Work Engagement and Knowledge Sharing among Nurses in Healthcare Organizations

Kawther Mahmoud Mahmoud[1] ; Eman Saad Mosaad Ebrahim Hussien[2]; Hind Mohamed Abdullah[3]; Takwa Rashwan Mohamed Abd Elhady[4]

[1]PHD nursing administrationBanha University; [2]B.S.c Nursing, Faculty of nursing, Alzagazeg University; [3, 4] Assistant professor of nursing administration, faculty of nursing, Port Said, University.

ABSTRACT

Background: Nurses' work engagement and knowledge sharing reduce negative outcomes for healthcare organizations as well as the quality of their performance outcomes.**The aim:** to examine the relationship between work engagement and knowledge sharing among nurses at healthcare organizations. **Design:** A descriptive correlational research design .**Setting:** at As Salam Hospital that affiliated to the Health Insurance System of the Ministry of Health in Port Said Governorate. Subjects 294 nurses: **Tools.** Work Engagement Scale and Knowledge Sharing Scale. **Results:** The study revealed nearly two thirds (63.1%) of nurses who were studied had a moderate level of work engagement. Also, 3.4% of them had a high level of work engagement. While, more than half (54.6%) of nurses had a fair level of knowledge sharing, Also, (8.2%) of them had high level of knowledge sharing. **Conclusion:** the highest mean score among studied nurses' responses regarding emotional engagement domain, while lowest mean score was among studied nurses' responses regarding behavioral engagement. Regarding studied nurses 'responses related to knowledge sharing domains highest mean scores were related to organizational climate, behavioral control, and reputation enhancement. While the lowest mean score related to organizational climate (Innovation).In addition, knowledge sharing positively and significantly influence work engagement **Recommendation:** Educational program about knowledge sharing and its impact on work engagement.

Keywords: Work Engagement, Knowledge Sharing, Nurses, Healthcare Organizations

INTRODUCTION

Manesh, Pellegrini, Marzi, and Dabic, (2020) state that work engagement has become an intriguing issue among scholastics and researchers throughout the past ten years since associations have embraced that language. However, little is known about how employee engagement would be affected by knowledge sharing, one of the main tool's organizations use to maintain their competitive advantages.

The performance of nurses is frequently a crucial factor in determining the quality of patient care. Nurses play a crucial role in ensuring that the healthcare organization's policies and programs are implemented efficiently and effectively and that patients receive the best possible care. Additionally, nurses are the foundation of the health care system. As a result, improving nurses' levels of work engagement is critical (Bhatti, Hussain & al Doghan, 2018).

So, healthcare organizations have started looking for people who are dedicated to their work and can overcome obstacles. Such characteristics indicate engagement at work to benefit organizations and employees alike (Othman & Nasurdin, 2019). Perceived organizational support and self-efficacy boost work engagement, job satisfaction, job performance, organizational commitment, and emotional wellness, according to the job demand-resource model (Al- Hamdan & Bani Issa, 2022). High work engagement in nursing services reduces intentions to leave, delays in work, and absences from work. It also improves emotional well-being and influences productivity, care quality, and patient satisfaction, all of which are indicators of organizational outcomes(González-Gancedo, Fernández-Martínez, Rodríguez-Borrego, 2019).

In recent years, the delivery of safe, high-quality services to patients and the improvement of patient outcomes are the two primary goals of healthcare organizations, which are a complex and knowledge-based sector that rely on the integrative expertise of multidisciplinary professionals. Consequently, sharing of unsaid and expressed information is essential to organizational performance and achievement (Al- Hamdan & Bani Issa, 2022) . Knowledge sharing is a bunch of explicit ways of behaving that include the exchanging of information or pertinent information to team up with others toward growing groundbreaking thoughts and executing strategies in updating expertise can all result from nurse knowledge sharing activities guidelines contributions to research

boards, symposiums, conferences, academic discussions, and reports (Zhang, 2017). knowledge sharing may be related to a psychological process that necessitates a series of initiatives to assist employees in in recognizing the knowledge they already possess as well as to inspire, facilitate, and support them in sharing that knowledge with others (Ipe, 2003).

According to Tabrizi, & Morgan (2014) when multidisciplinary experts collaborate to share knowledge, they can make well-informed, cost-effective, and high-quality judgments of patient care. Lack of knowledge sharing among multidisciplinary providers has been linked to patient safety issues, poor patient outcomes, quality issues, and cost issues. As a result, collaboration among multidisciplinary providers is crucial for safe, high-quality care, improved patient outcomes, and organizational performance.

Significance of the study

Keyko, Cummings, Yonge, & Wong, (2016) emphasized that engagement of work and dividing knowledge sharing among nurses leads to positive individual and implementation outcomes and reduces negative outcomes for both individual nurses and health care organizations. According to Orgambdez-Ramos & de Almeida (2017) and de Simone, Planta & Cicotto (2018) the quality of care, reduction of nursing staff leaving their jobs, patient satisfaction, and job satisfaction because of work participation.

Organizations seek to create a good workplace through the commitment of medical care providers and the knowledge sharing in a highly competitive work environment to rise or keep up with the upper hand, benefit, efficiency, and viability to keep organizations growing profitable to the maximum extent of their current capabilities (Andrew, & Sofian). In today's organizations, to grow and survive, leaders need a high-performing workforce, and the concepts of work engagement and knowledge sharing must receive maximum attention from management. In addition, for growth and survival, leaders require a workforce with high performance (Abu Bakar, & McCann, 2016).

Many results showed that knowledge sharing and nurses' engagement have a significant impact on productivity and viability, It was recommended that to ensure efficiency and improve performance in their organization, the top management of organizations should take into consideration the different drivers of employee engagement for example empowering employees, providing complete information,

support from top administration, and adjusting endeavors to the methodology while arranging and connecting with their workers (Liao & Wu, 2010).

SUBJECTS AND METHODS

The aim of the study was to examine the relationship between work engagement and knowledge sharing among nurses at healthcare organizations.

