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Job Performance among Nurses in Pediatric Department (Khartoum State 2015)

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Research Article

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Abstract

Intoduction: Job performance is the effectiveness of the person in carrying out his or her roles and responsibilities related to direct patient care (Leveck& Jones (1996), Abualrub, 2004) This a descriptive correlational study aimed to assess the level of job performance and to examine the relationship between job performance and age, experience and the educational level among professional nurses in pediatricand intensive care units (P& NICUs) in Khartoum state hospital.

Method: A descriptive health facility based study, was conducted on 137 nurses in Khartoum State during the period 2013-2015, stratified random sampling was used. Research instrument was composed of two parts: Demographic Data Form and The modified Schwirn Six Dimensions Scale for Nursing Performance was used for data collection (Six-D Scale). Reliabilities of the Six- Dimension Scale was checked. Mean, standard deviation, one sample (t) test and Pearson's correlation were used for data analysis.

Results: Findings showed that: overall job performances were at above average level in the neonatal units and below average in other department. There were no statistically differences according to the age and according to the experience and there was a positive significant relationship between Job performance and level in intensive care units. But there were no statistically differences in the other pediatric department according to age and, the years of experiences,and there was significant differences according to education level and job performance.

Data Analysis: Data entry and processing were performed by using the Statistical Package of the Social Science (SPSS) Software, version 16.0. various descriptive and inferential statistical methods were used including Mean ,SD, Student *t*-test and correlation coefficients logistic regression P value was set at < 0.05 for statistically different variables. Pearson's correlation to examine the relationship, between the variable was conducted.

Conclusion: The results of this study can be used in planning work and training programs for professional nurses to ensure high level of job performance.

Keywords: Job performance; Professional nurses; Intensive care units; Pediatric hospitals

Introduction

Job performance, defined as the effectiveness of the person in carrying out his or her roles and responsibilities related to direct patient care [1]. A healthy work environment is one in which staff have made health and health promotion a priority and part of their working lives [2]. Performance refers to voluntary behaviors that can harm the well-being of the organization and Core task performance refers to the basic requiredduties of a particular job. Education and work experience are the two forms of human capital individuals are most likely to acquire during their careers (Thomas & FeldmanEL,2009) Work and care environments must be safe, healing and humane, respectful of the rights, responsibilities, needs and contributions of patients, their families, nurses and all health professionals. Nursing performance measures are an integral part of quality initiatives in acute care; hospital needs to support quality improvement processes and outcomes [3].

Thus a healthy working environment is one in which there is not only an absence of harmful conditions but an abundance of health-promoting ones. These may include continuous assessment of risks to health, the provision of appropriate information and training on health issues and the availability of health promoting organizational support practices and structures. A healthy work environment is one in which staff have made health and health promotion a priority and part of their working lives [2].

General Objectives

To assess the performance of nurses working in pediatric department in Khartoum state hospitals [4].

Specific Objectives

1. To determine nurse's performance in the pediatric department in Khartoum state.
2. To assess nurse's performance neonatal intensive care units in Khartoum state.
3. To determine the relation between nurses performance and their age, their experiences and their level education

Methods

Study Design

In order to fulfill the aims of the current study, a cross-sectional descriptive hospital-based study was conducted in Khartoum State, the national capital of Sudan.

Setting and Study Sampling Technique

The three states of Khartoum are Khartoum, Khartoum North and Omdurman. The main hospitals specialized in children were chosen from the three states. The selection of the hospitals was based on the fact that they have large numbers of children and large number of nurses in the Pediatric department. At the time of study, and large numbers of Pediatric department.

Random sampling method was selected in recruiting nurses from the hospitals so as to give equal chance to participants and avoid any selection bias. The list of the nurses was obtained from the human resource officers and the names were entered in a ballot in order to select participants randomly and give all the nurses equal chances for inclusion in the current study, thus avoiding selection bias.

All female and male nurses with different educational background (i.e. those with diplomas, undergraduate and postgraduate certificates university level were included were eligible for entry in the study. Auxiliary nurses were excluded.

Sample Size and Sample Techniques

In the current study, a total of 137 nurses working in the Pediatric department were selected after agreement [5].

Data Collection Tools

Data was collected by a questionnaire the variable the questionnaire included two parts; the first was the background information of nurses such as age, gender, education level and hospital type (public or private) and the second focused on nurses' performance. Questionnaire targeted nurses to assess their performance i.e. the service provided by them. It included six subtitles and a modified version of the Patria scale was used. The statements were namely: Leadership, Planning/Evaluation, Communications, perform the procedure and Critical Care, Teaching Collaboration and satisfaction for the family and finally the Professional Development (for nurses performance the nurses supervised if they performing the procedure or not, ,then if the procedure performed how it was performed (the questionnaire attached)). The data was collated and analyzed. Data collection on 2014-2015.

