management and Organizational Learning*, Springer Science+Business Media (pp. 3-13). Llc, New York, USA.

Koseoglu, M. A., Gider, O. & Ocak, S. (2011). What are the factors affecting the knowledge sharing attitudes? A research on a state hospital, *Eskisehir Osmangazi University Journal of Economics and Administrative Sciences*, 6(1), 215-243.

Lee, C. C. & Yang, J. (2000). Knowledge value Chain. *The Journal of Management Development*, 19(9), 783-794.

Lee, E. J., Kim, H. S. & Kim, H. Y. (2014). Relationships between core factors of knowledge management in hospital nursing organisations and outcomes of nursing performance. *Journal of Clinical Nursing*, 23, 3513-3524.

Liebowitz, J., Beckman, T. J. (1998). *Knowledge organizations: What every managers hould know* (pp. 67-99). New York; Crc Press Llc:1998.

Lunden, A., Teras, M., Kvist, T. & Laitila, A. H. (2017). A systematic review of factors influencing knowledge management and the nurse leaders role, *Journal Of Nursing Management*, 25(6),407-420.

Ojha, A. K. (2005). Impact of team demography on knowledge sharing in soft ware Project teams, *South Asian Journal of Management*, 12(3), 67-78.

Ozdemirci, F. & Aydın, C. (2007). Corporate information resources and information management. *Turkish Librarianship*, 21(2), 164-185.

Perry, E. L., Kulik, C. T. & Zhou, J. (1999). A closer look at the effects of subordinate- supervisor age differrences. *Journal of Organizational Behaviour*, 20(3), 341-357.

Rego, A., Pinho, I., Pedrosa, J. & Cunha, M.P.E. (2009). Barriers and facilitators to knowledge management in university research centers: An exploratory study. Management Research*: The Journal Of The Iberoamerican Academy Of Management*, 7(1):33-47.

Riege, A. (2007). Actions to overcome knowledge transfer barriers in MNCs. *Journal of Knowledge Management*, 11(1), 48-67.

Riege, A. (2005). Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, 9(3),18-35.

Ruggles, R. L. (1997). *Tools for knowledge management: An introduction knowledge management tools* (pp.10-12). New York, Butterworth-Heinemann.

Stefl, M.E. (2001). Introduction the drivers of change. *Frontiers of Health Services Management*, 18(2), 3-8.

Subramaniam, S. (2007). *Perceivedbarriers of knowledge sharing at individual, organisational and technological levels: A case study on MARDI*. Masters Thesis, Multimedia University.

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*,17, 27-43.

Tutar, H., Fettahlıoglu, O. O., Sayın, F. Z. & Yasan, D. (2017). Does information management have effect on organizational ambidexterity*? Journal of Social and Humanities Sciences Research (JSHSR)*, 4(10), 152-164.

Wiig, K. (1997). Knowledge management: An introduction and perspective. *The Journal of Knowledge Management*, 1(1), 6-14.

Yeniceri, O. & Demirel, Y. A (2007). study on organizational and individual impediments against knowledge sharing in organizations. *Selcuk University Karaman Faculty Journal of Economics and AdministrativeSciences*, 12(9), 221-234.