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# Quality perceived by users of nursing services at three public hospitals

Calidad percibida por usuarios de enfermería en tres hospitales públicos

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Palabras clave: Calidad de la Atención de Salud; Calidad Percibida; Enfermería; Servqhos (Fuente DeCs)

#### ABSTRACT

The nursing service in the hospital sector as a process of providing professional and technical level must be oriented in a context of quality and meet the guidelines established in discipline and welfare legislation. The quality of nursing services provided in the clinical area, must respond to human needs, establish management, guide practice and meet the personal and social expectations as they constitute a user's right which is the subject of improvement institutional level.

**Objective:** To analyze the evaluation of the quality perceived by users of nursing services at three public hospitals in Boyacá during the years 2008 and 2011.

**Methods**: A quantitative and retrospective study, based on measurements made with the instrument SERVQHOS - E from 2008 to 2011 in the Hospitals of Duitama, Sogamoso and Tunja, which was validated in Colombia.

**Results:** 1093 instruments were applied at different times, with two measurements per hospital, we have obtained the average score of the items that objective and subjective quality was 3.62, which are predictors of satisfaction.

**Conclusions:** The study identified areas for improvement in hospitals and to determine the delay of care, as one of the decisive factors affecting the perceived quality and satisfaction.

#### RESUMEN

La atención de los cuidados enfermeros en el sector hospitalario, como proceso de prestación a nivel profesional y técnico debe estar orientado dentro de un contexto de calidad y ajustarse a los lineamientos establecidos en materia disciplinar, legislativa y asistencial. La calidad de los cuidados enfermeros brindados en el área clínica, debe dar respuesta a las necesidades humanas, establecer la gestión, orientar la práctica y satisfacer las expectativas personales y sociales, puesto que constituyen un derecho del usuario lo cual es objeto de mejoramiento a nivel institucional.

**Objetivo:** Analizar la evaluación de la calidad percibida por los usuarios de los cuidados enfermeros en tres hospitales públicos de Boyacá durante los años 2008 y 2011.

**Métodos:** Estudio cuantitativo, retrospectivo, fundamentado en mediciones realizadas con el instrumento SERVQHOS – E del año 2008 al 2011 en los Hospitales de Duitama, Sogamoso y Tunja, el cual fue validado en Colombia.

**Resultados:** se aplicaron 1093 instrumentos en periodos diferentes, con dos mediciones por hospital, que permitieron obtener la puntuación media de los ítems de calidad objetiva y subjetiva que fue de 3.62, los cuales son predictores de la satisfacción.

**Conclusiones:** El estudio permitió identificar áreas de mejora en los hospitales, así como determinar la demora de la atención, como uno de los factores decisivos que afectan la calidad percibida y la satisfacción.

#### INTRODUCTION

The measurement and evaluation of the quality perceived by users, is a key objective of evaluation referring to institutions of services and its applicability is recommended not only for the process itself, but for its outstanding relevance in the continuous improvement. There are three types of hospital quality to be assessed: scientific and technical quality, which is commonly assessed by means of indicators, processes and protocols. Functional or interactive quality, which is given by the evaluation carried out by user which usually deals with the satisfaction level. Finally, the corporate quality. It does have acquired a relevant importance. It is measured in a transversal way by integrating the previous two categories  $^{(1, 2)}$ .

Health services are susceptible to measurement by means of instruments that ask for the quality to the user, recognizing the usefulness provided by the findings from institutions to foster care, reducing costs, motivating staff and creating a differentiation from competence.

Quality achievement requires a series of steps that conclude with the evaluation of the service and care provided, which can be done through the perception and measurement of users satisfaction <sup>(3)</sup>. This measure is an indicator of the perceived quality that constitutes a desirable outcome of hospital care, but not it is not the only <sup>(3, 4)</sup>

In the professional and technical nursing job performance is related to the health services provided in these institutions. Professional nurses constitute a large and available percentage of human resources to provide health services, from users entrance to their egress, that is why the permanent and progressive contact is really important in that, and it is a critical and relevant issue in the evaluation of the given care,. It is expressed in the quality of care the service provides <sup>(5-8)</sup>.

