ORIGINAL ARTICLE

A Multicentre Study of Nursing Leadership in Andalusian Hospitals from a Gender-based Perspective

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ABSTRACT

Introduction: *Leadership is the ability to guide subordinates in a direction or decision so that they can perform a task or achieve a goal that leaves them feeling empowered and accomplished. Leaders are capable of producing changes and at the same time, they inspire others to do the same. This research analysed gender-based differences and dimensions of nursing leadership styles in 18 hospitals in Andalusia, a region of southern Spain.*

Methods: *The sample population of the study comprised 335 subjects, who were middle managers in 18 public regional hospitals in Andalusia. The instrument used to measure different leadership styles was the Multifactor Leadership Questionnaire (MLQ 5X-Short form), which is composed of 45 items.*

Results: *The study showed that the most predominant leadership style was transactional leadership with a mean value of* M *= 4.22 (standard deviation [SD] = 0.42) followed by transformational leadership with a mean value of* M *= 3.97 (SD 0.45). Of the three styles analysed, transactional leadership had the highest statistical median for both male and female subjects. From a gender-based perspective, transformational leadership showed statistically significant differences (*$p < 0.01$*) between men and women. This was true for leadership styles as well as for the dimensions that define each style.*

Conclusion: *The most frequent leadership style in middle nursing management in Andalusian hospitals was transactional leadership. In regard to the three leadership styles as well as their dimensions, the female subjects obtained the highest scores. This means that from a gender-based perspective, female nursing managers had better performance levels than their male counterparts in the regional hospital system in Andalusia.*

Keywords: Nursing management, transformational leadership, transactional leadership.

INTRODUCTION

Hospitals are social systems in which human resources and their management are generally extremely important factors in the optimal provision of healthcare and the smooth operation of healthcare organizations (1). In this regard, hospitals require leaders at the management level who are able to work closely with personnel in order to perform tasks and achieve goals. Evidently, objectives cannot be successfully attained without the targeted efforts and commitment of both supervisors and employees (2).

Leadership is the ability to guide others in a direction or decision so that they can perform a task or achieve a goal that leaves them feeling empowered and accomplished. Leaders are capable of producing changes and at the same time of inspiring others to do the same (3). Accordingly, nurse managers should create hospital environments that support and motivate nursing personnel. Leadership qualities include the capacity to guide and influence others as well as the motivation and vision to achieve organizational efficiency (4). In this sense, the task of managers and supervisors is to

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coordinate resources by using a set of functions and procedures geared to the attainment of specific organizational goals (5).

Nurse managers may have a wide range of different leadership styles. These styles range from the more classical modes of authoritarian, democratic, *laissez-faire*, bureaucratic, and situational leadership to more contemporary styles, such as charismatic, transactional, transformational, or participative leadership (6). In hospital environments, the leadership style of nurse managers may have a significant impact on worker satisfaction (7). Research has shown that transformational leadership is more beneficial than transactional leadership, as reflected in the job satisfaction index of nursing personnel (8).

Transactional leadership establishes a clear chain of command. The transactional leader expects subordinates to perform tasks and satisfy requirements in exchange for a salary or some sort of compensation (9). Before the appearance of transformational leadership theory, it was generally believed that transactional leadership was the most effective leadership behaviour in large organizations. Unlike transformational leadership, transactional leadership is based on a system of rewards (10). The transactional leader establishes objectives, gives instructions and uses contingent rewards to reinforce desirable behaviour in employees so that they will work harder to achieve performance goals. These rewards include praise and acknowledgement, salary bonuses, job promotions, *etc* (11).

However, the most successful leaders are those that achieve a balance between transactional and transformational leadership, thus creating a leadership style that is more in consonance with worker needs. Leaders who successfully use a balanced combination of these two styles can help their followers towards greater individual and organizational achievements. This enables subordinates to feel more confident in themselves and their performance and to have a greater sense of belonging to their organization (12). This shared sense of direction with management empowers workers and leads to greater loyalty and a stronger organizational commitment. The degree of commitment is reflected in employee acceptance of the objectives and values of the organization. The organization thus operates more smoothly because of the considerable efforts of its personnel to work together towards shared performance goals and to continue being a part of the organization (13).

Nevertheless, nursing is still perceived as a 'feminized' profession. In the literature on nursing leadership, studies generally focus on the nursing profession in general and do not address gender-based differences. This research thus studied nursing leadership and its dimensions from the perspective of gender in a population of nurses in various hospitals in the region of Andalusia in southern Spain.

MATERIALS AND METHODS

Subjects

The sample in our study comprised 335 nursing professionals, 97 men and 238 women, who worked as middle managers in 18 public hospitals in Andalusia.

