

Relationship Between Nurse Managers' Leadership Styles and Staff Nurses' Job Satisfaction in a Greek NHS Hospital

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Abstract: Leadership style of nurse managers plays a significant role in staff nurses' job satisfaction. The aim of this study was to examine the relationship between leadership style of nurse managers and nurses' job satisfaction in a Greek NHS Hospital. Two questionnaires were distributed to and completed by the nursing staff working in the Hospital: a) the Multifactor Leadership Questionnaire (MLQ Form) for distinguished nurse managers' leadership style of and b) the Minnesota Satisfaction Questionnaire (MSQ) to measure the dependent variable of the nurses' job satisfaction. Data were collected from December 2013 to March 2014. Data were entered and analyzed using SPSS version 19.0. Significance level was set up to $p \leq 0.05$. The mean scores of the subscales of transformational leadership style were slightly higher than the mean scores of the subscales of the transactional leadership style, which leads us to conclude that nurses prefer the transformational leadership style. The overall rating of satisfaction and the satisfaction scores due to intrinsic factors indicated moderate satisfaction, while the satisfaction rates due to extrinsic factors indicated low satisfaction. Further studies in the Greek healthcare sector are recommended to determine the perceptions of head and staff nurses on various leadership styles and its effects.

Keywords: Transformational and Transactional Leadership, Nurses, Job Satisfaction, MLQ, MSQ

1. Introduction

1.1. Job Satisfaction

Employees' job satisfaction, which is defined as "the extent to which employees like their jobs" [1], has been an important issue for health care organizations and their leaders in the last few decades [2]. Especially in the nursing sector this issue has been arisen as a great problem -due to nurses' shortage worldwide-. Due to this reason nurses' job satisfaction has attracted much attention during the last decades [3, 4]. For this reason many researchers have investigated factors related to nursing staff's job satisfaction. The outputs of these efforts were original research and meta-analyses focusing on various factors associated to nurse job satisfaction such as adequate staffing by the meaning of patients-to-nurse ratios [5, 6], team spirit [7], nurses' educational level [8], collaboration with medical staff [9], greater autonomy in clinical decision making [10],

friendships among staff members [11], communication with supervisors and peers, recognition, fairness, control over practice [12], professional commitment [13] (Fang, 2001) and management support [11]. Additionally among the factors that affect job satisfaction are the various head nurses' leadership styles [13-22].

1.2. Leadership

According to Skansi [23] leadership is the process of influencing employees to achieve organizational goals. Burns [24] was the first, who made the distinction between the two main types of leadership: transformational (TF) and transactional (TA). Transactional leaders usually do not strive for cultural change in the organization but they work in the existing culture while transformational leaders can try to change organizational culture. Transformational leadership

differs from transactional leadership in that it is concentrated on development and progress, authorization, self-competence, solidity and strategic thinking [25]. On 1985 Bass [26], who expanded Burns Leadership Theory, suggested that leadership can simultaneously display both transformational and transactional leadership.

The purpose of the present study was to measure the dimensions of leadership styles of head nurses as they are perceived by the nursing personnel and their impact on the job satisfaction of nursing personnel in a Greek NHS hospital.

2. Materials and Methods

2.1. Study Area and Study Design

The study was a cross-sectional one. The sample selection procedure chosen was convenience sampling, a type of nonprobability sampling. The questionnaires were addressed to nurses and nurse assistants working in an NHS Hospital, located in the prefecture of Peloponnese, Greece. The participants fulfilled the criteria such as more than one years of working experience in nursing profession, non supervisory management position and working under the direct supervision of a head nurse. The questionnaires were accompanied by a description of the purpose of the study. Additional clarifications were provided in some cases. The collection of data held within a period of four months from December 2013 to March 2014. The questionnaires were administrated by the investigators through liaison people of the study. The completed questionnaires were collected in enclosed envelopes on a weekly basis. Of the 200 distributed questionnaires (110 offprints to the nurses and 90 to the nurse assistants) 168 fully completed were returned (93 by the nurses and 75 by the nurse assistants). Response rate was 84% (84.55% for the nurses and 83.33% for the nurse assistants).