Data Analysis

Data entry and processing were performed by using the Statistical Package of the Social Science (SPSS) Software, version 16.0. Various descriptive and inferential

statistical methods were used including mean, SD, Student *t*-test and correlation coefficients logistic regression P value was set at < 0.05 for statistically different variables. Pearson's correlation to examine the relationship, between the variable was conducted.

Ethical Considerations

The approval to conduct the current study was sought from the scientific committee at the College of Nursing Sciences at the University of Khartoum. The three selected hospitals were approached and ethical permission was obtained from the General Directors. All nurses participated in the study were those who actually agreed to complete the study. Nurses were approached with a full description of the study and its aims and were assured that all the information obtained would be treated with high privacy and confidentiality. Any information revealing the identity of any individual was not included in the final report or in other communication prepared throughout the study.

Validity and Reliability of Data Collection Tools

Job performance scale: In order to check the validity of the job performance scale items in the current research population, the data collection tool was applied on a pilot sample consisting of 40 subjects (10 males & 30 females). The sample was selected randomly from the research population. After scoring the responses, Pearson correlation was conducted to get correlation coefficients between scores of each item and the total score of the subscale in which the item belonging to. This helped in determining the internal consistency of the scale. The results of these computations were shown on the (Table 1).

Leadership		Planning & Evaluation		Communication skills		Critical Care		Family Teaching & Guidance		Job Development	
Item	R	Item	R	Item	R	Item	R	Item	R	Item	R
1	0.614	7	0.352	13	0.9	20	0.417	33	0.431	38	0.550
2	0.777	8	0.591	14	0.925	21	0.579	34	0.535	39	0.726
3	0.766	9	0.604	15	0.772	22	0.701	35	0.746	40	0.914
4	0.852	10	0.771	16	0.838	23	0.734	36	0.801	41	0.818
5	0.824	11	0.714	17	0.638	24	0.736	37	0.431	42	0.773
6	0.815	12	0.765	18	0.770	25	0.688				
				19	0.630	26	0.751				
						27	0.715				
						28	0.722				
						29	0.603				
						30	0.656				
						31	0.472				
						32	0.538				

Table 1: Person coefficients of item-total correlation (r) by subscales of the job performance scale.

Reliability Coefficients

The researcher computed both Cronbach's Alpha and Spearman-Brown reliability coefficients for each subscale and for total job Performance Scale. (Table 2) shows the results of these computations.

Job performance sub-dimensions	No of Items	Reliability Coefficients	
		Alpha	S – B
Leadership	6	0.92	0.866
Planning & Evaluation	6	0.845	0.702
Communication skills	7	0.93	0.819
Perform the procedure and Critical Care	13	0.914	0.778
Family Teaching & Guidance	5	0.761	0.939
Job Development	5	0.899	0.789
Job performance Total score	42	0.947	0.917

Table 2: Alpha and Spearman-brown reliability coefficients for each subscale of the job performance scale.

Sample Description

(Table 3) shows study sample descriptions according to Place of Working and Socio - Demographic variables

Descriptions Variables	Levels	Other Pediatric department		Neonatal Intensive Care Units		Both Departments	
		N	%	N	%	N	%
Gender	Males	24	28.6	16	30.2	40	29.2
	Females	60	71.4	37	69.8	97	70.8
	Total Sum	84	100	53	100	137	100
Qualification	Med Diploma	37	44	22	41.5	59	43.1
	University Diploma	27	32.1	16	30.2	43	31.4
	Becalorea Certificate	18	21.4	15	28.3	33	24.1
	Post Graduate	2	2.4	--	--	2	1.5
	Total Sum	84	100	53	100	137	100
Age Levels In Years	20 – 30	50	59.5	28	52.8	78	56.9
	31 – 45	28	33.3	21	39.6	49	35.8
	46 – 60	6	7.1	4	7.5	10	7.3
	Total Sum	84	100	53	100	137	100
Social status	Single	47	56	31	58.5	78	56.9
	Married	34	40.5	21	39.6	55	40.1
	Divorced	1	1.2	1	1.9	2	1.5
	Widow	2	2.4	--	--	2	1.5
	Total Sum	84	100	53	100	137	100
Experience in Years	LT 1	14	16.7	7	13.2	21	15.3
	1 – 5	30	35.7	31	58.5	61	44.5
	6 – 10	22	26.2	10	18.9	32	23.4
	GT 10	18	21.4	5	9.4	23	16.8
	Total Sum	84	100	53	100	137	100

Table 3: Shows study sample descriptions according to place of working and socio - Demographic variables.