One of the functions of professional nurses in hospitals is providing an immediate response to the users' needs, from logistical questions, interrogatories, basic

interventions and complex administrative procedures, provision of resources, among others. User's satisfaction as well as being an indicator of the quality of service, is also an indicator of the quality of administrative and management systems of the institution <sup>(7)</sup>.

Quality evaluation in nursing presents multiple approaches. A measurement can be carried out to assess processes or results by obtaining data such as the number of procedures performed or adverse events, among others. The quality assessment made by users is assessed globally within the hospital services, sometimes, the perceived quality measurement is conducted by different staff as it is performed in the information services and customer care (SIAU) by simple questionnaires in which biases are presented due to the lack of appropriate metric validity <sup>(7, 8)</sup>.

The SERVQHOS - E, is a Spanish questionnaire that measures the perceived quality of nursing care, which has been used in nursing studies in Colombia, specifically in Boyacá. It is used to know the evaluation carried out by nursing users. The instrument has a reliability of 0.96 for the country and for measuring the construct validity of the perceived quality of care in nursing care <sup>(7)</sup>.

In Colombia, the Decree 1011, 2006 regulates the Mandatory System of Assurance Quality (SOGC). It establishes as the major component the Quality Improvement and System Information to Users (SIAU) as a permanent event, two-way feedback, based on constant audit processes to identify failures in the provision of the services and its suitability for achieving users' satisfaction (8). Public hospitals in Colombia, from Act 100 of 1993 became State Social Enterprises and suffered structural changes involving reduced willingness of staff for the attention of users, new processes to access services and intermediation of Health Promoting Companies (EPS), which changed the hospital approach and are still the main providers of health services in the country, despite of the strong private sector participation. The Research Group on Nursing and Quality Management, aware of the need to assess people's satisfaction with the services offered by the three public hospitals, three main areas of practice of Pedagogical and Technological University of Colombia, with the support hospitals, makes the decision to apply a measure instrument of the perceived quality and satisfaction, in order to validate it, introduce it and apply it permanently, as an objective way of evaluation.

In Spain, a study was carried out based on the evolution of the quality perceived by users with hospital care in two hospitals, in three times and used the SERVQHOS questionnaire was used to collect information <sup>(9)</sup>. The study reported that there was better evaluation by users in one of the hospitals, not among the measurements; outstanding issues such as the appearance of staff, the provision and treatment, which scored between 3.5 and 4.5., were relevant. The least qualified categories were the waiting time and punctuality. In another study in five hospitals in Spain, levels of satisfaction were about 59.2% and a relevant indicator of satisfaction, dealt with knowing the name of the nurse and the doctor <sup>(11)</sup>.

Furthermore, it was found that patients surveyed in a University Hospital gave more importance to the subjective quality and lower relevance to the objective aspects as the condition of the rooms, the waiting time, among others <sup>(12)</sup>. Also there was a multicenter study conducted with patients in hemodialysis units <sup>(13)</sup>. The researchers used the modified instrument to assess satisfaction and they found that the best aspects evaluated were the friendly staff, the training of personnel, the staff's willingness to help and solve problems, personalized service and the interest of the nursing staff. The less skilled aspects were related to the objective type, such as information and timeout issues that

coincided with other studies <sup>(14, 15)</sup> performed in similar populations. In another study, two different measurements were performed to evaluate user's satisfaction in two groups. Although different methodologies were used to deliver the questionnaire to patients, there were not significant differences when evaluating the quality <sup>(16)</sup>. There was not found in the state of art in Colombia, comparisons of studies evaluating the user-perceived quality of nursing in different institutions.

### MATERIALS AND METHODS

A descriptive and longitudinal study was carried out. The sample was collected by the research group of students which were previously trained. The information was collected in three public hospitals during two measurements. A first measurement was used to establish an initial evaluation of the perceived quality, which led the institutions to implement improvement actions and subsequent measurement to establish comparisons, in order to determine the evolution in the time of the quality perceived by users and at the same time to evaluate the carried out actions.