Research objectives

1. Identify work engagement as perceived by nurses.
2. Assess knowledge sharing among nurses.
3. Explore the relation between work engagement and knowledge sharing among nurses.

Research design

Descriptive correlational research design was utilized in this study.

Setting

This study was conducted at As Salam hospital that affiliated to Egypt Health Care Authority Hospitals in Port Said Governorate which provides a wide variety of health care services. This hospital contains 113 beds.

Study subjects

The subject of this study is a convenience sample of 293 nurses, who are working in hospital departments.

Inclusion criterion

Nurses have at least one year of experience in a hospital.

Tools for data collection

Data of this study was collected through using two tools.

Tool I : includes two main parts:

First part: Personnel characteristics such as age, gender, qualifications, years of experience, department, job title, etc.

Second Part: Work Engagement Scale

This scale was developed by Schaufeli (2007); updated and adopted from Roach, (2017) and Sharaf (2021) to measure the work engagement of nurses to work. The scale consists of 36 items and is divided into three domains: cognitive engagement (12 items), emotional engagement (14 items), and behavioral engagement (9 items).

Scoring system

Responses were measured on 5- point Likert scale ranging from (one) strongly disagree to (five) strongly agree. A score of 36 to 84 indicates low levels of work engagement; 85 to 133 indicate moderate work engagement, and 134 to 180 indicate high work engagement.

TOOL (II): Knowledge Sharing Scale

This scale is developed by Bock, Zmud, Kim, and Lee (2005). Aimed to assess knowledge sharing behavior among nursing personnel. It consists of seven main dimensions that composed of 38 items; namely, perceived behavioral control 6 items, perceived organizational incentives 5 items, perceived reciprocal benefits 3 items, perceived reputation enhancement 6 items, perceived loss of knowledge power 4 items, perceived enjoyment in helping others 4 items, and perceived organizational climate 10 items which has three sub dimensions Affiliation 4 items, Innovativeness 3 items, and fairness 3 items.

Scoring system

Responses were measured on 5-point Likert scale ranging from (one) strongly disagree to (five) strongly agree. The higher knowledge sharing score ranged from (140 - 190); fair knowledge sharing score ranged from (89-139) and poor knowledge sharing score ranged from (38-88).

II. Operational design: includes preparatory phase, pilot study, validity, reliability, and field work.

Preparatory phase: It includes reviews of current national and international related literature, articles, periodicals, magazines, theoretical knowledge, and internet EBK (Egyptian Bank Knowledge) to acquire theoretical knowledge regarding various aspects of knowledge sharing and work engagement among nurses.

Validations of the tools

Knowledge sharing scale was translated to Arabic language by the researcher, and then retranslated into English. The face and content validity of the tools was measured. Which were submitted and modified to assess the clarity, relevance, applicability, understanding, and simplicity of data collection by the current tool by a jury team consisting of five specialists in the field of nursing administration.

Pilot study

Ten percent of the nurses participated in a pilot study to evaluate its applicability, feasibility, objectivity, and estimate the time required to fill out the date collection sheets. The pilot study's findings were used to make any necessary adjustments.

Reliability

Cronbach's alpha coefficient test was used to evaluate the consistency of the study tools through its internal consistency that yielded 0.91 and 0.94 for work engagement tool, and shared knowledge tool respectively.

Field Work

Data had been collected for 5 months, from the beginning of June 2022 to the end of October 2022, morning shift two days a week. Data was collected from personnel at As Salam Hospital by the researcher after explaining to each participant the aim of the study and getting his/ her consent. filled in questionnaire sheets by the study subjects, ensuring the confidentiality of the data filled in by the participating nurses. The questionnaire sheets were handed back to the researcher upon completion. the questionnaire needed to fill out was 15–20 minutes time.

III. Administrative design

The selected hospital was contacted by an official letter from the dean of the faculty of nursing and vice dean for postgraduate studies and research. The director of the health care insurance authority, and the director of As Salam Hospital and the nursing director were instructed to get permission to include the nurses in the current research.

Ethical Considerations:

Ethical approval was obtained from the research ethics committee of the Faculty of Nursing at Port-Said University with code number NUR (7/4/2024)(36). The nurses being studied were informed that their participation is voluntary and that they have the right to withdraw from the study at any time, and anonymity was guaranteed in exchange for their consent to participate.

IV. STATISTICAL DESIGN

Statistical analysis:

Data was coded, tabulated, and transformed by the investigator into a specially designed format to be suitable for computer feeding, and then the data were analyzed using the statistical package for social science (SPSS) computer program version 25. The following statistical measures were employed to analyze and interpret the data: The one-sample Kolmogorov–Smirnov test was utilized to confirm the data's normality. Qualitative data were labeled using numbers and percentages. Continuous variables are shown as the mean and standard deviation. Categorical variables' relationships and differences were analyzed using the analysis of variance (ANOVA) test, the t-test, Chi-square, Pearson correlation coefficient, and the statistical significance was considered at a P value of 0.05 for all statistical methods used.

RESULTS

Table (1): Personal characteristics of studied nurses (n = 293).

Personal characteristics	N	%
Age groups		
< 20 years	13	4.4
20: < 30 years	177	60.4
30: < 40 years	87	29.7
≥ 40 years	16	5.5
Mean age ± SD	28.45± 5.334	
Range	19-50	
Gender		
Male	53	18.1
Female	240	81.9
Educational levels		
Diploma	34	11.6
Technical	170	58.0
Bachelor	88	30.0
Postgraduate	1	0.3
Years of experience		
< 5 years	131	44.7
5 : 15 years	132	45.1
> 15 years	30	10.2
Mean age ± SD	7.52±5.508	
Marital status		
Single	118	40.3
Married	168	57.3
Widow	4	1.4
Divorced	3	1.0

Table (1): Shows that 60.4% of study nurses ages were ranging between 20 - < 30 years old. While the lowest percentage of them 4.4% was < 20 years. Also, it was noticed that most studied nurses 81.9% were female. Regarding educational level 58.0% of nurses had technical education. As regards years of experience, 45.1 of nurses have experience between 5: 15 years. Also, 57.3% of study nurses married.

