RELATIONSHIP BETWEEN NURSES' LEADERSHIP STYLES AND POWER BASES

Inmaculada García García[1]

Emilio Sánchez Santa-Bárbara[2]

This quantitative study aimed to empirically evidence the relationship between the power bases of the leader and the leadership styles of nurses. The random sample consisted of 204 nursing professionals from a public hospital. The following measurement instruments were used: the SBDQ (Supervisory Behavior Description Questionnaire) to identify leadership styles and the Power Perception Profile to determine the types of power used by leaders. Descriptive, bivariate and multivariate analyses were used. Based on the results, two relationships proposed by the SLT (Situational Leadership Theory) were verified: between coercive power and S1 leadership style (telling), and between referent power and S3 leadership style (participating). In other cases, results have been opposite to expectations: the use of power proposed by the model decreases the probability of performing the prescribed leadership style.

DESCRIPTORS: nursing staff; power; leadership; hospital administration

RELACIÓN ENTRE ESTILOS DE LIDERAZGO Y BASES DE PODER EN LAS ENFERMERAS

El objetivo del estudio es la comprobación empírica de la relación entre las fuentes de poder del líder y los estilos de dirección de las enfermeras. Estudio cuantitativo, muestra elegida al azar constituida por 204 participantes pertenecientes al personal de Enfermería de un hospital público. Los instrumentos de medida fueron: el SBDQ (Supervisory Behavior Description Questionaire) para identificar los estilos de liderazgo y el Perfil de Percepción de Poder para determinar los tipos de poder utilizados por los líderes. Se realizó análisis descriptivo, bivariante y multivariante. A partir de los resultados obtenidos, se verificó la relación propuesta por la TLS (Teoría del Liderazgo Situacional) entre el poder coercitivo y el estilo de liderazgo E1 (decir) y entre el poder referente y el estilo de liderazgo E3 (participar). En otros casos, los resultados han sido opuestos a los esperados: la utilización del poder propuesto por el modelo disminuye la probabilidad de desempeñar el estilo de liderazgo prescrito.

DESCRIPTORES: personal de enfermería; poder; liderazgo; administración hospitalaria

RELAÇÃO ENTRE ESTILOS DE LIDERANÇA E BASES DE PODER DAS ENFERMEIRAS

O objetivo deste estudo foi comprovar empiricamente a relação entre as bases de poder do líder e os estilos de liderança das enfermeiras. Trata-se de estudo quantitativo com amostra aleatória de 204 participantes, profissionais de enfermagem de um hospital público. Os instrumentos de mensuração foram: o SBDQ (Supervisory Behavior Description Questionare) para identificar os estilos de liderança e o Perfil de Percepção do Poder para determinar os tipos de poder utilizados pelos líderes. Foi realizada análise descritiva, bivariada e multivariada. Com base nos resultados alcançados, verificou-se a relação proposta pela TLS (Teoria da Liderança Situacional) entre o poder coercitivo e o estilo de liderança E1 (determinar) e entre o poder referente e o estilo de liderança E3 (participar). Em outros casos, os resultados têm sido opostos aos esperados: a utilização do poder proposto pelo modelo diminui a probabilidade para desempenhar o estilo de liderança prescrito.

DESCRITORES: recursos humanos de enfermagem; poder; liderança; administração hospitalar

[1]RN, Ph.D. in Psychology, Universidad de Granada, Spain, e-mail: igarcia@ugr.es; [2]Doctor en Psicologia, Universidad de Granada, Spain e-mail: esanchez@ugr.es.

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INTRODUCTION

*T*he concept of leadership has been addressed from different perspectives. Its study in organizations refers to leaders' intention to gain cooperation in a common task. Research on the theme has increased as western societies indicate the need to count on more complex organizations.

The concept of leadership has been addressed by different theories. Most times, definitions have identified leadership as influence. Among all these theories, this study concentrates on the Situational Leadership Theory[1]. In the same way, other studies on nursing personnel have also used this model[2-3]. This theory defines leadership as "the process of influencing the activities of an individual or a group in efforts towards goal achievement in a given situation".

The Situational Leadership Theory has progressed over time. In its first version, it was called Life Cycle Theory of Leadership. Its main application was not in the labor context but it referred to the educational work parents and teachers carry out with children in the different stages of life. Later on, these authors developed some aspects of this model and considered it would be applicable in any leadership situation, both in family and in educational or labor contexts. Afterwards, it was called Situational Leadership Theory (SLT).