To determine the minimum sample size required by institution, a simple random sampling (MAS) was applied, which resulted in a minimum of 163 users per institution. Each sample was analyzed separately and then the global comparison was made. It is the subject of this study. The monthly egresses average for hospitalization was taken as a basis for obtaining the sample.

If one of the hospitals deals with a higher complexity, the selection of services where users were accosted was made according to similar conditions. Services such as Hospitalization, internal medicine and surgery services were accosted, with common characteristics regarding to the level of care: second and third level, the kind of services provided, availability of bed in an average of 30 beds, available human resource in nursing: average of nurses in the morning, in the afternoon and at night, as well as the adult population attended.

The instrument was self-completed by users at hospital egress, men and women aged 18 years, with awareness and a proper mental state, which had more than two days of hospitalization. Once the information was collected, a database was developed in Excel ® and the information was processed by using the statistics program SPSS ® version 15.0. Descriptive statistics and bivariate analysis were used. It was approved by the institutions and the principles of beneficence and confidentiality, as well as respect for people for being ethical information were respected <sup>(10)</sup>.

#### Instrument

The SERVQHOS-E, evaluates the quality perceived by the user with the care of nursing care received by him, in particular, aspects related to the treatment, trust, staff training and individualized care. It is designed from the theory of the discrepancy between expectations and perceptions; it is an adaptation <sup>(11)</sup> of the original SERVQHOS <sup>(9)</sup>. The first part of the questionnaire describes the objectives and importance of the requested information to the user. It establishes ethical issues as permission and consent to its application and it determines that the information will be treated anonymously and confidentially, the second part consists of 16 items with a Likert scale, which represents "much worse than expected" and 5, "much better than I expected" and it evaluates two factors called objective and subjective quality that explain the 64% of the variance.

The first factor of objective Quality contains four items that probe verifiable aspects of service delivery such as equipment technology, the appearance of the nursing staff, signs for guidance and room conditions. The second factor determines the subjective quality, it contains 12 items that deals with care and determinants of satisfaction and interest of nurses, the information provided, the waiting time for treatment, interest in solving problems, punctuality, how quickly the user gets what he needs, willingness to help, trust (security) that is transmitted, friendliness (complimentary), preparing to do the job (training), the personalized service and the ability to understand the patients' needs. Then there are two questions that indicate the level of global satisfaction and if he would recommend the hospital and a determinant question of quality dealing with if the user knows the name of the nurse who attended him. Finally, it contains 5 questions related to socio demographic variables such as age, sex, marital status, education level and occupation.

#### RESULTS

The reliability analysis of the instrument SERVQHOS - E, was obtained by Cronbach's alpha, which resulted was 0.96 indicating an optimal level of reliability of the instrument to measure the perceived quality. After the procedure of items' removal, the score is retained.

From a total of 1,228 valid instruments applied, 1093 were valid, with a response rate of 89% for the two measurements; 135 instruments were removed due to mistakes made while filling the forms or because they were incomplete. Two Measurements were carried out by each single hospital during the years 2008 and 2011, with a difference of a year, in order to give a response to a continuous improvement process required by the institutions. Similarly, the implementation methodology was continued, which dealt with approaching in an anonymously way to the users at discharge, providing instructions for filling out the instrument and controlling the risk of inducing answers.

The data was processed by using an Excel data base and the statistics proves were carried out by means of SPSS program version 15.0 for Windows. The significance level obtained was p <0.005 for the no parametrical statistics.

The sample per hospital was constituted by 250 users (32%) for hospital A, 394 for hospital B (26.9%) y 449 for hospital C (41.1%). They were distributed in two different measurements for each hospital among the years 2008 and 2009, 2009 and 2011 between September and December (table 1). With respect to the gender, differences about percentages were found. Hospital A showed a high percentage for the female gender 76% in both measurements; with respect to hospitals B and C, the percentages were in a range of 57% and 48% for the female gender respect to the male one.