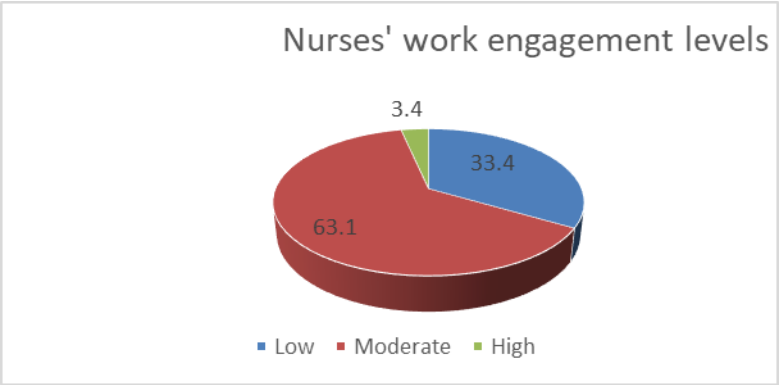

Figure (1): Work engagement levels as reported by studied nurses (n=293).

Figure **(1):** Shows that 63.1% of nurses had a moderate level of work engagement. While the lowest percentage of them, 3.4%, had a high level of work engagement.

Table (2): Descriptive statistics of the studied nurses' work engagement domains (n = 293).

Knowledge Sharing domains	**No.items**	**Min-Max**	**Median**	**M**	**SD**	**Nurses' knowledge sharing levels**					
						Poor		**Fair**		**Good**	
Behavioral Control	6	6-30	16	**16.03**	**4.88**	97	33.1	156	53.2	40	13.7
Organizational Incentives	5	5-25	14	13.77	4.27	140	47.8	136	46.4	17	5.8
Reciprocal Benefits	3	3-15	8	8.28	2.81	88	30.0	135	46.1	70	23.9
Reputation Enhancement	6	6-30	15	**15.81**	**4.79**	101	34.5	156	53.2	36	12.3
Loss of Knowledge Power	4	4-20	12	11.57	3.22	62	21.2	189	64.5	42	14.3
Enjoyment in Helping Others	4	4-20	12	11.17	3.24	73	24.9	183	62.5	37	12.6
Organizational Climate	10	10-50	22	**24.33**	**9.44**	109	37.2	160	54.6	24	8.2
Organizational Climate (Affiliation)	4	4-20	9	9.95	3.93	129	44.0	122	41.6	42	14.3
Organizational Climate (Innovation)	3	3-15	6	7.02	3.26	148	50.5	96	32.8	49	16.7
Organizational Climate (Fairness)	3	3-15	7	7.35	3.23	145	49.5	99	33.8	49	16.7

Table (2) represents the highest mean % among nurses' responses regarding emotional engagement domain was 63.5%; while the lowest mean % was 47.5% among nurses' responses to cognitive engagement.

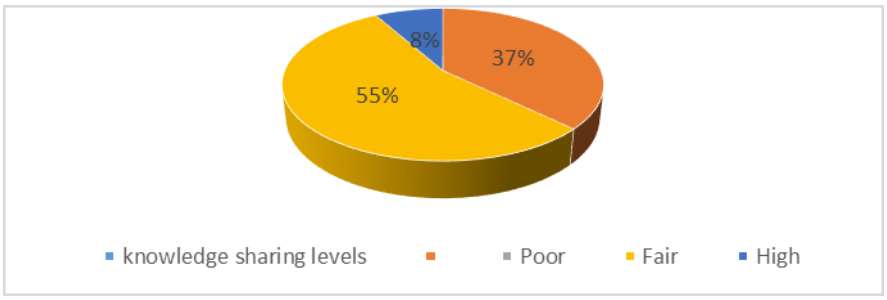

Figure (2): Total knowledge sharing levels as reported by studied staff nurses (n=293).

Total percentage of knowledge sharing levels displayed in figure (2) As shown in the table more than half of studied staff nurses (54.6%) had fair level of knowledge sharing. While the lowest percentage of them (8.2%) had a high level of knowledge sharing.

Table (3): Descriptive statistics of the studied nurses' knowledge sharing domains.

Work Engagement	Min-Max	Median	M±SD	Mean%
Emotional Engagement	14-65	38	38.07±8.99	63.5%
Cognitive Engagement	13-60	33	33.26±8.48	47.5%
Behavioral Engagement	9-43	24	23.69±6.75	52.6%
Total	36-168	94	95.04±21.38	52.8%

Regarding studied nurses 'responses related to knowledge sharing domains, table (3) shows that the highest mean scores (24.33±9.44, 16.03±4.88, and15.81±4.79, respectively) were related to organizational climate, behavioral control, and reputation enhancement. While the lowest mean score (7.02±3.26) was related to organizational climate (Innovation). Regarding nurses' knowledge sharing levels 23.9% nurses had good level of knowledge sharing related to reciprocal benefits. Furthermore, 53.2% of studied nurses had fair level of knowledge sharing related to behavioral control. While 50.5% nurses had poor level of knowledge sharing related to organizational climate (Innovation).

Table (4): Relationship between studied nurses work engagement and their personal characteristics (n = 293).

Personal characteristics	Work Engagement		
	M ± SD		Sig. test (P)
Age groups			
< 20 years	87.31	18.84	
20: < 30 years	94.16	21.43	F= 1.258
30: < 40 years	98.08	21.41	P =.289
≥40 years	94.43	22.04	
Gender			
Male	98.35	22.12	t=1.249
Female	94.30	21.19	P=.647
Educational level			
Diploma	90.91	19.99	
Technical	91.91	18.14	F= 5.718
Bachelor	102.74	25.65	P =.170
Postgraduate	90.0	---.	
Years of experience			
<5 years	92.466	19.35	
5: 15 years	97.39	23.23	F= 1.784
>15 years	95.93	20.79	P =.001**
Marital status			
Single	93.75	19.31	
Married	95.11	22.73	F= 2.277
Widow	110.0	7.34	P =.080
Divorced	120.2	13.07	

*Significant (P<0.05). F = One Way ANOVA. t test for independent group

Table (4) Demonstrates relationship between studied nurses' work engagement and their personal characteristics. There were statistically significant relations between years of experience and nurses' work engagement.

