Relationship between Leadership Behaviors and Job Satisfaction among Nurses in Hospitals of South Kordofan State, Sudan

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Abstract

Purpose: This study aimed to assess job satisfaction of nurses working at hospitals in South Kordofan State, Sudan and its relationship with transformational and transactional leadership behaviors.

Design: Cross-sectional survey research.

Methods: This study collected data from 184 nurses working at four hospitals in South Kordofan State, Sudan, using self-administered questionnaires. Descriptive statistics and Pearson's correlation was used to analyze general characteristics and association between transformational and transactional leadership behaviors and job satisfaction.

Main findings: Almost half of the nurses (46.2%) had low levels of job satisfaction. They also predominantly reported low levels of transformational leadership (38.6%) and transactional leadership (52.2%). Job satisfaction was positively correlated with both transformational ($r = .75$; $p < .001$) and transactional leadership behaviors ($r = .71$; $p < .001$).

Conclusion and recommendations: Strong correlations between leadership behaviors and job satisfaction of nurses in Sudan suggest a solution to help alleviate the nursing shortage problem in South Kordofan State, Sudan. With good leadership behaviors, nurses would be more likely satisfied with the working conditions and would not only be willing to stay, but also perform their best to provide high quality care to their patients.

Keywords: leadership behavior, job satisfaction, nurses, South Kordofan State, Sudan

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Background and Significance

Nursing is a healthcare profession focused on the care of individuals, families, and communities, so they may attain, maintain, or recover optimal health and quality of life from birth to death.[1] The shortage of nurses worldwide has been well documented in health care industry.[2-4] Nursing shortage has adverse effects on quality of health care services[5,6] and patient care costs.[6] Studies have shown that job satisfaction and turnover are inversely related.[7] Moreover, job satisfaction is considered a strong predictor of overall individual well-being,[8] as well as a good predictor of intentions or decisions of employees to leave a job.[9] The lack of job satisfaction has an impact on staff shortage, and thus leads to emigration outside of the country.[10] Recent studies have suggested a direct correlation between staff and patient satisfaction in health care organizations.[11] A number of work environment factors that affect patient outcomes including quality of leadership and management, staff resources, workload,[12] teamwork and effective communication.[13] In healthy work environments, nurses feel valued by their organization, use standardized processes, feel empowered and develop strong leadership skills.14 In addition, they feel a sense of community and recognize that strategic decision-making authority influences how their units are run and how scarce resources are distributed.[14] Unhealthy work environments can cause unfavorable consequences on the quality of care delivered as well as nurses' intention to leave the profession.[15-18] Effective nursing leadership is associated with greater job satisfaction among staff nurses[19] and is a key factor in staff nurse retention.[20, 21]

Effective leadership demonstrates both transformational and transactional leadership behaviors.[22] Literature has reported that both transformational and transactional leadership behaviors increased job satisfaction and production.[23,24] An organization's success is influenced by good leadership skills and dedicated employees. Leadership, in turn, extensively influences employees' motivation and dedication.[25] Leadership mentoring will also be crucial as to meet today's challenges in health care.[26]

Sudan is one of the developing countries in Africa with extremely scarce resources. Of its 17 states, South Kordofan is one of the most lacking in resources. Its health services provision, just like other social services, is poor. According to a 2007 health facility survey, 15 hospitals, 61 health centers, and 312 health units were operating in the state. Health care providers always want to emigrate to the Khartoum and other wealthier states. These factors have resulted in a relatively higher work load, and therefore, dissatisfaction among the remaining nurses in Kordofan.

Leadership behaviors and job satisfaction have not been studied before in Kordofan. A need exists for empirical evidence regarding job satisfaction, leadership behaviors and relationship between leadership behaviors and job satisfaction for staff nurses working in four hospitals. The findings of this study would help nursing administrators to alleviate the problems of nursing shortage and improve the environment leading to job satisfaction in the South Kordofan State in Sudan.

Objectives

1. To measure the level of job satisfaction of nurses working at hospitals in South Kordofan State, Sudan.

2. To explore leadership behaviors of nurses working at hospitals in South Kordofan State, Sudan.

3. To identify the relationships between transformational, transactional leadership behaviors and job satisfaction among nurses working at hospitals in South Kordofan State, Sudan.