The media for the sample's age was 39.23 years old (From 16.2) with relevant differences of hospital C whose result was 58.8 years. The results of the variable related to occupation pointed for home activities 42.7% and employed 35.6%. The variable dealing with education, without studies 57% and primary education; related to social status, married the 40%, single and in free union 24% and 23%. This data shows the kind of users that public institutions in Colombia take care of.

The global results obtained in the three hospitals are showed. The differences of punctuations obtained in the same institutions are presented too as well as the measurements.

	Hosp	ital 1	1 Hospital 2			Hospital 3		
Ítem	Measure	Measure	Measure	Measure	Measure	Measure		
	ment 1	ment 2	ment 1	ment 2	ment 1	ment 2		
Users number	187	163	187	107	266	183		
Porcentage	32	2,0	26	5,9	41	1,1		
		Gender	(Porcentage)					
Man	27	37	62	22	46	56		
Woman	73	63	38	78	54	42		
Age	32,8	40,3	36,9	36,9	57,9	53,7		
		Marital Sta	tus (Porcentag	ge)		I		
Single	21,7	32,7	25,7	28	17,7	18,2		
Married	36	38	39	36,4	50,4	43,9		
Widower	2,3	5	3,2	7,5	13,5	18,2		
Separate	1,4	3,3	1,6	2,8	7,1	4,8		
Join free	38,6	21	30,5	25,2	11,3	12,8		
		Study leve	el (Porcentage	)				
No education	4,3	1,8	10,2	0	19,5	21,4		
Primary	46,6	43,8	36,9	33,6	50	50,3		
baccalaureate	43,1	37	52,4	61,7	23,7	19,8		
University	0	17,4	0,5	4,7	6,8	6,4		
		Occupatio	on (Porcentage	)		I		
Pensioner	0,3	5	0	1,9	1,1	4,3		
Unemployed	15,7	25,6	16,6	5,6	46,5	7		
Employee	30,9	23,7	52,4	48,6	24,1	34,2		
Home	48,6	37,9	29,9	38,3	53,8	48,1		
Student	4,6	7,8	1,1	5,6	4,5	4,3		

Source: Database SPSS 2010.

The results of objective and subjective quality (Table 2), show an average score of 3.61 for all items, which is statistically significant (p = 0.000) due to differences in scores between the first and second measurements, which were higher in the first for hospitals A and C and lower in hospital B. Similarly, significant differences were found in scores between the first and second measurement per hospital with an increasing trend in the second (p = 0.000) (Table 2) especially in hospitals A and B, Hospital C showed a trend to keep the score.

In relation to the items that assess the objective quality, equipment and technology is found with a media of 3.54, and the conditions of the rooms with a media of 3.63, the items are received lower scores, unlike the presentation of and indications for guidance staff with an average of 3.79, and users perceive such better quality in hospitals A and C.

Moreover, the items corresponding to better subjective quality were the best assessed. Hospitals A and C, remained similar scores unlike B, which was considerably lower. For the second measurement, scores showed and relevant improvement in all three institutions, especially for Hospital B, A and C hospitals had higher scores than B in the first measurement and a significant improvement in the second one, especially hospital B, the hospital C shows the same tendency. The highest rated items are: kindness with an average of 3.75, 3.72 and personnel training 3.68 confidence, affecting aspects being more important in the quality perceived by the user. In turn, the waiting time to be seen by the nurse 3.37, speed and punctuality 3.43 3.49, were the items with the lowest score, taking into account that they are directly related.