Table (5): Relationship between studied nurses' knowledge sharing and their personal characteristics (n = 293).

Personal characteristics	Knowledge Sharing		
	M ± SD		Sig. test (P)
Age groups			
< 20 years	109. 8	14.15	
20 : < 30 years	98.84	26.09	F= 1.809
30 : < 40 years	101.9	28.34	P =.146
≥ 40 years	112.1	32.04	
Gender			
Male	103.6	24.21	t=.803
Female	100.3	27.4	P=.049*
Educational level			
Diploma	100.7	30.41	
Technical	97.73	23.84	F= 2.519
Bachelor	107.5	30.05	P =.048*
Postgraduate	100.	--	
Years of experience			
< 5 years	99.90	23.74	F=.266
5 : 15 years	101.4	28.62	P =.767
> 15 years	103.6	31.91	
Marital status			
Single	100.2	24.19	
Married	100.9	28.23	F= 1.15
Widow	106.1	39.78	P =.328
Divorced	128.1	29.50	
Personal characteristics	Knowledge Sharing		
	M ± SD		Sig. test (P)
Age groups			
< 20 years	109. 8	14.15	
20 : < 30 years	98.84	26.09	F= 1.809
30 : < 40 years	101.9	28.34	P =.146
≥ 40 years	112.1	32.04	
Gender			
Male	103.6	24.21	t=.803
Female	100.3	27.4	P=.049*
Educational level			
Diploma	100.7	30.41	
Technical	97.73	23.84	F= 2.519
Bachelor	107.5	30.05	P =.048*
Postgraduate	100.	--	
Years of experience			
< 5 years	99.90	23.74	F=.266
5 : 15 years	101.4	28.62	P =.767
> 15 years	103.6	31.91	
Marital status			
Single	100.2	24.19	
Married	100.9	28.23	F= 1.15
Widow	106.1	39.78	P =.328
Divorced	128.1	29.50	

*Significant (P<0.05). F = One Way ANOVA. t test for independent group

Table (5) Demonstrates relationship between studied nurses' knowledge sharing and their personal characteristics. There were statistically significant relations between nurses' gender and educational level with knowledge sharing .

Table (6): Relationship between the studied nurses' knowledge sharing levels and their personal characteristics (n = 293).

Personal Characteristics	knowledge Sharing Levels						Total N=293		χ^2	P
	Poor(N=90)		Fair(N=193)		Good(N=10)		No	%		
	No	%	No	%	No	%				
Age groups										
< 20 years	3	1.0%	10	3.4%	0	.0%	13	4.4%	9.270	.159
20 : < 30 years	72	24.6%	91	31.1%	14	4.8%	177	60.4%		
30 : < 40 years	32	10.9%	48	16.4%	7	2.4%	87	29.7%		
≥ 40 years	2	0.7%	11	3.8%	3	1.0%	16	5.5%		
Gender										
Male	12	4.1%	38	13.0%	3	1.0%	53	18.1%	7.654	.022*
Female	97	33.1%	122	41.6%	21	7.2%	240	81.9%		
Educational level										
Diploma	13	4.4%	17	5.8%	4	1.4%	34	11.6%	7.565	.027*
Technical	70	23.9%	91	31.1%	9	3.1%	170	58.0%		
Bachelor	26	8.9%	51	17.4%	11	3.8%	88	30.0%		
Post graduate	0	.0%	1	.3%	0	.0%	1	.3%		
Years of experience										
< 5 years	46	15.7%	78	26.6%	7	2.4%	131	44.7%	6.224	.183
5 : 15 years	54	18.4%	66	22.5%	12	4.1%	132	45.1%		
> 15 years	9	3.1%	16	5.5%	5	1.7%	30	10.2%		
Marital status										
Single	41	14.0%	70	23.9%	7	2.4%	118	40.3%	17.424	.008**
Married	67	22.9%	87	29.7%	14	4.8%	168	57.3%		
Widow	1	.3%	2	.7%	1	.3%	4	1.4%		
Divorced	0	.0%	1	.3%	2	.7%	3	1.0%		

*Significant (P<0.05). 2χ Chi-Square test

Table 6. Demonstrates the relationship between studied nurses' knowledge sharing levels and their personal characteristics. There were statistically significant relations between studied nurses' gender, educational level, and marital status with knowledge sharing levels.

Table (7): Relationship between the studied nurses' work engagement levels and their personal characteristics (n = 293).

Personal Characteristics	Work Engagement Levels						Total N=293		2χ	P
	Poor (N= 90)		Fair(N=193)		Good (N=10)		No	%		
	No	%	No	%	No	%				
Age groups										
< 20 years	7	2.4%	6	2.0%	0	.0%	13	4.4%	6.010	.422
20 : < 30 years	57	19.5%	114	38.9%	6	2.0%	177	60.4%		
30 : < 40 years	22	7.5%	61	20.8%	4	1.4%	87	29.7%		
≥ 40 years	4	1.4%	12	4.1%	0	.0%	16	5.5%		
Gender										
Male	12	4.1%	39	13.3%	2	.7%	53	18.1%	1.983	.371
Female	78	26.6%	154	52.6%	8	2.7%	240	81.9%		
Educational level										
Diploma	11	3.8%	23	7.8%	0	.0%	34	11.6%	17.524	.214.
Technical	61	20.8%	107	36.5%	2	.7%	170	58.0%		
Bachelor	18	6.1%	62	21.2%	8	2.7%	88	30.0%		
Postgraduate	0	.0%	1	.3%	0	.0%	1	.3%		
Years of experience										
< 5 years	43	14.7%	86	29.4%	2	.7%	131	44.7%	5.808	008*
5 : 15 years	39	13.3%	85	29.0%	8	2.7%	132	45.1%		
> 15 years	8	2.7%	22	7.5%	0	.0%	30	10.2%		
Marital status										
Single	39	13.3%	77	26.3%	2	.7%	118	40.3%	5.791	.447
Married	51	17.4%	109	37.2%	8	2.7%	168	57.3%		
Widow	0	.0%	4	4.0	0	.0%	4	4.0		
Divorced	0	.0%	3	1.0%	0	.0%	3	1.0%		

*Significant (P<0.05). 2χ Chi-Square test

Table 7. Demonstrates the relationship between studied nurses' work engagement levels and their characteristics. There were statistically significant relations between years of experience and nurses' work engagement levels.