2.2. Measures

For the purpose of the study the "Multifactor Leadership Questionnaire" (MLQ Form 5X) and "Minnesota Satisfaction Questionnaire" (MSQ Short Form) were used. Items about the participants' demographic and professional characteristics (gender, age, educational level, years of experience at the current work, total years of experience) were added at the end of the questionnaires.

The Multifactor Leadership Questionnaire, which was used to determine the leadership style of superiors, was created by Bass [26], and its components were re-examining by Avolio, Bass & Jung on 1999 [27]. For its use in our study a permission was granted by Mind Garden Inc., which has the copyright of the questionnaire and provided us its Greek

version (MLQ 5X)[28]. The questionnaire consists of five transformational, three transactional and one laissez-faire subscales. The transformational leadership subscales are: a. idealized influence (attributed), b. idealized influence (behavior), c. inspirational motivation, d. intellectual inspiration and e. individualized consideration. The transactional leadership subscales are: a. contingent reward, b. management by exception (active) and c. management by exception (passive). The absence of leadership is basically defined by "laissez-faire". The total number of items is using a five point Likert scale from 0 (not at all) to 4 (frequently, if not always). Furthermore the questionnaire includes three (3) outcome criteria (followers' extra effort, the effectiveness of leader's behavior and followers' satisfaction with their respective leader), which were not used for the conduction of our study, because instead of them the "Minnesota Satisfaction Questionnaire short form (MSQ short form)" was used to measure the dependent variable of satisfaction of nurses and nurse assistants from their work. This questionnaire was developed by Weiss, Davis, England and Lofquist on 1967[29]. Permission was granted by Dr David J. Weiss to use his research tool in our study. In the MSQ there are 20 items about the internal (intrinsic), external (extrinsic) and broad job satisfaction, using a five point Likert scale, from 1 (very dissatisfied) to 5 (very satisfied).

The MSQ was translated by two independent bilingual translators. One other native English speaker who did not have knowledge of the original instrument then back translated the reconciliated Greek version. The backward translation was sent to an English speaking expert for comments, who was an academic with specific interest in clinical education. Since the translated questionnaire was not far from the original, the questionnaire was considered to be distributed to participants. The content validity of the questionnaires was tested on the basis of a pilot study in which nurses and nurse assistants at this NHS Hospital (N=22) responded to the questionnaire. After completing the questionnaire, the principal investigator conducted personal interviews with the respondents, who were encouraged to make comments about clarity or difficulties in completion. The few comments were embedded in the final version of the questionnaire. The internal validity of the questionnaires was assessed by using the Cronbach's alpha coefficients, which were found 0.82 for MLQ and 0.78 for MSQ. After the pilot study was completed, the main study was carried out at the aforementioned Hospital.

Table 1 presents the internal consistency Cronbach's alpha coefficients for the subscales of MLQ and MSQ. At all scales, the internal consistency Cronbach's alpha coefficient was ranging from 0.62 to 0.92, which indicates acceptable internal consistency.

Table 1. The Cronbach's alpha coefficients for MLQ and MSQ subscales.

	Subscale	Cronbach's alpha
Transformational Leadership	Idealized Influence (attributed)	0.82
	Idealized Influence (behavior)	0.70
	Inspirational motivation	0.84
	Intellectual stimulation	0.80
	Individual consideration	0.80
Transactional Leadership	Contingent reward	0.81
	Management by exception (active)	0.70
	Management by exception (passive)	0.64
Absence of Leadership	Laissez faire Leadership	0.70
Nurses' job satisfaction	Intrinsic Satisfaction	0.90
	Extrinsic Satisfaction	0.78
	Overall Satisfaction	0.92

2.3. Ethical Aspects

The research protocol was approved by the University of Peloponnese, Greece. The permission for the distribution of the questionnaire to the nursing staff of the Greek NHS Hospital was granted by the Ethics Committee of the Hospital. Participants were informed in a letter from the principal investigator about the study, its voluntary nature and data confidentiality. A consent form was signed by those who accepted to participate in the study. The completed questionnaires were collected by the investigator once per week in sealed envelopes.