	Hospital A		Hospital B		Hospital C		
Ítem	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Mean by Ítem
	Ob	jective Qua	lity Ítems (1	mean)	1	1	1
Technology	3,45	3,93	2,83	3,64	3,6	3,82	3,5
Difference 1 and 2	0.	48	0.	81	0.	22	<b>P</b> 0.000
Presentation	3,57	4,22	3,21	4,03	3,7	3,96	3,78
Difference 1 and 2	0.	65	0.	82	0.	26	<b>p</b> 0.000
Indications	4,94	4,00	2,99	3,55	3,5	3,82	3,79
Difference 1 and 2	0.	94	0.	56	0.	32	<b>p</b> 0.000
State room	3,43	4,05	3,19	3,66	3,7	3,81	3,6
Difference 1 and 2	0.	62	0.	47	0.11		<b>p</b> 0.000
Mean Objective Quality	3,62	4,05	3,05	3,72	3,62	3,85	
Difference 1 and 2 Objective	0.	43	0.	67	0.	23	<b>p</b> 0.000
Quality	Sub	jective Qua	l <b>ity Ítems</b> (i	mean)			
Compliance interest	3,37	4,05	3,07	3,81	3,6	3,92	3,63
Difference 1 and 2	0,	68	0,	74	0,32		<b>p</b> 0.000
Information	3,36	4,00	3,11	3,57	3,6	3,83	3,57
Difference 1 and 2	0,	64	0,	46	0,	23	<b>p</b> 0.000
Timeout	3,19	3,77	3	3,42	3,3	3,55	3,37
Difference 1 and 2	0,	58	0,	42	0,	25	<b>p</b> 0.000
Interest troubleshoot	3,31	3,96	3,05	3,75	3,5	3,8	3,56
Difference 1 and 2	0,	65	0	,7	0	,3	<b>p</b> 0.000
Punctuality	3,33	3,96	2,99	3,64	3,3	3,74	3,49
Difference 1 and 2	0,	63	0,	65	0,	44	<b>p</b> 0.000
Rapidity	3,23	3,81	3,02	3,51	3,3	3,73	3,43
Difference 1 and 2	0,	58	0,	49	0,	43	<b>p</b> 0.000
Avaliable to help	3,37	4,04	3,26	3,79	3,5	3,84	3,63
Difference 1 and 2	0,	67	0,	53	0,	34	<b>p</b> 0.000
Confidence	3,45	4,14	3,17	3,69	3,7	3,97	3,68
Difference 1 and 2	0,	69	0,	52	0,	27	<b>p</b> 0.000
Amability	3,5	4,14	3,17	3,82	3,8	4,08	3,75
Difference 1 and 2	0,	64	0,	65	0,	28	<b>p</b> 0.000
Staff training	3,5	4,15	3,05	3,97	3,7	3,98	3,72
Difference 1 and 2	0,	65	0,	92	0,	28	<b>p</b> 0.000
Treatment	3,51	4,18	3,01	3,79	3,6	3,93	3,66
Difference 1 and 2	0.	67	0.	78	0.	33	<b>p</b> 0.000

#### Table 2. Objective and Subjective Quality

Capacity	3,38	4,05	3,03	3,89	3,6	3,93	3,64
Difference 1 and 2	0,67			0,86		0,33	
Mean subjective quality	3.38	4.03	3.07	3.72	3.54	3.86	
Difference 1 and 2 Subjective Quality		0,65		0,65	0,32		<b>p</b> 0.000
Difference Total Measurement 1 and 2 Objective and Subjective Quality		0.54		0.66	0.29		
•			Me	an objectiv	e and subje	ctive quality	3.61

Source: Database SPSS 2010.

In the case of the differences between measurements, the results of the second measurement was significantly higher (p = 0.000) in particular for hospital B, which had a difference of 0.66, in contrast with A and C, which was 0.54 and 0.23 respectively, the difference was greater in subjective quality aspects. This finding is due to hospitals based on the results of the first measurement, and immediate requirements of the certification and accreditation processes, which are part of the Mandatory Quality Assurance <sup>(22)</sup>, implemented activities in a gradual way. Improvement of processes and changes were based on equipment, improvement areas, staff training in attention and care. The second measurement was used to establish the difference between the scores, but not the effect of the activities or strategies developed, because they were not considered as a target for this study.