Table (8): Correlation matrix between knowledge sharing domains and work engagement domains (n=293).

Study Domains	Sig	1	2	3	4	5	6	7	8	9
(1)Emotional Engagement	r	-								
	p	-								
(2)Cognitive Engagement	r	.699**	-							
	p	.000	-							
(3)Behavioral Engagement	r	.666**	.624**	-						
	p	.000	.000	-						
(4)Behavioral Control	r	.611**	.613**	.633**	-					
	p	.000	. 000	.000	-					
(5)Organizational Incentives	r	.468**	.451**	.526**	.682**	-				
	p	.000	.000	.000	.000	-				
(6)Reciprocal Benefits	r	.447**	.346**	.489**	.514**	.616**	-			
	p	.000	.000	.000	.000	.000	-			
(7)Reputation Enhancement	r	.454**	.468**	.538**	.669**	.628**	.647**	-		
	p	.000	.000	.000	.000	.000	.000	-		
(8)Loss Of Knowledge Power	r	.339**	.334**	.419**	.527**	.519**	.515**	.659**	-	
	p	.000	.000	.000	.000	.000	.000	.000	-	
(9)Enjoyment In Helping Others	r	.314**	.348**	.402**	.529**	.473**	.502**	.584**	.808**	-
	p	.000	.000	.000	.000	.000	.000	.000	.000	-
(10)Organizational Climate	r	.542**	.540**	.613**	.668**	.574**	.605**	.738**	.501**	.495**
	p	.000	.000	.000	.000	.000	.000	.000	.000	.000

Study Domains	Sig	1	2	3	4	5	6	7	8	9
(1)Emotional Engagement	r	-								
	p	-								
(2)Cognitive Engagement	r	.699**	-							
	p	.000	-							
(3)Behavioral Engagement	r	.666**	.624**	-						
	p	.000	.000	-						
(4)Behavioral Control	r	.611**	.613**	.633**	-					
	p	.000	. 000	.000	-					
(5)Organizational Incentives	r	.468**	.451**	.526**	.682**	-				
	p	.000	.000	.000	.000	-				
(6)Reciprocal Benefits	r	.447**	.346**	.489**	.514**	.616**	-			
	p	.000	.000	.000	.000	.000	-			
(7)Reputation Enhancement	r	.454**	.468**	.538**	.669**	.628**	.647**	-		
	p	.000	.000	.000	.000	.000	.000	-		
(8)Loss Of Knowledge Power	r	.339**	.334**	.419**	.527**	.519**	.515**	.659**	-	
	p	.000	.000	.000	.000	.000	.000	.000	-	
(9)Enjoyment In Helping Others	r	.314**	.348**	.402**	.529**	.473**	.502**	.584**	.808**	-
	p	.000	.000	.000	.000	.000	.000	.000	.000	-
(10)Organizational Climate	r	.542**	.540**	.613**	.668**	.574**	.605**	.738**	.501**	.495**
	p	.000	.000	.000	.000	.000	.000	.000	.000	.000

Bivariate Person correlation test, Significance considered if p <0.05*, highly considered if p <0.001**

Table 8. Displayed correlation matrix between knowledge sharing domains and work engagement domains. There were statistically significant relations between knowledge sharing domains and work engagement domains, except emotional domain.

Table (9): Correlation between total score of work engagement and knowledge sharing (n=293).

Study Variables		Knowledge Sharing
Work Engagement	r	.689**
	p	0.000

**. Correlation is significant at the 0.01 level (2-tailed). Bivariate Person correlation test used.

Table 9. Indicates that knowledge sharing positively and significantly influences work engagement.

DISCUSSION

Work engagement enables nurses to take pleasure in their work, which leads to improved performance and gives hospitals a competitive edge. When tackling the major issues facing health systems, such as the worldwide nurse shortage, pressure to cut healthcare costs, and rising patient expectations for high-quality care and favorable results, work engagement in professional nursing practice is vitally crucial to consider (Keyko, Cummings, Yonge, & Wong).

The results of the study showed that, in terms of work engagement levels, most of the nurses under study had a moderate level of work engagement. This finding is probably due to the Egypt Health Care Authority Hospitals in the Governorate of Port Said providing a conducive work environment and work performance aids that support nurses' motivation and job satisfaction. This finding is probably due to the Egypt Health Care Authority Hospitals in the Governorate of Port Said providing a conducive work environment and work performance aids that support nurses' motivation and job satisfaction. These results are consistent with those of (Bayona, Caballer, & Peiró ,2020; Ghazawy, Mahfouz, Mohammed, & Refaei 2021; & Sharaf, Sleem, & Abd-El Hady, 2021).

The study's conclusions regarding the various work engagement domains showed that the emotional engagement domain had the highest mean score and percentage of staff

nurses' replies. This finding is consistent with that of Erum, Abid, and Contreras (2020) who found that nurses have a positive attitude toward their profession and make use of all their resources and capabilities to complete tasks. According to Engelbrecht, Rau, Nel, and Wilke (2020) the respondents' overall emotional well-being was good, and their emotional engagement was high. More precisely, the first stage of burnout emotional exhaustion was not a concern for the responders.

This contrasts with other research findings, which indicated that nurses experienced higher levels of emotional exhaustion also felt unable to express their emotions due to the combination of their high workloads, resource scarcity, and exposure to patients' suffering (Delgado, Upton, Ranse, Furness, & Foster, 2017&Wu et al., 2018).