Methods

Population and sample

The study population comprised 720 staff nurses working in four hospitals of the Ministry of Health, South Kordofan State, Sudan. Their education levels included a three-year diploma and bachelor degree in nursing. Nurses who have worked in any of the four hospitals for more than six months were recruited and those who were on a long leave and not present in the hospitals during the data collection period were excluded. The sample size of 226 was calculated using the following formula:[27]

$$n = \frac{NZ^2_{\alpha/2}\sigma^2}{d^2 (N-1) + Z^2_{\alpha/2}\sigma^2}$$

Whereby,

n = Estimated sample size of nurses

$Z_{\alpha/2}$ = 1.96 (A value from normal distribution associated with 95% confidence interval)

N = Total nurses at hospitals in South Kordofan State = 702

σ = Standard deviation of the job satisfaction level = .56

d = Maximum allowable error = .06

The sample size is calculated as follows:

$n = 702 \times 1.96^2 \times 0.56^2 / (0.06^2 \times 701) + (1.96^2 \times 0.56^2)$

$n = 226$

The questionnaire was distributed to 226 staff nurses and 207 returned them, giving a response rate of 91.6%. A total 184 of the responses were complete and used for analysis. Data were collected in January, 2013.

Research instruments

The self-administered questionnaire comprised three parts. The first part asked about general characteristics of the nurses including age, sex, education level, marital status, income, years of experience at hospital, hours of work, and duration of in-service training for capacity building. The second part explored leadership behaviors developed by Bass and Avolio in 1994. Transformational leadership (12 statements) had four dimensions, namely, idealized influence, inspiration motivation, individualized consideration and intellectual stimulation. Transactional leadership (6 statements) had two dimensions, namely, contingent reward and management by exception. The final part was Job Satisfaction Survey (JSS) (36 items) developed by Paul E. Spector in 1997 comprising nine dimensions, namely, pay, promotion, supervision, fringe benefits, contingent reward, operating conditions, co-worker, nature of work and communication. The JSS used a six-point rating scale ranging from 1 (strongly disagree) to 6 (strongly agree). Regarding levels of leaderships and job satisfaction, the scores of each scale were categorized in three groups by cut-off point: high (4.5 to 6), moderate (3.5 to 4.4), and low (1 to 3.4).

The questionnaires were translated into Arabic. Content validity was reviewed and approved by three experts from the Department of Health Planning, Ministry of Health, Sudan. Reliability was assessed among 30 registered nurses, revealing high Cronbach's Alpha coefficients for both leadership behaviors and job satisfaction, .96 and .91, respectively.

Procedures

The procedures of data collection are described below:

1. After approval from the Ethics Review Committee for Human Research, Faculty of Public Health, Mahidol University (COA No. MUPH 2013-062), permission was obtained from the Ministry of Health, South Kordofan State, Sudan for data collection.

2. The permission letter and request for questionnaire administration was provided to hospitals of the Ministry of Health, South Kordofan State, Sudan for cooperation in completing the research questionnaire, explaining the purposes and the benefits of the study.

3. Volunteers from the health field, with master's of public health degrees comprised leaders for data collection and medical doctors from the hospitals under the study distributed the questionnaires among nurses according to the criteria.

4. Participating nurses were requested to complete the questionnaires, including written informed consent forms issued by Mahidol University, along with information sheets and pencils to complete the questionnaires.

5. The participants had the rights and freedom to withdraw at any time of the study.

6. The completed questionnaires in envelopes were collected by the volunteers, health professional (Master's of Public Health) and medical doctors in four hospitals on the day most convenient to identify the respondents.

7. When all of the completed questionnaires were returned, the researcher checked all of them for statistical analysis.

8. PASW statistics version 18 was used for data analysis. Descriptive statistics including frequency, percentage, range, mean and standard deviation were used as appropriate. Pearson's coefficient was used to measure the correlations between leadership behaviors and job satisfaction. Significance level was set at .05.