Results of Hypothesis No (1)

To test hypothesis no (1) which wording: "Job performance of nurses working in pediatric department in Khartoum state hospitals was below average", the researchers applied one sample (t) test. The flowing (Table 4) shows the results of this procedure:

Job performance Total score	Mean	SD	tested value	Calculated (t) value	df	p	Inference
Leadership	10.44	6.76	12	-2.110	83	0.019	Below Average
Planning & Evaluation	9.25	5.97	12	-4.221	83	0.001	Below Average
Communication skills	8.11	7.69	14	-7.027	83	0.001	Below Average
Critical Care	20.55	13.39	26	-3.733	83	0.001	Below Average
Family Teaching & Guidance	10.01	6.17	10	0.018	83	0.498	At Average
Job Development	12.80	6.60	10	3.887	83	0.001	Above Average
Job performance Total score	71.16	36.43	84	-3.230	83	0.002	Below Average

Table 4: Shows the results of one sample (t) test to determine the levels of job performance of nurses working in pediatric units in khartoum state hospitals (n=84).

Results of Hypothesis No (2)

To test hypothesis no (2) which wording: "Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals is above average", the researchers applied one sample (t) test. The flowing (Table 5) shows the results of this procedure:

Job performance sub-dimensions	Mean	SD	tested value	Calculated (t) value	df	p	Inference
Leadership	11.71	7.54	12	-0.278	52	0.391	At Average
Planning & Evaluation	9.14	6.39	12	-3.261	52	0.001	Below Average
Communication skills	8.9	6.78	14	-5.473	52	0.001	Below Average
Critical Care	23.32	12.18	26	-1.602	52	0.068	At Average
Family Teaching & Guidance	12.06	6.05	10	2.473	52	0.009	Above Average
Job Development	13.74	6.07	10	4.487	52	0.001	Above Average
Job performance Total score	78.87	34.38	84	-1.087	52	0.141	At Average

Table 5: Shows the results of one sample (t) test to determine the levels of job performance of nurses working in neonatal intensive care units in khartoum state hospitals (n=53).

Results of Hypothesis No (3 - a)

To test hypothesis no (3 - a) which wording: "There was a positive significant relationship between Job performance of nurses working in pediatric units in Khartoum state hospitals, with their Ages Levels variable", the researchers applied Spearman rank correlation equation. The flowing (Table 6) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	.189*	0.042	There is a positive sig correlation
Planning & Evaluation	.203*	0.032	There is a positive sig correlation
Communication skills	0.103	0.177	The correlation isn't significant
Critical Care	.200*	0.034	There is a positive sig correlation
Family Teaching & Guidance	.222*	0.021	There is a positive sig correlation
Job Development	.309**	0.002	There is a positive sig correlation
Job performance Total score	.253*	0.010	There is a positive sig correlation

Table 6: Shows results of spearman rank correlation coefficients to explain the significance of relationship between job performance of nurses working in pediatric units in khartoum state hospitals, with their ages levels variable (n=84).

Results of Hypothesis No (4 - b)

To test hypothesis no (3 - b) which wording: "There is a positive significant relationship between Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals, with their Ages Levels variable", the researchers applied spearman rank correlation equation. The flowing (Table 7) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	-0.134	0.170	The correlation isn't significant
Planning & Evaluation	-0.213	0.063	The correlation isn't significant
Communication skills	-0.203	0.072	The correlation isn't significant
Critical Care	-0.053	0.352	The correlation isn't significant

Family Teaching &Guidance	-0.096	0.247	The correlation isn't significant
Job Development	-0.173	0.108	The correlation isn't significant
Job performance Total score	-0.118	0.199	The correlation isn't significant

Table 7: Shows results of spearman rank correlation coefficients to explain the significance of relationship between job performance of nurses working in neonatal intensive care units in khartoum state hospitals, with their ages levels variable (n=53).

Results of Hypothesis No (5 - C)

To test hypothesis no (3 - c) which wording: "There is a positive significant relationship between Job performance of nurses working in pediatric units in Khartoum state hospitals, with their Experience Levels variable", the researchers applied Spearman rank correlation equation. The flowing (Table 8) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	0.268	0.007	There is a positive sig correlation
Planning & Evaluation	0.246	0.012	There is a positive sig correlation
Communication skills	0.046	0.339	The correlation isn't significant
Critical Care	0.278	0.005	There is a positive sig correlation
Family Teaching & Guidance	0.290	0.004	There is a positive sig correlation
Job Development	0.241	0.014	There is a positive sig correlation
Job performance Total score	0.315	0.002	There is a positive sig correlation

Table 8: Shows results of spearman rank correlation coefficients to explain the significance of relationship between job performance of nurses working in pediatric units in khartoum state hospitals, with their experience levels variable (n=84).