As regard levels of knowledge sharing among studied nurses, findings of the current study displayed that more than half of study nurses had fair level of knowledge sharing. This result is consistent with studies that examined subjects' knowledge sharing behavior, such as, Castaneda & Durán (2018), Yoo, Zhang, & Yun (2019), Diab, & Eldeeb, (2020), and Basiony & Ghonem (2023) which revealed that more than half of the research participants reported a moderate level of knowledge sharing.

According to the current study's findings, over half of the study's nurses shared knowledge at a fair level (innovative work behavior). Abd El-Fattah (2017) provided support for the present study's findings, stating that more than half of nurses had a modest number of points for perceived innovative behavior. The current study's findings also matched those of Jung and Yoon (2018) who found that below half of the participants had a high average level of innovative work behavior.

On the inverse, research by Mahgoub, Mostafa Shazly, & Mohammed El-Sayed (2019), and Asurakkody and Kim (2020) revealed that the majority of nurses exhibit highly inventive work behaviors. Additionally, the American Association of Critical-Care Nurses (2015) highlighted that nurses who work in critical areas are resourceful, encourage lifelong learning, look for information, and eventually develop into more innovative nurses.

The recent study results showed that over half of the nurses viewed the situation as fair regarding reputation enhancement. These results align with the research conducted

by Ibrahim, Ebraheem, & Mahfouz (2022) which suggest an overall enhancement in nurses' perceptions of job reputation.

According to Deheshti, Azimzadeh, Mirzazadeh, & Alimohammadi (2019) having a solid work reputation has several advantages for the company and its services at all levels, both internally and outside. The primary advantages include raising the standard of service quality, developing positive relationships with supply chain partners, preserving competitive product positioning, increasing customer loyalty, raising beneficiary awareness, and boosting employee morale, spirituality, and motivation, all of which lead to high performance and productivity across the board.

More than half of the nurses in the current study reported that the organizational climate, affiliation, innovation, and fairness were at a fair level. Perhaps this is due to the department head not being biased towards anyone, and the department members trust the decisions and judgments of the department head, they cooperate well with each other, the goals are clear and logical, the department is encouraged to innovate new solutions and ways of performing tasks .

These results are corroborated by Xu, Wang, & Suntrayuth's (2022) who state that when an organization implements an innovation orientation, knowledge staff members can identify that their innovative behavior aligns with the organization's strategic goals. However, when knowledge workers' ideas are at odds with the organization's goals, they are not wasing to speak honestly with their leaders. Edmondson and Lei (2014) contend that perceptions of organizational fairness policies, awareness of the innovative climate, and knowledge of interpersonal interactions in the workplace was all influence the conduct of knowledge workers. According to Mesfin, Woldie, Adamu, and Bekele (2022), employees are greatly impacted by the organizational climate. Thus, increased job satisfaction and decreased turnover might boost the intrinsic motivation of knowledge workers.

According to Zohar, Huang, Lee, and Robertson (2015), aspects like fairness and knowledge workers' sense of accountability for their work have a crucial influence on developing knowledge workers in terms of organization climate (fairness). Organizational procedural justice has a stronger effect on work engagement, according to

studies by Riono, Syaifulloh, & Utami (2022) and Li, Martins, Vasconcelos, & Peng (2023). It also has a positive effect on knowledge sharing and creative work behavior.

There are statistically significant differences in years of experience and nurses' work engagement in this study, concerning the relationship between the work engagement of the studied nurses and their personal characteristics. This result is in line with the findings of Topchyan & Woehler (2021), who found a significant relationship between years of experience and work involvement. Aboshaiqah, Hamadi, Salem, & Zakari (2016)They noted that when nurses have the resources necessary to practice professionally, they feel more energized because they interact with their patients, are more satisfied with the care they can offer, and report feeling more absorbed in their work.

Study findings stated that there were statistically significant differences in the relation between studied nurses' gender, marital status, and educational level with knowledge sharing. The current study findings are inconsistent with the study conducted by Basiony, & Ghonem, (2023) who reported that is no statistical relation between knowledge sharing level and nurses' ages, gender, marital status, educational qualifications, and years of experience.

There were statistically significant differences in correlation between knowledge sharing domains and work engagement domains, except emotional domain. Findings are logically plausible as the level of education, awareness of knowledge sharing and its importance for healthcare provider's increases. Nurses can share more knowledge when they are more educated than other staff, which greatly increases the amount of knowledge that can be shared. results are consistent with According to Juan, Ting, Kweh, and Yao (2018), employee engagement is greatly and favorably impacted by all facets of knowledge sharing. Improved work environment, leadership, organizational policies, communication, training and career development, compensation, and team and coworkers in the context of knowledge sharing all contribute to increased employee engagement.

CONCLUSION

Based on the findings of the current study, it can be concluded that:

Most nurses had a moderate level of work engagement. More than half of the nurses in the study knowledge sharing at a fair level. In addition, number of years of experience and the level of work engagement among nurses were statistically different. Also, gender, educational level, and marital status of the nurses under study differed statistically significantly from knowledge sharing . Nurses' work engagement levels and years of experience differed statistically significant and there were statistically significant differences between the knowledge sharing and work engagement domains. Finally,knowledge sharing has a favorable and substantial impact on employee engagement at work.

RECOMMENDATIONS

Based on the results of the present study, the following recommendations can be suggested:

Healthcare organizations:

Hospital administrators should establish systems, protocols, policies and strategies to enhance nursing perception about work engagement and knowledge sharing.

Nurse Managers

- Nurse managers should consider the workload and its negative impact on the nurse’s engagement outcomes to improve their performance.
- Hospital administrators and policymakers establish an alluring working environment among the nursing to increase their engagement.
- Conduct periodic meetings between nurse manager and nurses to share, improve two ways of communication, discuss nurses' problems, share nurses in creating solutions for their problems and advanced work engagement.

Further research

Further research study is needed to assess the influence of knowledge sharing and work engagement of work environment on achieving nursing outcomes. Additional research is needed with larger samples across different governorates to generalize the results. There is a need for future research to study the factors that affect the knowledge sharing.