Methods

The data collection instrument of the study was the Multifactor Leadership Questionnaire (MLQ 5X-Short form), which is composed of 45 items. For over two decades, this questionnaire has been widely used throughout the world to measure leadership behaviours in organizational science. As reflected in the results of different studies, the MLQ 5X-Short form, which is structured in terms of four factors, produces the best fit with the data.

The first factor in the MLQ 5X is *transformational leadership*, which increases the individual or collective capacity of organization members to solve problems and to make decisions (14). The second factor is *transactional leadership* in which a reward and punishment system is used to motivate subordinates and enhance their work performance (15). The third is *corrective leadership* in which the leader monitors subordinates' actions in relations to certain standards and detects and corrects errors. Finally, the fourth factor is *laissez-faire* leadership in which the leader avoids any involvement and allows the staff to establish goals, make decisions and resolve problems on their own (16).

Of the 45 items in the MLQ 5X-Short form, 36 items measure leadership styles. The other nine items measure organizational outcome variables such as the extra effort that employees are willing to make, leader effectiveness and employee satisfaction with the leader.

Procedure

The first step was to translate the MLQ 5X-Short form into Spanish. As previously mentioned, the instrument is composed of four factors: (a) transformational leadership, (b) transactional leadership, (c) corrective leadership, and (d) *laissez-faire* leadership. After the questionnaire was translated into Spanish, two professional translators then translated the text back into English. It was thus

possible to verify that the meaning of the Spanish translation was the same as the meaning of the original text. The translated version of the questionnaire was then assessed by three experts in questionnaire design, and semantically adjusted according to their suggestions.

In the second stage of our study, the questionnaire was piloted. Previously, however, we contacted the nursing management offices of the five hospitals in the sample. These medical centres represented the three levels of specialized healthcare in Andalusia. The objective of piloting the questionnaire was to collect the responses and suggestions of the participants. This information was extremely valuable because it allowed us to adapt the items to the healthcare context in Andalusia and also to ascertain whether the meaning of the items was clear.

The analysis of the questionnaires showed that of the 45 items, there were 2 items that the participants were not certain how to answer. These items were subsequently modified by the experts in questionnaire design so as to make them more understandable. The questionnaire was then administered to 10 nursing professionals. As reflected in their answers, all of the items in the modified version of the questionnaire elicited the desired information. The questionnaire was thus regarded as satisfactory in its wording and design.

The next step was to analyse the factorial structure of the questionnaire, based on four scales: transformational leadership, transactional leadership, corrective leadership, and *laissez-faire* leadership. The results of the analysis showed high levels of reliability and validity. This was the basis for our research study of 18 public hospitals in the region of Andalusia.

In order to conduct our study, it was necessary to send letters to the nursing management offices of the hospitals requesting permission to administer the questionnaire to their personnel. Also included was a detailed description of the project. Most of the hospitals immediately gave permission to carry out the study. Three hospitals, however, said that the project first had to be analysed and approved by their respective ethics committees. The project was finally approved in these hospitals, and we were able to proceed with our research.

Statistical analysis

The data were analysed with the IBM SPSS Statics 20 statistical software package. The results are expressed as frequencies, percentages and averages ± standard deviation pertaining to the variables of age, marital status, contract type, professional experience, job seniority, and hospital. Simple average analysis was used to evaluate the difference in leadership styles and the dimensions in each one. To evaluate gender and leadership type, we examined the difference in averages and variances by means of a Student's *t*-test for independent groups based on a 95% confidence interval. All of the data were expressed as a mean value and a standard deviation (X ± SD). Values of $p < 0.05$ were considered to be statistically significant.

RESULTS

The mean age of the male subjects in the sample was 45.7 years (SD 8.3) and that of the female subjects was 46.7 years (SD 7.7). As reflected in the demographic characteristics (Table 1), the age of most of the samples, regardless of gender, ranged from 40 to 49 years. The majority of the subjects were married. Regarding their work status, 86% had a permanent contract, 11% had a fixed-term contract and 3% had a temporary contract. Professional experience is another factor to take into account. Most of the male and female subjects had been working for 1–5 years or 6–10 years, respectively. Fewer had professional experience of more than 11 years. The number of men and women working in each hospital varied though there was a higher percentage of female participants.