As its name states, the situation is particularly relevant in this theory. Previously, in other theoretical approaches, the effective leader was considered to have a set of specific characteristics or attributes. In the same way, other approaches focused on identifying the appropriate behavior and style in any situation. The SLT, without invalidating the previous one, emphasizes the adjustment between leaders' behavior and situational demands.

The SLT recognizes that each leader can have a preferred style, however, the effectiveness of leadership depends on the extent to which the leader is able to adapt or modify his/her style when the situation requires.

Authors of the SLT[1] identify the leadership style based on two dimensions of the leader's conduct: they define the task behavior as all conducts forwarded to detail the task and functions of each of its members. Relationship behavior is defined as the conducts that facilitate communication with subordinates, including support to them, if necessary.

In 1967, the 3D Leadership Theory was presented[4], introducing effectiveness as the third dimension. Under this viewpoint, relationship and task conducts would not be sufficient, and effectiveness would depend on the degree of adjustment between the leader's style and the circumstance of the situation.

Authors of the SLT[5] previously adopted the idea of a third dimension to achieve leadership effectiveness. Of all possible variables that configure the situation, they identified the subordinates' maturity (or preparation) as the most relevant situational variable.

According to this model, there is no optimal leadership style to influence employees more effectively; the leadership style should depend directly on the preparation of the subordinates, on whom the leader intends to exert influence so as to achieve his/her aims. The readiness of the subordinates is concretized in their ability and willingness. The first refers to the experience and skill of the individual to perform a given task, and the second to the motivation to perform it.

This theoretical model considers that there are four leadership styles, resulting from the combination of task behavior and relationship behavior. These two dimensions are independent; four leadership styles emerge from them, described as follows.

Style 1 (S1) - *telling* – is characterized by above-average task behavior and below-average relationship behavior.

Style 2 (S2) - *selling* – is characterized by both task and relationship behavior above average.

Style 3 (S3) - *participating* – is characterized by above-average relationship behavior and below-average task behavior.

Style 4 (S4) - *delegating* - both relationship behavior and task behavior below average.

According to the authors of the SLT[1], each level of readiness corresponds to a certain leadership style. Thus, level 1 of readiness corresponds to S1, level 2 corresponds to S2 and so on.

The great appeal and dissemination of the model among leaders is well known[6]. According to several researchers[7], the probability of successful leadership increases when the style reflects the appropriate power base.

This study aimed to verify whether the power bases used correspond to the theory, which led to the need of defining and describing what power is.

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Power has been defined[8-9] as the potential an individual has to influence another. Leadership is any effort exerted to influence and power is its potential influence, the resource that permits influencing.

On the other hand, some researchers[7] support the idea that it is not the leader's power that permits influencing his/her followers, but actually the perception they have of the leader's power.

Different classification systems of power bases have been proposed. Among them, the classification below is the most disseminated. It[10] identifies five bases of power.

Coercive power – is the perception of the subordinate on the leader's capacity to enforce punishments.

Reward power – subordinates recognize the leader's capacity to offer gratifications.

Legitimate power - this power is related to the leader's position or function.

Referent power – the leader inspires positive admiration and affection in subordinates.

Expert power – subordinates recognize the leader as someone with experience and ability.

A sixth power base was added later, the *information* power, which is the leader's ability to obtain relevant information for subordinates.

Years later, the set of power was configured with the addition of another type of power, the *connection* power[11], which is defined as the subordinates' perception of the leader's ability to connect with influential people or organizations.

The SLT was finally completed by adding the relationship between the power bases and the leadership styles[7]. In this model, a specific match is prescribed between each of the power bases and the most appropriate style leaders should apply to exert the strongest possible influence on their followers. These assumptions of the model are tested in this study.

In the last decades, nurses have occupied managerial jobs in the health system. This and other studies[12] provide useful scientific knowledge to the exercise of new positions and competences.

OBJECTIVE

This study aimed to empirically test the relationship between the different sources of power of the leader and nurses' management styles.

Thus, the following premises are presented:

- the application of the coercive power base increases the probability of having S1 style (telling);

- the use of the connection power increases the probability of developing the S1 style (telling);

- the use of the connection power increases the probability of using the S2 style (selling);

- the application of the reward power increases the probability of having the S2 style (selling);

- the use of the legitimate power increases the probability of developing the S2 style (selling);

-the application of the legitimate power increases the probability of using the S3 style (participating);

- the use of the referent power increases the probability of having the S3 style (participating);

- the use of the information power increases the probability of using the S3 style (participating);

- the application of the information power increases the probability of having the S4 style (delegating);

- the use of the expert power increases the probability of developing the S4 style (delegating).

METHOD

Type of study: descriptive.