In general, the aspects that require greater attention as part of the improvement process, based on aspects of infrastructure, especially the hospital B, as the condition of the rooms and indications for orientation. On the other hand, the waiting time, speed, punctuality, information provided and interest in solving problems, are issues that the keeping in mind the opinion of the users requires a better attention from institutions, because they are predictors of satisfaction <sup>(13)</sup>. It is observed that users satisfied with the care, rated these items as expected (p = 0.000), ie about 3, indicating an improvement in the perception of users, without the latter could be exceeded.

Global satisfaction for users treated by nurses in hospitals was 92%, among those who say they are satisfied (68%) or very satisfied (24%) with the care provided by the service, there is not significant difference between men and women <sup>(14)</sup>. Similarly, it coincides with recommending the hospital, in which the 87% would do without hesitation and the remaining 13% would have doubts or they would not recommend it (Table 3).

The three hospitals do not differ in satisfaction scores or recommend the hospital except hospital B whose score improved 27% very satisfied, satisfied versus 59.8% in the second measurement.

	Hosp	spital A Hosp		ital B	Hospital C		
Ítem	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Mean by Ítem
Satisfaction (Porcentage)		•					
Very satisfied	19,4	27,4	16	27,1	34,2	20,9	24,1
Satisfued	68,9	66,2	81,3	59,8	62,8	70,1	68,1
Dissatisfied	10,3	6,4	2,1	13,1	2,6	5,3	6,6
All satisfied	1,4	0	0,5	0.0	0,4	1,6	0,78

#### Table 3. Overall satisfaction

Recommend the Hospital (Porcentage)							
Clearly	80,9	86,3	98,9	69,2	95,9	91,4	87,1
I have a question	18,6	13,7	1,1	27,1	3,4	4,8	11,4
Never	0,6	0		3,7	0,8	1,6	1,34

Source: Research Basadate

Table 4 shows other aspects of perceived quality measurement, in which the ethical stands at 90.9% informed consent, the adequacy of information provided 75.9%, the number of times the user has been hospitalized in the year (64.7% after). On the percentage of users who know the name of the nurse who attended them, it is found that in the three hospitals, 80% of users do not know (p = 0.001) (Table 4). In the first measurement hospital B, 63.1 showed a high score, which decreased significantly in the second 9.3, it was possibly associated with the changes made by the hospital, including the name on the uniform (p = 0.000). As in other studies (12, 15-17) it was found between perceived quality variables and knowing the name of the nurse (p = 0.000).

-	Hosp	ital A	Hosp	ital B	Hospital C		
	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Measure ment 1	Measure ment 2	Mean Ítem
	Testin	g without c	onsent (Por	centage)	L		
Yes	2,3	2,7	1,1	5,6	1,9	7	3,43
No	96,6	95,4	98,9	68,2	96,6	89,8	90,9
Sometimes	1,1	1,8		26,2	1,5	1,1	6,34
Boarding time							
Less than necessary	6,9	1,8	3,2	0,9	4,1	7	3,98
Time required	88,9	95,4	93,6	81,3	88,3	85,6	88,8
More than necessary	4,3	2,7	3,2	17,8	7,5	5,3	6,8
	Know the na	me of the n	urse (Porce	ntage)		1	
Yes	16,9	9,6	63,1	9,3	3,8	8,6	18,5
No	83,1	90,4	36,9	90,7	91,7	89,3	80,3
	Sufficient	informatio	n (Porcenta	aje)		1	
Yes	62,6	77,6	93,6	54,2	85	82,4	75,9
No	37,4	22,4	6,4	45,8	15	15,5	23,7
		Admission	(Porcentaj	e)		1	1
Programmed	15,7	10,5	19,3	16,8	4,9	8,6	12,6
Emergency	84,3	89,5	80,2	83,2	95,1	89,3	86,9
	Number of	times has b	een admited	l (Porcenta	ge)		
1	67,7	69,4	52,9	69,2	64,3	64,7	64,7
2	21,7	16,4	43,9	23,4	23,7	21,4	25,08
3	6,9	9,1	3,2	5,6	6,4	8,6	6,6
Over 3	3,2	5,0	0	1,8	5,6	3,2	3,1

#### Table 4. Other aspects of Perceived Quality

#### DISCUSSION

Assessing the quality perceived by the user's attention regarding nursing care provided in public hospitals, has allowed a more accurate approach, based on a quality model. While this type of measurement is focused on aspects of service and attention, it deserves a special interest on the part of managers of health institutions. Colombia had a radical

change aimed at the modernization of services from the consolidation of the Mandatory Quality Assurance in Health <sup>(18)</sup>, after normalization of licensing and accreditation standards that have focused on providing services in users.