Findings

General characteristics

The nurse respondents were mostly middle-aged (36.50 ± 8.73 years), married (71.8%), female (64.1%) with varying work experience from 1 to 39 years (Table 1). The majority of respondents had obtained a three-year diploma (96.7%) without in-service training (57.1%). More than half of the respondents worked in the outpatient department, had a monthly income of at least 600 Sudanese pounds and 86.9% of them worked 40-49 hours weekly.

Table 1. General characteristics of nurses (n = 184)

Variables	Number	%
Age (years)		
20-29	56	30.4
30-39	77	41.8
40-49	37	20.2
50-59	14	7.6
Min = 20, Max = 58,		
Mean = 36.50, SD = 8.73		
Sex		
Female	118	64.1
Male	66	35.9
Education level		
Three-year Diploma	178	96.7
Bachelor degree in nursing	6	3.3
Marital status		
Single	37	20.1
Married	132	71.8
Divorced	14	7.6
Widowed	1	0.5
Years of experience		
1-10		
11-20	79	42.9
21-30	65	35.3
31-40	25	13.6
Min = 1, Max = 39,	15	8.2
Mean = 14.77, SD = 8.93		
Department		
Outpatient	107	58.2
Inpatient	77	41.8
Income (Sudanese pounds)		
200-600	79	42.9
601-961	105	57.1
Min = 200, Max = 961,		
Mean = 617.95, SD = 125.35		
Hours of work (per week)		
40-49	160	86.9
50-59	20	10.9
60-69	4	2.2
Min =40, Max = 65,		
Mean = 43.42, SD = 6.76		
In-service training		
Yes	79	42.9
No	105	57.1

Job Satisfaction

Job satisfaction dimensions included pay, promotion, supervision, fringe benefits, contingent reward, operating conditions, coworker, nature of work and communication. High job satisfaction mean scores were found in communication, coworker, and nature of work components whereas operating conditions, pay and contingent reward were the least satisfactory. The nurses were moderately satisfied with promotion, supervision and fringe benefits (Table 2).

Table 2. Mean and standard deviation of job satisfaction dimensions of nurses (n = 184)

Dimensions	Mean	SD	Interpretation
Pay	2.70	1.30	Low
Promotion	3.80	1.41	Moderate
Supervision	3.90	1.49	Moderate
Fringe benefits	3.56	1.72	Moderate
Contingent reward	2.78	1.67	Low
Operating conditions	2.46	1.45	Low
Coworker	4.89	1.22	High
Nature of work	4.23	1.35	Moderate
Communication	5.08	1.06	High

Leadership behaviors

Leadership behaviors were divided into transformational and transactional leadership dimensions. For transformational leadership, the highest score was found in idealized influence (4.05 ± 1.71) and the lowest score was obtained in intellectual stimulation (3.48 ± 1.61). In addition, the mean score of transformational leadership was 3.84 ± 1.64. For transactional leadership, the mean score of management by exception was higher than that of contingent reward. Furthermore, the transactional leadership had a mean score of 3.69 ± 1.57. Mean and standard deviation of leadership behaviors are shown in Table 3.

Table 3. Mean and standard deviation of leadership behaviors of 184 nurses

Leadership behaviors	Mean	SD	Interpretation
Transformational leadership	**3.84**	**1.64**	**Moderate**
Idealized influence	4.05	1.71	High
Individualized consideration	3.90	1.60	Moderate
Inspiration motivation	3.95	1.64	Moderate
Intellectual stimulation	3.48	1.61	Moderate
Transactional leadership	**3.69**	**1.57**	**Moderate**
Contingent reward	3.65	1.70	Moderate
Management by exception	3.73	1.45	Moderate

For the levels of leadership behaviors, the nurses reported low level in the transformative leadership (38.6%) and transactional leadership (52.2%). Considering each dimension of transformative leadership, it was found that around 40% of respondents had a high level of idealized influence, individual consideration and inspiration motivation. About half of the respondents had a low level of intellectual stimulation. Likewise, the dimension of transactional leadership had the highest percent at a low level for both contingent reward (49.5%) and management by exception (44.0%) dimensions (Table 4).