Participants

Nursing professionals from a public hospital in Granada, Spain. The study was authorized by the Research Committee of the *Virgen de las Nieves* Hospital, responsible for complying with the ethical aspects of the research.

Sample

Simple random, with 290 out of 980 nursing professionals. The nursing professionals who were part of the sample were first located and then visited at their workplace. They were given a letter of presentation with the objectives of the research and asked to sign the free and informed consent to participate in this research. Those who accepted were informed how to collaborate and their anonymity was guaranteed.

The percentage of answers was 77.6% (n=225), however, only 204 participants fully filled out the questionnaires. Of those, 53.9% were nurses, 7.9% were specialist technicians and the remaining 38.2% were nursing auxiliaries. In this sample, 11% of the participants was male. The average age was 44.37 years and standard deviation .62 years. The age interval ranged from 22 to 62 years.

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Measurement instruments

The SBDQ (Supervisory Behavior Description Questionnaire) was used to measure the leadership style[13], as it provides data in two behavior dimensions (Initiating Structure and consideration, assimilable to the task and relationship behaviors, respectively). This instrument comes from studies on leadership at Ohio State University, United States. In recent decades, it has been extensively applied in research in different organizations.

SBDQ is a 48-item questionnaire that describes the behavior of the leader, using a 5-point scale in the answers. Among the items, 28 correspond to the dimension of Consideration and the others to the Initiating Structure dimension. As there is no SBDQ normative data parameter, the median was used to establish the cut-off point between the high and low values in each dimension.

The Power Perception Profile was used to measure the perception of power[14]. Each of the seven power bases is compared to the others, so as to obtain 21 pairs of compared statements. In each of the pairs, the interviewee has to assign three points aiming to obtain the score for each source of power. This instrument is distributed and sold in Spain by the Leadership Studies Center, Spanish Consultants, SA, adapted to Spanish from the English original.

Data analysis

First, descriptive analysis was carried out, with mean, median, standard deviation or percentages and frequencies, according to quantitative or qualitative variables, respectively.

Later, bivariate analysis through contrast of means using the ANOVA test was carried out. Finally, ten logistic regressions were estimated to verify the probability of using a determined leadership style, according to the different types of power.

RESULTS

Descriptive analysis

Table 1 shows the mean scores interviewees attributed to the power base used by leaders. Scores can range from 0 to 18.

Table 1 – Description of the types of power

Type of Power	Average	sd
Coercive	7.60	3.67
Connection	8.28	4.19
Reward	9.05	2.93
Legitimate	12.12	2.67
Referent	6.74	4.01
Information	8.25	3.43
Expert	10.98	3.60

Results were subsequently analyzed in relation to the leadership styles through the following procedure.

Firstly, the scores of the 28 first items of the SBDQ were summed, to determine the score in the relationship dimension.

Secondly, the results of the last 20 items were summed to obtain the score in the task dimension.

Thirdly, the median of the relationship dimension, 65, and of the task dimension, 36, were used to classify the leaders with high and low scores in the dimensions.

The score 65 in the relationship dimension was included in the high category. The score 36, obtained in the task dimension, was included in the high category.

The median divided leaders into two categories in both dimensions:
- low in the relationship dimension, identified as number 1;
- high in the relationship dimension, identified as number 2;
- low in the task dimension, identified as number 1;
- high in the task dimension, identified as number 2.

Then the different categories were recoded according to the four leadership styles defined by the model.

Table 2 shows the distribution of the different styles.

Table 2 – Leadership styles

Leadership styles	Frequency	%
S1: high task and low relationship	45	20
S2: high task and high relationship	69	30.7
S3: low task and high relationship	45	20
S4: low task and low relationship	66	29.3

Bivariate analysis

Before the multivariate analysis, bivariate analysis was carried out, to check whether there were

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differences in the mean score of the different types of power used by the leaders who have different leadership styles.

Table 3 presents the result of the comparison of the means of the seven types of power in each of the leadership styles. S1 style had 37 questionnaires, S2 style 63, S3 style 44 interviews and S4 style 60.

Table 3 – Comparison of the average of the seven types of power in each of the leadership styles

Power	Style	Mean	p	Power	Style	Mean	p
Coercive	1	9.03	0.001	Referent	1	6.03	0.004
	2	6.81			2	7.48	
	3	6.45			3	7.98	
	4	8.58			4	5.5	
Connection	1	9.41	0.000	Information	1	7.92	0.025
	2	6.49			2	9.06	
	3	7.39			3	8.66	
	4	10,13			4	7.28	
Reward	1	9.89	0.162	Expert	1	8.95	0.000
	2	8.56			2	12.63	
	3	8.86			3	12.14	
	4	9.18			4	9.65	
Legitimate	1	12.05	0.250				
	2	11.97					
	3	11.66					
	4	12.67					

As observed in Table 3, the differences of the mean scores obtained in the different leadership styles are statistically significant in the coercive, connection, referent, information and expert types.