Generally speaking, the predominant leadership style is transactional leadership (Table 2) with a mean value of $M = 4.22$ (SD 0.42) followed by transformational leadership ($M = 3.97$, SD 0.45). Within transformational leadership, the main component was individualized consideration ($M = 4.11$, SD 0.52) followed by intellectual stimulation ($M = 4.09$, SD 0.48), idealized influence-behaviours ($M = 4.02$, SD 0.53), inspirational motivation ($M = 3.09$, DT 0.55), and idealized influence-attribution ($M = 3.77$, DT 0.60).

Within the transactional leadership, the main dimension was contingent reward ($M = 4.44$, DT 0.50) followed by active management by exception ($M = 3.54$, DT 0.61) and passive management by exception ($M = 2$, DT 0.41). The least used leadership style was *laissez-faire*.

The figure shows the leadership styles depending on gender. The transactional leadership style has the highest statistical mean with similar values for both genders. This signifies that it is the most popular leadership style, which is very desirable since the sample is mainly composed of young managers as reflected in the ages of the subjects. This is very clear given the fact that 50% of the data (between the 25th and 75th percentiles represented by the box plot) are distributed between points 3 and 5 of the leadership scale. The transformational leadership

Table 1: Demographic characteristics of the sample population

	Characteristics	Gender				Total	
		Male		Female			
		N	%	N	%	N	%
Age	25–39 years	25	7.5	43	12.8	68	20.3
	40–49 years	37	11	100	29.9	137	40.9
	50–59 years	30	9	82	24.5	112	33.4
	More than 60 years	5	1.5	13	3.9	18	5.4
	Total	97	29	238	71	335	100
Marital status	Single	11	3.3	35	10.4	46	13.7
	Married	76	22.7	164	49	240	71.6
	Separated	4	1.2	15	4.5	19	5.7
	Divorced	4	1.2	18	5.4	22	6.6
	Widowed	2	0.6	6	1.8	8	2.4
Contract type	Permanent	77	23	211	63	288	86
	Fixed term	18	5.4	19	5.7	37	11
	Temporary	2	0.6	8	2.4	10	3
Professional experience	Less than 1 year	4	1.2	3	0.9	7	2.1
	1–5 years	35	10.4	84	25.1	119	35.5
	6–10 years	24	7.2	62	18.5	86	25.7
	11–20 years	19	5.7	37	11	56	16.7
	More than 21 years	15	4.5	52	15.5	67	20
Job seniority	Less than 1 year	3	0.9	11	3.3	14	4.2
	1–5 years	52	15.5	113	33.7	165	49.3
	6–10 years	17	5.1	55	16.4	72	21.5
	11–20 years	18	5.4	31	9.3	49	14.6
	More than 21 years	7	2.1	28	8.4	35	10.4
Hospital	Virgen de las Nieves	5	1.5	41	12.2	46	13.7
	San Cecilio	5	1.5	22	6.6	27	8.1
	Comarcal Baza	6	1.8	2	0.6	8	2.4
	Santa Ana Motril	3	0.9	7	2.1	10	3.0
	Carlos Haya Málaga	6	1.8	19	5.7	25	7.5
	Axarquia Málaga	5	1.5	5	1.5	10	3.0
	Virgen del Rocío Sevilla	8	2.4	28	8.4	36	10.7
	Virgen de la Macarena Sevilla.	9	2.7	9	2.7	18	5.4
	Juan Ramón Jiménez Huelva	4	1.2	5	1.5	9	2.7
	Puerta del Mar Cádiz	2	0.6	5	1.5	7	2.1
	Puerto Real	8	2.4	12	3.6	20	6
	Punta Europa Algeciras	4	1.2	5	1.5	9	2.7
	C. H. de Jaén	7	2.1	9	2.7	16	4.8
	Alto Guadalquivir	3	0.9	12	3.6	15	4.5
	Torrecardenas	5	1.5	16	4.8	21	6.3
	Hospital de Poniente	2	0.6	6	1.8	8	2.4
	Reina Sofía de Córdoba	3	0.9	12	3.6	15	4.5
	Hospital de Marbella	12	3.6	23	4.2	35	10.5

style with a median of 4 points was used less frequently by the sample. And even more strikingly, in a sample of professionals who have management roles and/or who are in training, *laissez-faire* leadership is located at a very low point on the measuring scale. The values for these subjects are at a distance of more than 2.5 box lengths from the 75th percentile.