Table 4. Levels of leadership behaviors among nurses (n = 184)

Leadership behaviors	High		Moderate		Low	
	Number	%	Number	%	Number	%
Transformational Leadership	**59**	**32.1**	**54**	**29.3**	**71**	**38.6**
Idealized influence	83	45.1	34	18.5	67	36.4
Individualized consideration	74	40.2	39	21.2	71	38.6
Inspiration motivation	74	40.2	46	25.0	64	34.8
Intellectual stimulation	53	28.8	32	17.4	99	53.8
Transactional leadership	50	27.2	38	20.7	96	52.2
Contingent reward	**62**	**33.7**	**31**	**16.8**	**91**	**49.5**
Management by exception	49	26.6	54	29.3	81	44.0

Leadership behaviors and job satisfaction

Both transformational and transactional leadership behaviors were strongly and positively correlated with job satisfaction ($r = .75$, $p < .001$ and $r = .71$, $p < .001$, respectively). Transformational leadership was moderately and positively correlated with dimensions of job satisfaction including supervision, nature of work, fringe benefits, communication and promotion ($r = .69$, $p < .001$; $r = .65$, $p < .001$; $r = .60$, $p < .001$; $r = .59$, $p < .001$; $r = .53$, $p < .001$ respectively), whereas transformational leaderships had low positive correlations with dimensions of job satisfaction including coworker, pay, and operating conditions ($r = .47$, $p < .001$; $r = .34$, $p < .001$; $r = .27$, $p < .001$ respectively). No correlation was found between contingent reward and transformational leadership ($r = .08$, $p > .05$).

A moderately positive correlation was found between transactional leadership and dimensions of job satisfaction such as supervision and fringe benefits, nature of work and communication ($r = .67$, $p < .001$; $r = .59$, $p < .001$; $r = .58$, $p < .001$; $r = .52$, $p < .001$ respectively), whereas low positive correlations were found between transactional leadership and dimensions of job satisfaction including promotion, coworker, pay, and operating condition ($r = .48$, $p < .001$; $r = .45$, $p < .001$; $r = .34$, $p < .001$; $r = .27$, $p < .001$ respectively). No correlation was found between contingent reward and transactional leadership ($r = .11$, $p > .05$) (Table 5).

Table 5. Correlation coefficients (r) between transformational leadership, transactional leadership and job satisf action of nurses (n = 184)

	Leadership behaviors	
	Transformational	Transactional
Job satisfaction	**.75*****	**.71*****
Pay	.34***	.34***
Promotion	.53***	.48***
Supervision	.69***	.67***
Fringe benefits	.60***	.59***
Contingent reward	$.08^{ns}$	$.11^{ns}$
Operating condition	.27***	.27***
Coworker	.47***	.45***
Nature of work	.65***	.58***
Communication	.59***	.52***

^{ns} = non significance, $p > .05$; *** $p < .001$

Discussion

Overall job satisfaction in this study was correlated with both transformational and transactional leadership behaviors. However, no correlations were found between contingent reward and leadership behaviors. The finding was similar to Mahmoud Al-hussami[11,28] study reporting that employees' job satisfaction was significantly correlated and was affected by leadership behaviors.[29]

In previous studies,[12-14] work environment factors and scare resources had unfavorable consequences on quality of care delivered as well as nurses' intention to leave the profession. Results of the present study showed that operating condition, pay and contingent reward were least satisfactory (Table 2). Therefore, hospital administrators should pay more attention to improve the work environment, supervision, and leadership to make nurses more satisfied with their work.

Given the context of extremely scarce resources, the Ministry of Health and the state administration should support nursing leadership training, improve work environment and develop promotion, monitoring and evaluating systems for hospitals. To promote leadership skills,30 in–service education, continuing education and career development are needed for nurse leaders. Generalizability of the findings from this pilot study of four hospitals in one state is limited but the instruments are useful for further exploration of the issue in other states of Sudan and elsewhere.

Conclusion

A strong correlation exists between leadership behaviors and job satisfaction of nurses in Sudan suggesting one potential solution to help alleviate nursing shortages at least in South Kordofan State, Sudan. With good leadership behaviors, a nurse is more likely to be satisfied with the work conditions and would not only be willing to stay, but also try their best to provide high quality care to their patients.

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