2.4. Data Analysis

Categorical variables were expressed in terms of absolute (n) and relative (%) frequencies and quantitative variables were expressed in terms of mean, standard deviation, median, minimum and maximum. The Kolmogorov-Smirnov test and normal plots were utilised to test the normality of the quantitative variable distribution. All quantitative variables were found to be normally distributed.

Student's t-test was used to detect potential relationships between quantitative and dichotomous variables and analysis of variance was used to detect possible relationships between quantitative variables and categorical variables with >2 categories. Pearson's correlation coefficient was used to detect potential relationships between two normally distributed quantitative variables.

The chi-squared (χ^2) test was used to detect potential relationships between two categorical variables. The chi-squared (χ^2) test for trend was used to detect potential relationships between categorical and ordinal variables.

If the dependent variable was quantitative and >2 independent variables were significant at the 0.2 ($p < 0.2$) level in bivariate analysis, multivariate linear regression was applied, using the backward stepwise linear regression model. For multivariate linear regressions, coefficients' beta values, 95% confidence intervals and p values are presented.

If the dependent variable was dichotomous and >2 independent variables were significant at the 0.2 ($p < 0.2$) level in bivariate analysis, multivariate logistic regression was applied, using the backward stepwise linear regression model. For multivariate logistic regressions, odds ratios, 95% confidence intervals and p values are presented.

Specific ward, where nursing personnel was working, was not used as an independent variable because of the wide range of possible answers to questions regarding these issues and the exceptionally small number of comments provided in several responses. A two-tailed significance level of 0.05 was established. Data were analysed using IBM SPSS 21.0 (Statistical Package for the Social Sciences) for Windows.

3. Results

Table 2 shows the demographic characteristics of the participants. The 94.6% of participants were female, 65.5% were aged between 36 and 50 years old, 55.4% were University or Technological Educational Institute graduates (nurses) and 63.7% had >10 years of total service.

Table 2. Demographic characteristics of participants (n=186).

Variable	Frequency	%
Age		
26-35	53	31
36-50	110	65,5
>50	5	3,0
Gender		
Male	9	5,4
Female	159	94,6
Educational level		
Secondary Nursing School (nurse assistants)	75	44,6
Technological Educational Institute (nurses)	86	51,2
University (nurses)	3	1,8
Master's Degree (nurses)	4	2,4
Years of experience in this Hospital		
>1-5	53	31,5
6-10	53	31,5
11-15	25	14,9
16-20	19	11,3
>20	18	10,7
Total years of experience		
0-5	12	7,1
6-10	49	29,2
11-15	45	26,8
16-20	23	13,7
>20	39	23,2

The mean values ranged from 1.11 to 2.26 and they indicated that nursing staff was more satisfied with both dimensions of transformational and transactional leadership style excluding the dimension "management by exception (passive)" (Mean=1.46, SD=0.74). The mean values of job

satisfaction indicated that nursing staff demonstrated low level of extrinsic satisfaction ($M=14.9$, $SD=4.0$) but high moderate level of intrinsic satisfaction ($M=37.4$, $SD=7.9$), level of overall job satisfaction ($M=56.8$, $SD=12.10$).

Table 3. The scores of the subscales of the MLQ 5X and MSQ short form.