In regard to gender-based differences in leadership styles (Table 3), transformational leadership showed statistically significant differences ($p < 0.01$) between men ($M = 3.88$; SD 0.44) and women ($M = 4$; SD 0.40). More specifically, in the dimension of inspirational motivation, statistically significant differences ($p < 0.01$) were

Table 2: Means of leadership styles in the study population

Leadership style	Mean	SD
Transformational (TRF)	3.97	0.42
• Idealized influence-behaviour (IIB)	4.02	0.53
• Idealized influence attribution (IIA)	3.77	0.60
• Inspirational motivation (IM)	3.9	0.55
• Intellectual stimulation (IS)	4.09	0.48
• Individualized consideration (IC)	4.11	0.52
Transactional (TRS)	4.22	0.45
• Contingent reward (CR)	4.44	0.50
• Active management by exception (AME)	3.54	0.61
• Passive management by exception (PME)	2	0.41
Laissez-faire (LF)	1.42	0.54

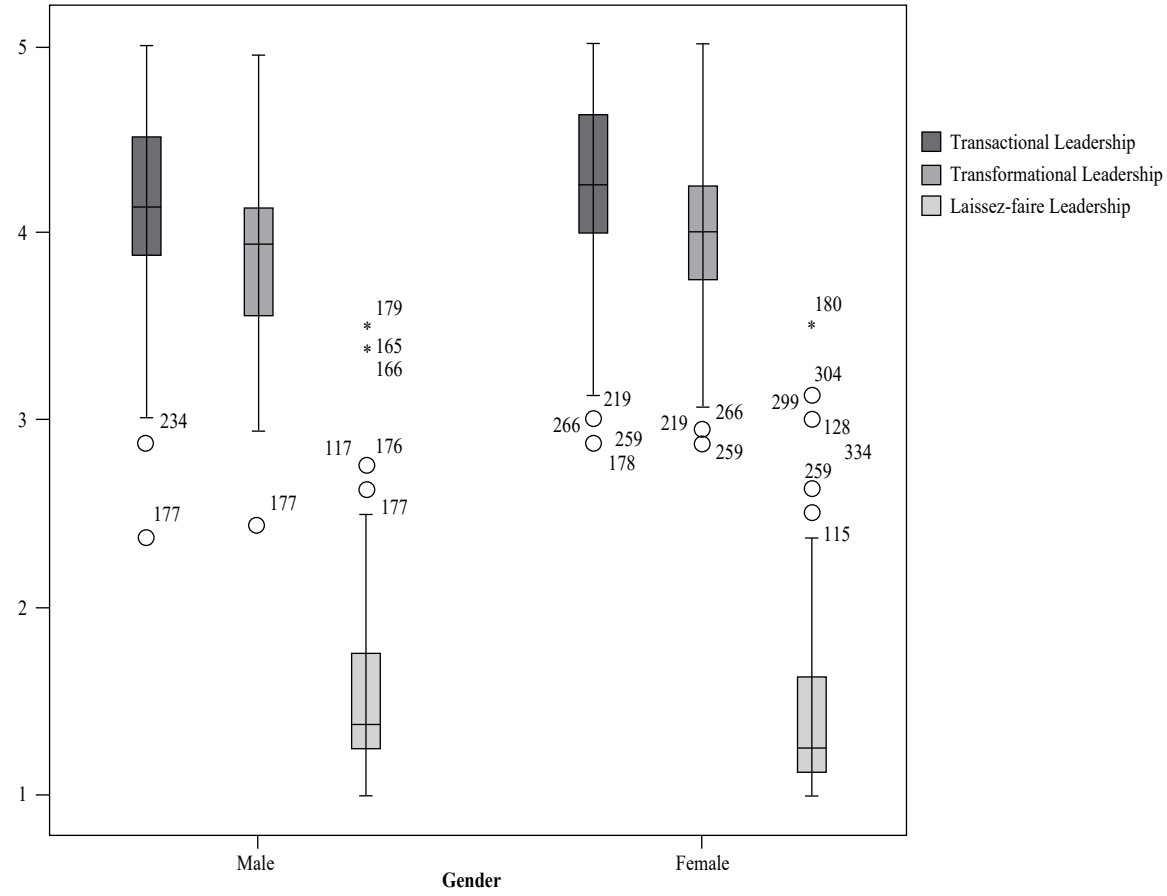

Figure: Leadership styles depending on gender.

found between the male subjects (M = 3.83; SD 0.57) and female subjects (M = 4.05; SD 0.53).

Statistically significant gender-based differences were also obtained for transactional leadership (p < 0.01) in which men had a score of M = 4.13 (SD 0.48) and women, M = 4.26 (DT 0.44). There were also statistically significant gender-based differences (p < 0.01) in the dimension of contingent reward. The male subjects had a score of M = 4.23 (SD 0.52) and the female subjects had a score of M = 4.38 (SD 0.49). Statistically significant differences (p < 0.05) were also found in laissez-faire leadership between men (M = 1.56, SD 0.52) and women (M = 1.41, SD 0.43).