References

Abd El-Fattah, M.A. (2017). Innovation behavior levels and its relation with TIGER-based nursing informatics competencies among critical care nurses. *Egyptian Nursing Journal*, *14*(2), 59-69.

Aboshaiqah, A. E., Hamadi, H. Y., Salem, O. A., & Zakari, N. M. (2016). The work engagement of nurses in multiple hospital sectors in Saudi Arabia: a comparative study. *Journal of nursing management*, *24*(4), 540-548.

Abu Bakar, H., & McCann, R. M. (2016). The mediating effect of leader–member dyadic communication style agreement on the relationship between servant leadership and group-level organizational citizenship behavior. *Management Communication Quarterly*, *30*(1), 32-58.

Al- Hamdan, Z., & Bani Issa, H. (2022). The role of organizational support and self-efficacy on work engagement among registered nurses in Jordan: A descriptive study. *Journal of Nursing Management*, *30*(7), 2154-2164.

Andrew, O. C., & Sofian, S. (2012). Individual factors and work outcomes of employee engagement. *Procedia-Social and behavioral sciences*, *40*, 498-508.

Asurakkody, T. A., & Kim, S. H. (2020). Effects of knowledge sharing behavior on innovative work behavior among nursing Students: Mediating role of Self-leadership. *International Journal of Africa Nursing Sciences*, *12*, 100190.

Basiony, B. M., & Ghonem, N. E. S. (2023). Job crafting, knowledge sharing, and career resilience among nurses at Suez canal university hospital. *Assiut Scientific Nursing Journal*, *11*(36), 287-298.

Bayona, J. A., Caballer, A., & Peiró, J. M. (2020). The relationship between knowledge characteristics' fit and job satisfaction and job performance: The mediating role of work engagement. *Sustainability*, *12*(6), 2336.

Bhatti, M. A., Hussain, M. S., & Al Doghan, M. A. (2018). The role of personal and job resources in boosting nurses' work engagement and performance. *Global Business and Organizational Excellence*, *37*(2), 32-40.

Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 87-111.

Castaneda, D. I., & Durán, W. F. (2018). Knowledge sharing in organizations: Roles of beliefs, training, and perceived organizational support. *Knowledge Management & E-Learning*, *10*(2), 148-162.

De Simone, S., Planta, A., & Cicotto, G. (2018). The role of job satisfaction, work engagement, self-efficacy and agentic capacities on nurses' turnover intention and patient satisfaction. *Applied Nursing Research*, *39*, 130-140.

Deheshti, M., Azimzadeh, S. M., Mirzazadeh, Z., & Alimohammadi, H. (2019). Modeling the competitive advantage of Iranian soccer clubs based on the team reputation considering the satisfaction level of fans of the selected teams. *Annals of Applied Sport Science*, *7*(2), 63-71.

Delgado, C., Upton, D., Ranse, K., Furness, T., & Foster, K. (2017). Nurses' resilience and the emotional labour of nursing work: An integrative review of empirical literature. *International journal of nursing studies*, *70*, 71-88.

Diab, G. M. A. E., & Eldeeb, G. A. E. A. (2020). Effect of organizational support and knowledge sharing on nurses' innovative behavior. *Int J Nurs Sci*, *10*, 51-61.

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annu. Rev. Organ. Psychol. Organ. Behav.*, *1*(1), 23-43.

Engelbrecht, M., Rau, A., Nel, P., & Wilke, M. (2020). Emotional well- being and work engagement of nurses who moonlight (dual employment) in private hospitals. *International Journal of Nursing Practice*, *26*(1), e12783.

Erum, H., Abid, G., & Contreras, F. (2020). The calling of employees and work engagement: The role of flourishing at work. *Business, Management and Economics Engineering*, *18*(1), 14-32.

Ghazawy, E. R., Mahfouz, E. M., Mohammed, E. S., & Refaei, S. A. (2021). Nurses' work engagement and its impact on the job outcomes. *International Journal of Healthcare Management*, *14*(2), 320-327.

González- Gancedo, J., Fernández- Martínez, E., & Rodríguez- Borrego, M. A. (2019). Relationships among general health, job satisfaction, work engagement and job features in nurses working in a public hospital: A cross- sectional study. *Journal of clinical nursing*, *28*(7-8), 1273-1288.

Ibrahim, S. A. M., Ebraheem, S. M. A., & Mahfouz, H. H. E. S. (2022). Effect of Educational Program about Head Nurses' Agile Leadership on Staff Nurses' Workplace Spirituality and Job Reputation. *Egyptian Journal of Health Care*, *13*(1), 1661-1680

Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human resource development review*, *2*(4), 337-359.

Juan, S. H., Ting, I. W. K., Kweh, Q. L., & Yao, L. (2018). How does knowledge sharing affect employee engagement?. *Institutions and Economies*, *10*(4).

Jung, H. S., & Yoon, H. H. (2018). Improving frontline service employees' innovative behavior using conflict management in the hospitality industry: The mediating role of engagement. *Tourism Management*, *69*, 498-507.

Keyko, K., Cummings, G. G., Yonge, O., & Wong, C. A. (2016). Work engagement in professional nursing practice: A systematic review. *International journal of nursing studies*, *61*, 142-164.

Li, S., Martins, J. T., Vasconcelos, A. C., & Peng, G. (2023). Knowledge sharing in project work: the dynamic interplay of knowledge domains and skills. *Journal of Knowledge Management*, *27*(2), 328-355.

Liao, S. H., & Wu, C. C. (2010). System perspective of knowledge management, organizational learning, and organizational innovation. *Expert systems with Applications*, *37*(2), 1096-1103.

Mahgoub, A. E. F., Mostafa Shazly, M., & Mohammed El-sayed, S. (2019). Relationship between work environment and innovative behavior among staff nurses. *Egyptian Journal of Health Care*, *10*(3), 64-76.

Manesh, M. F., Pellegrini, M. M., Marzi, G., & Dabic, M. (2020). Knowledge management in the fourth industrial revolution: Mapping the literature and

scoping future avenues. *IEEE Transactions on Engineering Management*, *68*(1), 289-300.