	Subscale	Mean Value	Standard Deviation	Median Value	Min-Max Value
Transformational Leadership	Idealized Influence (attributed)	2.23	0.91	2.25	0 - 4
	Idealized Influence (behavior)	2.06	0.64	2.00	0 - 4
	Inspirational motivation	2.07	0.89	2.00	0 - 4
	Intellectual stimulation	2.07	0.90	2.00	0 - 4
	Individual consideration	2.03	0.92	2.00	0 - 4
Transactional Leadership	Contingent reward	2.26	0.83	2.00	0 - 4
	Management by exception (active)	2.07	0.76	2.00	0 - 4
	Management by exception (passive)	1.46	0.74	1.50	0 - 4
Absence of Leadership	Laissez faire Leadership (for the avoidance behavior)	1.11	0.83	1.25	0 - 4
Nurses' job satisfaction	Intrinsic Satisfaction	37.4	7.9	37.00	14 - 60
	Extrinsic Satisfaction	14.9	4.0	15.00	6 - 28
	Overall Satisfaction	56.8	12.1	57.00	22 - 97

Table 4 presents the correlations between overall satisfaction, intrinsic satisfaction and extrinsic satisfaction scores and the nine (9) subscales of MLQ 5X, gender, education level and total years of experience.

Table 4. Bivariate analyses Correlations between overall satisfaction, intrinsic satisfaction and extrinsic satisfaction scores and 12 subscales of MLQ 5X, gender, education level and total years of experience.

	Overall job satisfaction		Intrinsic job satisfaction		Extrinsic job satisfaction	
	Correlation Coefficient	p-value	Correlation Coefficient	p-value	Correlation Coefficient	p-value
Idealized Influence (attributed)	0,48 [†]	<0,001 [†]	0,43 [†]	<0,001 [†]	0,53 [†]	<0,001 [†]
Idealized Influence (behavior)	0,37 [†]	<0,001 [†]	0,33 [†]	<0,001 [†]	0,44 [†]	<0,001 [†]
Inspirational motivation	0,41 [†]	<0,001 [†]	0,37 [†]	<0,001 [†]	0,50 [†]	<0,001 [†]
Intellectual stimulation	0,48 [†]	<0,001 [†]	0,44 [†]	<0,001 [†]	0,55 [†]	<0,001 [†]
Individual consideration	0,42 [†]	<0,001 [†]	0,36 [†]	<0,001 [†]	0,52 [†]	<0,001 [†]
Contingent reward	0,49 [†]	<0,001 [†]	0,46 [†]	<0,001 [†]	0,55 [†]	<0,001 [†]
Management by exception (active)	0,12 [†]	0,14 [†]	0,05 [†]	0,47 [†]	0,21 [†]	0,47 [†]
Management by exception (passive)	-0,29 [†]	<0,001 [†]	-0,27 [†]	<0,001 [†]	-0,29 [†]	<0,001 [†]
Laissez faire Leadership	-0,29 [†]	<0,001 [†]	-0,22 [†]	<0,001 [†]	-0,36 [†]	<0,001 [†]
Greater effort	0,34 [†]	<0,001 [†]	0,31 [†]	<0,001 [†]	0,41 [†]	<0,001 [†]
Effectiveness	0,44 [†]	<0,001 [†]	0,39 [†]	<0,001 [†]	0,49 [†]	<0,001 [†]
Pleasure of leadership	0,39 [†]	<0,001 [†]	0,35 [†]	<0,001 [†]	0,48 [†]	<0,001 [†]
Total years of experience	-0,05 ^{††}	0,53 ^{††}	-0,05 ^{††}	0,50 ^{††}	-0,01 ^{††}	0,86 ^{††}
Gender		0,6 [§]		0,7 [§]		0,9 [§]
Male	54,7 (13,1)*		37,7 (7,8)*		14,6 (3,4)*	
Female	56,9 (12,1)*		37,2 (7,9)*		14,8 (4,1)*	
Educational level		0,43 [§]		0,47 [§]		0,21 [§]
Nursing secondary school (nurse assistants)	57,6 (12,5)*		37,7 (7,8)*		15,4 (4,4)*	
University / Technological Educational Institute graduates (nurses)	56,1 (11,8)*		37,2 (7,9)*		14,4 (3,6)*	

* Mean (Standard Deviation)

[†] Pearson Correlation coefficient

^{††} Spearman Correlation coefficient

[§] t-test

In bivariate analyses were found significant relationships -at the 0.20 level ($p<0.20$)-, between overall satisfaction, intrinsic satisfaction and extrinsic satisfaction scores and all subscales of the MLQ 5X. For this reason, multivariate linear regression was performed. The findings from this regression are presented in Table 5.