Table 3: Gender-based differences, leadership styles and leadership dimensions

Leadership style	Male		Female		*p*-value
	M	DT	M	DT	
Transformational (TRF)	3.88	0.44	4	0.40	0.01
• Idealized influence-behaviour (IIB)	3.7	0.61	3.8	0.60	NS
• Idealized influence-attribution (IIA)	3.9	0.56	4	0.52	NS
• Inspirational motivation (IM)	3.83	0.57	4.05	0.53	0.01
• Intellectual stimulation (IS)	4.02	0.53	4.12	0.45	NS
• Individualized consideration (IC)	4.02	0.57	4.14	0.49	NS
Transactional (TRS)	4.13	0.48	4.26	0.44	0.01
• Contingent reward (CR)	4.23	0.52	4.38	0.49	0.01
• Active management by exception (AME)	3.55	0.60	3.53	0.61	NS
• Passive management by exception (PME)	2.02	0.39	2	0.42	NS
Laissez-faire (LF)	1.56	0.52	1.41	0.43	0.05

Student's *t*-test scores

DISCUSSION

The results of our study showed that middle nursing management in 18 hospitals in Andalusia (Spain) had a greater tendency towards transactional leadership behaviours. This style of leadership is a process of change based on the achievement of previously established objectives (17). Transactional leaders generally negotiate a contract with their subordinates so that they know exactly what is required of them and are aware of the rewards that they will receive for following orders and achieving goals (contingent reward). The transactional leader often uses management by exception (18). This means that exceptions to expectation will lead to praise and reward for exceeding expectation, whilst some kind of corrective action will be applied for performance below expectation. The dimension of management by exception has two subdimensions: an active form (preventing errors before they occur) and a passive form (taking action after the error has occurred (19).

The results of our study showed that transactional leadership was the most popular style since its median was higher than that of transformational leadership (Table 2). From a gender-based perspective, we found that both the male and female subjects were predisposed towards transactional leadership behaviours though this tendency was even more pronounced in women (Table 3). The mean value of the dimension of contingent reward was also greater in women than in men (Table 3). This could be due to the fact that women are more disposed to giving incentives than to imposing norms on subordinates. In fact, many authors claim that within the context of transactional leadership (20), contingent reward is the foundation for the interaction between leaders and followers since such incentives entail the specification of objectives and responsibilities (21), the negotiation of contracts, and acknowledgement and praise for the attainment of high-performance levels (22). The results of this study coincide with those of other research, which found that female directors and managers clearly outline objectives and appropriately reward their subordinates when these goals are attained (23). Transactional leadership is generally an integral part of smoothly run organizations (24).

Although transformational leadership does not seem to be as popular, it was the source of gender-based differences. In this regard, women were found to be more disposed towards transformational behaviours than men. More specifically, they were perceived as reliable supervisors, who were focused on ideals and high ethical standards (idealized influence-attribution). According to our study, they took into account the intellectual capacity of their followers and challenged them to be more creative and thus obtain higher levels of performance (intellectual stimulation). They also gave subordinates personal attention, showing genuine concern for their needs and feelings (individual consideration). These results indicate that regardless of cultural context, female leadership seems to be strongly imbued with certain characteristics commonly associated with female gender roles.

This study does not agree with other research in which women did not score as high as men in leadership (24, 25). Moreover, according to Bass (26), women often score lower in transformational leadership, whereas men tend to evaluate themselves more highly. Nevertheless, our results coincide with those of other studies in that approximately the same percentage of male and female nursing managers focused on the dimensions of idealized

influence, inspirational motivation, individualized consideration, and intellectual stimulation (27).

Of the five dimensions of transformational leadership, inspirational motivation was the source of the most striking gender-based differences. Our results showed that the female supervisors (M = 4.05, SD 0.57) were better than their male counterparts (M = 3.83, SD = 0.53) at effectively communicating a vision so that it was understandable, powerful and engaging. In our view, this is consistent with qualities inherent in women who are often more capable of generating passion and enthusiasm than men (28).

In regard to transactional leadership, certain studies found that both genders engaged in management by exception and contingent reward in equal measure. Nevertheless, a more in-depth study of the dimensions of transactional leadership showed that there were slight gender-based differences in certain areas (29, 30).

In conclusion, the most frequent leadership style found in middle nursing management in Andalusian hospitals was transactional leadership. In regard to the three leadership styles as well as their dimensions, the female subjects obtained the highest scores. This means that from a gender-based perspective, female nursing managers had better performance levels than their male counterparts in the regional hospital system in Andalusia (Spain).

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