Multivariate analysis

Aiming to verify the probability that, using the power base described by the model, the corresponding leadership style could be determined, ten logistic regressions were estimated, one for each power base and the corresponding leadership style defined by the model.

Table 4 presents the results, according to each power base and corresponding leadership style.

Table 4 – Logistic regressions for the types of power and the leadership style

Prediction v.	Result v.	β	p	Exp. (β)	95% confidence interval	
					Lower lim	Upper lim
Coercive	Style S1	0.129	0.013	1.137	1.027	1.259
Connection	Style S2	-0.155	0.000	0.857	0.794	0.925
Connection	Style S1	0.081	0.075	1.085	0.992	1.186
Reward	Style S2	-0.084	0.110	0.920	0.830	1.019
Legitimate	Style S2	-0.031	0.581	0.969	0.868	1.083
Legitimate	Style S3	-0.081	0.196	0.922	0.815	1.043
Referent	Style S3	0.098	0.023	1.103	1.014	1.200
Information	Style S3	0.045	0.367	1.046	0.949	1.154
Information	Style S4	-0.120	0.011	0.887	0.809	0.973
Expert	Style S4	-0.132	0.002	0.876	0.807	0.951

It can be observed in Table 4 that the results of the regression analysis of the following variables were not statistically significant: connection power and S1 style, reward power in relation to S2 style, legitimate power with S2 style and with S3 style E3 and, at last, information power with S3 style.

On the other hand, the results of the regression analysis of the coercive power with S1 leadership style are statistically significant, that is, for each additional point in leader's coercive power, the probability of having S1 leadership style increases 1.137 times in comparison to other styles.

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Although results of the analysis between the connection power and S2 leadership style are statistically significant, in this case, â is negative and, thus, the probability of having S2 style when using connection power decreases. For each additional point in the connection power, the probability of having S2 style decreases 0.857 times in relation to other styles.

Regarding the analysis of the referent power to S3 leadership style, the result is significant, moreover, for each additional point in referent power, the probability of having S3 style increases 1.103 times in relation to other leadership styles.

The last two results show that the information power with S4 style and the expert power, also with S4 style, are statistically significant. In both cases, however, â is negative and, thus, the probability of having S4 style decreases when information power is used with expert power.

DISCUSSION

The current role of nurses incorporates leadership and management functions and competences. This has motivated this research, which aimed to contribute to the knowledge on the theoretical model of leadership exerted by nurses in the hospital context. Recent research[12] has underlined the importance of the knowledge nurses should have on leadership, management and power concepts, theories and research.

In the Managerial Gris Theory, leaders' attitude or orientation is measured in relation to production and to people. In a recent research[15] on ideal leadership styles, nurses have scored 9.9 – high production and people orientation – as preferred, followed by 5.5 and rejected the 9.1 and the 1.1. In this study, a behavior measure – not attitude measure - was applied to nurse leaders according to the description of their subordinates.

Based on the obtained results, the concepts of the ten assumptions were verified: that is, the use

of coercive power increases the probability of having S1 leadership style (telling). The same happens in the referent power regarding the S3 style (participating). On the other hand, in three other cases, obtained results were opposite to expectations, that is, the probability of developing a leadership style decreases due to the use of the power bases proposed by the model. These three cases are connection power with S2 leadership style, information power with S4 style and also expert power with S4 style. Results obtained in the other concepts are not statistically significant.

In this study, whose aim was to test the concept of a specific relationship between the bases of power and leadership styles[1,7], there was insufficient empirical support. Two possible explanations are appointed for the obtained results and are presented next.

From the perspective of the statistical procedure used, considering the absence of normative values, the median was chosen as the cut-off point to determine the levels, high and low, in each of the dimensions of the leader's conduct. Another possibility would have been to use the mean as the cut-off point.

Under the theoretical viewpoint, it is proposed that the effectiveness of leadership depends on the adjustment between management style and subordinates' level of readiness. Leader's power increases the probability of success when the style is already effective. In this research, subordinates' level of readiness and leaders' effectiveness were not measured. Thus, it is possible that results do not fit the model because all styles (the effective and the less effective ones) were included in the statistical analysis. If the less effective had been excluded, results could have been different. These questions should be the subject of further research with a view to clarify whether the model can predict the relationship between power and leadership style or not and, thus, guide nurses managers in the use of power and in leadership performance, increasing their effectiveness.

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