Results of Hypothesis No (6 - d)

To test hypothesis no (3 - d) which wording: "There is a positive significant relationship between Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals, with their Experience Levels variable", the researchers applied Spearman rank correlation equation. The flowing (Table 9) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	0.003	0.493	The correlation isn't significant
Planning & Evaluation	0.129	0.178	The correlation isn't significant
Communication skills	0.065	0.322	The correlation isn't significant
Critical Care	-0.039	0.391	The correlation isn't significant
Family Teaching & Guidance	-0.043	0.381	The correlation isn't significant
Job Development	0.025	0.431	The correlation isn't significant
Job performance Total score	0.30	0.417	The correlation isn't significant

Table 9: Shows results of Spearman rank correlation coefficients to explain the significance of relationship between Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals, with their Experience Levels variable (n=53).

Results of Hypothesis No (7 - E)

To test hypothesis no (3 - E) which wording: "There is a positive significant relationship between Job performance of nurses working in pediatric units in Khartoum state hospitals, with their Educational Levels variable", the researchers applied Spearman rank correlation equation. The flowing (Table 10) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	0.10	0.464	The correlation isn't significant
Planning & Evaluation	0.125	0.129	The correlation isn't significant
Communication skills	0.239	0.014	There is a positive sig correlation
Critical Care	0.042	0.354	The correlation isn't significant
Family Teaching & Guidance	0.015	0.446	The correlation isn't significant
Job Development	0.022	0.421	The correlation isn't significant
Job performance Total score	0.085	0.221	The correlation isn't significant

Table 10: Shows results of Spearman rank correlation coefficients to explain the significance of relationship between Job performance of nurses working in pediatric units in Khartoum state hospitals, with their Educational Levels variable (n=84).

Results of Hypothesis No (8- F)

To test hypothesis no (3 - F) which wording: "There is a positive significant relationship between Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals, with their Educational Levels variable", the researchers applied Spearman rank correlation equation. The flowing (Table 11) shows the results of this procedure:

Job performance sub-dimensions	Correlation coefficients	P (Sig.)	Statistical Inference
Leadership	0.170	0.112	The correlation isn't significant
Planning & Evaluation	0.337	0.007	There is a positive sig correlation
Communication skills	0.419	0.001	There is a positive sig correlation
Critical Care	0.300	0.015	There is a positive sig correlation
Family Teaching & Guidance	0.079	0.287	The correlation isn't significant
Job Development	0.104	0.229	The correlation isn't significant
Job performance Total score	0.321	0.10	There is a positive sig correlation

Table 11: Shows results of Spearman rank correlation coefficients to explain the significance of relationship between Job performance of nurses working in neonatal intensive care units in Khartoum state hospitals, with their Educational Levels variable (n=53).

Discussion and Conclusion

In the current study, most of nurse were female (70.8) (Table 3) and nurses had post graduate studies (1.5%) most of the nurses had work experience from one to five years. The findings of this study indicated that the job performance provided by the nurses in pediatric units was above average and below average in other department (Table 4). This finding may be due to large number of cases and few numbers of nurses per shift also, the qualified nurses are working in units. And this consists with the study prepared by Healthcare Research and Quality U.S. Department of Health and Human Services found that. A shortage of staff and increased workload, has the potential to threaten quality of care and hospitals with inadequate nurse staffing have higher rates of adverse events. Such as hospital acquired infection, shock, and failure to rescue.

On other hand this result when compared with the results of previous study, done by Yuxiu P, et al. (2011) [6] also, (Yang et al., 2006). They Found that the level of job performance with critical care at a moderate at moderate level. New nurses had lack of the experience to provide effective nursing care for patients, since their job performance was based on work experience and qualification, qualified nurses' and whom they work in neonatal units their performance above average ,this finding consist to some extend with study done by Hanan. AlAhmadi (2009) she found that, Job performance is positively related to some personal factors, including years of experience, nationality, gender, and marital status. Level of education is negatively related to performance but in current study the level of education positively related to performance. (Table 10) also this consist with study done by Tzeng, 2004 [7] also Thomas&Feldmanl.2009), they found that the relationships between educational level and job, performance stronger and positively related to job performance. Regarding age and nurses performance current study found that the correlation was positive in pediatric department (Table 7) except neonatal intensive

care units the relation not significant (Table 6), Reid and Dawson, 2001 fond that Nurses' job performance has been found to be *negatively* influenced by old age, in the intensive care unit the performance mostly depend on experience and specific related courses.

A shortage of staff and increased workload has the potential to threaten quality of care. (Halmetal.2005) hospitals with inadequate nurse staffing have higher rates of adverse events. Such as hospital acquired infection, shock, and failure to rescue [8].

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