Table 5. Multivariate linear regression with the dependent variable overall satisfaction score.

		Coefficient beta	95% confidence interval expectations for b	p- value
Overall job satisfaction	Contingent reward	6.4	4.5 to 8.4	<0.001
	Management by exception (passive)	-2.8	-5.0 to -0.6	0.015
Intrinsic job satisfaction	Contingent reward	3.9	2.6 to 5.2	<0.001
	Management by exception (passive)	-1.7	-3.2 to 0.2	0.024
Extrinsic job satisfaction	Contingent reward	1.4	0.2 to 2.5	0.020
	Laissez faire Leadership	-0.8	-1.5 to 0.1	0.020

According to the results of the multivariate linear regression the "contingent reward" was positively related to the overall, intrinsic and extrinsic job satisfaction scores, the "management by exception (passive)" had negatively significant relationship to the overall and intrinsic job satisfaction scores and the "laissez faire leadership" had also negatively significant relationship to the extrinsic job satisfaction score. The variables "contingent reward" and "management by exception (passive)" explain 26% of the variability of the total satisfaction score and 22% of the variability of the intrinsic satisfaction score. The variables "contingent reward" and "laissez faire leadership" explain 26% of the variability of the extrinsic satisfaction score.

4. Discussion

The mean scores of the transformational leadership style subscales were slightly higher than the mean scores of the transactional leadership style dimensions, with the exception of the "contingent reward", a dimension of the transactional leadership style. That might happen because the participants in the present study considered this dimension as a transformational leadership style [19]. All the above lead us to conclude that nursing staff prefers the transformational leadership style.

The overall and intrinsic satisfaction scores indicated moderate job satisfaction, while the external satisfaction rating indicates low satisfaction.

The results of multivariate regressions reveal the following:

- 1). The increase of "special reward" score had the effect of increasing the overall, the intrinsic and the extrinsic satisfaction scores.
- 2). The increase of "management by exception (passive)" score had the effect of reducing the total and the intrinsic satisfaction scores.
- 3). The increase of "laissez faire leadership" had the effect of reducing the extrinsic satisfaction score.

The results of this study is in accordance to the results of Morsiani's et al [15] study. According to their study head nurses' transformational and transactional leaderships styles were positively related to nursing staff's overall job satisfaction. Similar results revealed from the study conducted by Alshahrani and [16] where all head nurses demonstrated both transactional and transformational style of leadership and nursing staff -working under these supervisors- demonstrated higher job satisfaction with the transformational style. According to another study [17], which was conducted in public and private hospitals of Jordan, a positive relationship was found between the overall score of both leadership styles and the job satisfaction. In accordance to the above mentioned results were the results of a study conducted in the USA [14]. According to this study both leadership styles of head nurses had a positive correlation to the nursing staff's overall job satisfaction. During the last decade a great number of studies resulted to similar findings [18-22, 30] revealing that nursing

staff tends to be more satisfied with the leadership style which encourages creative behavior, encouraging staff to think highly and driven to conclude higher levels of personal commitment.

Due to that leadership style has an impact on the nursing personnel's job satisfaction that is a main reason for nurses, who are satisfied in their jobs, to retain their jobs [31, 32]. The results of another study [33] documented in a similar way that the different styles of leadership have different effects on the nursing staff and their work environment. When head nurse develop transformational leadership style achieve the best outcomes for their personnel.

According to Morsianni et al. [15] owing to the importance of this issue leadership style skills of the nurse managers should be enhanced not just by educational interventions but it should be dealt as the first priority by them.

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