Mesfin, D., Woldie, M., Adamu, A., & Bekele, F. (2020). Perceived organizational culture and its relationship with job satisfaction in primary hospitals of Jimma zone and Jimma town administration, correlational study. *BMC Health Services Research*, *20*, 1-9.

Orgambídez-Ramos, A., & de Almeida, H. (2017). Work engagement, social support, and job satisfaction in Portuguese nursing staff: A winning combination. *Applied Nursing Research*, *36*, 37-41.

Othman, N., & Nasurdin, A. M. (2019). Job characteristics and staying engaged in work of nurses: Empirical evidence from Malaysia. *International journal of nursing sciences*, *6*(4), 432-438.

Riono, S. B., Syaifulloh, M., & Utami, S. N. (2022). Analysis of Employee Empowerment, Organizational Commitment and Organizational Justice to Employee Job Satisfaction at Kardinah General Hospital of Tegal City. In *Tegal International Conference on Applied Social Science & Humanities (TICASSH 2022)* (pp. 482-491). Atlantis Press.

Roach, J. G. (2017). *A Comparison of Thriving and Engagement Among Attorneys: Two Sides of the Same Coin* (Doctoral dissertation, University of South Alabama).

Schaufeli, W. B. (2007). Literature list engagement. Retrieved February 28, 2008.

Sharaf, S. E. S., & Sleem, W. F. , Abd-El Hady, T. R. (2021). Engagement, spirituality, and thriving at work among nurses. *Port Said Scientific Journal of Nursing*, *8*(3), 195-218.

Sheng, M. L., Hartmann, N. N., Chen, Q., & Chen, I. (2015). The synergetic effect of multinational corporation management's social cognitive capability on tacit-knowledge management: Product innovation ability insights from Asia. *Journal of International Marketing*, *23*(2), 94-110.

Tabrizi, N. M., & Morgan, S. (2014). Models for describing knowledge sharing practices in the healthcare industry: Example of experience knowledge sharing. *International journal of management and applied research*, *1*(2), 48-67.

Topchyan, R., & Woehler, C. (2021). Do teacher status, gender, and years of teaching experience impact job satisfaction and work engagement?. *Education and Urban Society*, *53*(2), 119-145.

Wu, X., Li, J., Liu, G., Liu, Y., Cao, J., & Jia, Z. (2018). The effects of emotional labor and competency on job satisfaction in nurses of China: A nationwide cross-sectional survey. *International journal of nursing sciences*, *5*(4), 383-389.

Xu, Z., & Suntrayuth, S. (2022). Innovative work behavior in high-tech enterprises: Chain intermediary effect of psychological safety and knowledge sharing. *Frontiers in psychology*, *13*, 1017121.

Yoo, K. H., Zhang, Y. A., & Yun, E. K. (2019). Registered Nurses (RNs)'knowledge sharing and decision- making: the mediating role of organizational trust. *International nursing review*, *66*(2), 234-241.

Zhang, J. (2017). Benefit model of knowledge sharing behavior. *Open Journal of Social Sciences, 5*(8), 161-169.

Zheng, T. (2017). A literature review on knowledge sharing. *Open Journal of Social Sciences, 5*(3), 51-58.

الاندماج في العمل ومشاركة المعلومات بين الممرضين بمؤسسات الرعاية الصحية

كوثر محمود محمود [1]؛ ايمان سعد مسعد ابراهيم حسين[2] ؛ هـنـد عـبـدالله مـحـمـد[3] ؛ تـقـوى رشـوان مـحـمـد عبد الهادى.

[1]دكتوراة في إدارة التمريض- كلية التمريض- جامعه بنها؛ [2]اخصائية تمريض؛ [3,4,] أستاذ مساعد إدارة التمريض كلية تمريض جامعة بورسعيد

الخـــــلاصـــــة

الاندماج في العمل و مشاركة المعلومات حظى باهتمام كبير ومتزايد بين الأوساط الأكاديمية والعملية لارتباطهم بالأداء التنظيمي والنجاح المؤسسى. الـهـدف: دراسة العلاقة بين الاندماج في العمل ومشاركة المعلومات بين الممرضين بمؤسسات الرعاية الصحية. أدوات وطـرق الـبـحـث: دراسة وصفيه ترابطيه ستشمل هذه الدراسة جميع الممرضين العاملين بمستشفي السلام ببورسعيد .أدوات جمع البيانات: مقياس الاندماج في العمل، مقياس مشاركة المعلومات, الخصائص الشخصية و المهنية للمشاركين .النتائج:- (63.1٪) من الممرضين كان لديهم مستوى متوسط من المشاركة في العمل. بينما كانت النسبة الأدنى منهم 3.4% لديهم مستوى عالٍ من المشاركة في العمل و54.6% لديهم مستوى متوسط من تبادل المعرفة. في حين أن أقل نسبة منهم (8.2٪) لديهم مستوى عال من تبادل المعرفة. الاستنتاج: أعلى متوسط إجمالي للدرجات بين استجابات الممرضين العاملين فيما يتعلق بمجال المشاركة العاطفية؛ في حين أن أدنى متوسط إجمالي للدرجات كان بين استجابات الممرضين فيما يتعلق بالمشاركة السلوكية وفيما يتعلق باستجابات الممرضين المتعلقة بمجالات تبادل المعرفة، كانت أعلى الدرجات تتعلق بالمناخ التنظيمي، ومراقبة السلوك، وتعزيز السمعة. في حين أن أدنى متوسط يتعلق بالمناخ التنظيمي (الابتكار). بالاضافه الى ان مشاركة المعرفة تؤثر بشكل إيجابي وكبير على المشاركة في العمل. التوصية، برنامج تدريبي على مشاركه المعلومات وتأثيرها على أداء الممرضات بالمنشئات الصحية المختلفة.

الكلمات المرشدة: الاندماج في العمل، مشاركة المعلومات , الممرضين ,مؤسسات الرعاية الصحية.