This study has allowed to consolidate specific actions for nursing care in hospitals and public support for institutional improvement plans, under which conditions must adjust aspects of structure, process and outcome <sup>(2, 19)</sup>, not to mention the quality of care nurse, for which there are specific measurement instruments.

Measurable aspects through SERVQHOS-E, addressing considerations and judgments of users, by which it is possible to take concrete action on issues that somehow, are difficult to measure <sup>(9)</sup>. Since the first measurements and the mandatory and immediate quality system in Colombian health institutions <sup>(22)</sup>, hospitals Improvements in areas such as personnel identification with name and title visible, uniformity, signaling, training aspects of the care, maintenance and improvement of facilities, equipment upgrades, among others, which resulted in better scores of the second measurement.

The evaluation in public hospitals also evidence sociodemographic characteristics of the population served in general users with level I and II SISBEN (Beneficiary Identification System) with a low level of education and occupation, which is now a participant in the institutional assessment and whose opinion counts for institutional performance. This aspect is important, because no assessments were conducted in private institutions in the region, who apparently have better conditions, infrastructure and equipment (but not staff), taking care of users with higher economic levels.

Users evaluate aspects that are important for care within the nursing care provided, empathic, individualized treatment and human, beyond the technical or procedural <sup>(7)</sup> aspects that are consistent with the research reviewed <sup>(7-9, 11, 12, 14, 15, 26)</sup>. Hospitals scores A and C remain considerably high compared to hospital B, C although one would expect given the characteristics exceed services.

The attitude to take professional and nursing assistant, for the process to provide the service, is a key determinant of quality. As in several studies, it was found a relevant and crucial in satisfying, as is the delay in care and waiting for services <sup>(14)</sup>, which coincides with the frequent complaints of users of the Colombian System of Social Security. In Colombia, there is no clear regulations regarding to the number of professionals and assistants with whom must be an institution, which is at the discretion of the same and the characteristics of the service, not to the actual need of personnel, which is an important aspect, it is direct predictor of satisfaction <sup>(16, 20)</sup>.

The users' global satisfaction with the quality of care provided by nurses in hospitals, is considerably high, bearing in mind that they are public institutions and it is consistent for all three institutions evaluated with results of similar studies in satisfaction which is an indicator of the quality factor <sup>(16, 21-24, 30)</sup>. The percentage of satisfaction found, matches scores described in research consulted, especially in Spain, where the instrument has been widely used and are quite significant for public hospitals in nature in a country like Colombia. Similarly, the findings are relevant in relation to the subjective quality scores, which can be considerably improved process actions. Improvement is required in terms of structure, for comfort and a better environment for users.

Hospitals A and C, scores remain stable over time and are placed in the scale as expected, unlike the hospital B that requires further intervention, even if none of the

hospitals, come to fully overcome the expectations of users. Currently, hospitals continue to improve the processes, services and infrastructure, in order to obtain high quality accreditation and national positioning, nursing is part of the processes of hospital care in most services and therefore should aim to improve aspects of the service provided.

As for the measurements, scored better in the second, especially in hospital A and B, the hospital C, although scores improved in the second measurement, the same trend holds. Clearly, any action taken, ostensibly improving perceptions, however studies are required in order to develop concrete and statistically evaluate the effects of the same.

Colombian law on quality measurement aspects of health services, provides general guidelines on the use of methodologies for measuring quality, which is relevant for the use of reliable and valid questionnaires, which are based on relevant criteria, contextualized and under theoretical references that point to a more accurate measurement of the quality concept.

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