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Culture Level on Patient Safety in Nursing Staff

Carmen Roció Muñoz-García[1], Isabel Cristina Mesa-Cano[1,2],
Andrés Alexis Ramírez-Coronel[1,2,3]

[1]Master's Degree in Postgraduate Care Management of the Catholic University of Cuenca, Ecuador.
[2]Nursing Career of the Catholic University of Cuenca, Ecuador.
[3]Laboratory of Psychometry, Comparative Psychology and Ethology of the Center for Research, Innovation and Technology Transfer (CIITT) of the Catholic University of Cuenca, Ecuador.

*Correspondence: Mesa Cano Isabel Cristina
Affiliation: Master in Postgraduate Care Management, Universidad Catholica de Cuenca, Ecuador.

Abstract:- The patient safety culture of the health personnel is linked to attitudes and beliefs to avoid any harm that may be caused during the stages of health care. The objective of the research is to determine the level of patient safety culture among the nursing personnel of the Homero Castanier Crespo Hospital. Methodology: A non-experimental, descriptive-correlational and prospective cross-sectional design study was carried out, with a quantitative approach, with a study population of 161 nurses and nursing assistants; a survey was used to obtain socio-demographic data, and the instrument used to determine the patient safety culture was the Medical Office Survey on Patient safety -MOSPS Questionnaire. Results: According to age, the most prevalent age range was 30-39 years with 51.6% (83); the most prevalent sex was female with 94.4% (152); in relation to the number of years working in the hospital, 34% (56) worked for more than 10 years; according to the type of contract, 59.0% (95) worked with a permanent contract. With regard to the patient safety culture, the following were identified as strengths: teamwork and respectful treatment; carrying out activities aimed at improving patient safety, preventive measures, evaluation of effectiveness after introducing changes to improve safety; the general appreciation that the management is interested in patient safety and that there is communication with the nursing staff. However, the frequency of reported events prevalence is low; in the nursing staff perception of the degree of Patient Safety is very good. Conclusion: The determinants of safety culture depend on interprofessional and administrative relations. If patient safety is promoted, the safety of the healthcare personnel is promoted.

Keywords: *-Patient Safety, Health Care, Nursing Care.*

I. INTRODUCTION

Patient safety is the absence of avoidable harm to patients during the process of medical care and the reduction of the risk of unnecessary harm associated with medical care to an acceptable minimum (1).

Every point in the care process contains a certain degree of inherent unsafety and errors by health care personnel can occur in different health care settings, and those that occur in hospitals can have serious consequences and the culture of safety comprises knowledge of safe practices, proper management of standards to avoid complications, and all safe guidelines that promote proper health care (2).

The World Health Organization (WHO) estimates that in developed countries one out of every 10 patients while receiving health care suffers some harm, due to adverse events, of which 50% are preventable. A study conducted in 26 hospitals worldwide in middle and low-income countries described that the rate of hospital events is around 8%, 83% of these events are preventable and 30% were associated with patient death (3).

Flores et al. state that patient safety culture includes the study of the dimensions of teamwork and follow-up of patient care; work pressure and rhythm; communication and responsiveness; and management support, which makes it possible to identify, plan, design and implement strategies in their favor, on the understanding that, if patient safety is promoted, the safety of the healthcare personnel is promoted (4).

Ortega (5) in his study on culture in hospitalized patient safety and its relationship with associated factors in nursing professionals of the hospitals José Carrasco Arteaga and Vicente Corral Moscoso, in Cuenca - Ecuador in 2016, with 191 nurses, the results were: The dimensions rated as strengths: Organizational learning/continuous improvement with 84.12%; and Teamwork in the Unit/Service with 75.26%; making the association of the variables: level of instruction and job position with a p of 0.02 and 0.04 of each one, concluding that the level of safety climate in nursing

professionals is high and has an association between the variables level of instruction and current job position.

Patient safety is preventing unintended or unexpected harm to individuals during the delivery of health care by supporting providers in minimizing patient safety incidents and driving improvements in safety and quality (6).

Patients should be treated in a safe environment and protected from avoidable harm, which requires clear policies, organizational leadership to drive safety improvements, qualified healthcare professionals and effective patient participation in their care to ensure sustainable and significant improvements in healthcare safety (7) (8). This means that patient safety culture encompasses knowledge of safe practices, appropriate management of standards to avoid complications or adverse events, and all safe guidelines for proper health care (9).

This research focuses on analyzing the level of patient safety culture of the nursing staff of the Homero Castanier Crespo Hospital, analyzing the knowledge, attitudes and practices that may affect patient safety and their relationship with the generation of medical errors, with safe practice and with the factors specific to each of the health personnel. The results will be useful to provide valuable information on patient safety culture, in order to create protocols to improve health care, guaranteeing safe, quality and warm patient care.

Health care is a complex environment where errors can cause patient harm or death (10). Safeguards generally work. Standardized procedures and well-prepared health care professionals exist, however, they have weaknesses (11). When system failures occur, errors that are usually detected slip through the cracks.

The price we pay when such situations occur is often high, both at the human level and at the health system level (12). Measurement of patient safety initiatives and adverse events is essential when monitoring the progress of these strategies, tracking success, and helping to identify problems or identify potential areas for improvement. Patient safety indicators are critical in describing the status of patient safety. They have highlighted large variations in the risk of different types of adverse events, as well as differences in risk by patient group (13).

The principles of patient safety have existed since ancient times, and the oath of Hippocrates reiterated these principles: to care for the health of patients and to guarantee the greatest respect for human life. However, it is important for this discipline to increase personal input and establish a cultural vision that involves the entire community, i.e.: government, health institutions, professionals and patients to maintain prevention and care systems (14).

In 1999, the American Institute of Medicine published the fundamental pillar on patient safety called "To err is human", which highlighted the high figures related to deaths caused by medical errors and adverse effects. However, it did not present solutions to transform and improve medical care (15). In October 2004, the World Health Organization launched the new World Alliance for Patient Safety at the headquarters of the Pan American Health Organization, generating global improvement plans to improve patient safety worldwide (16).

In the Institute of Medicine Report to Err is Human, medical errors were estimated to be the leading cause of death, although not all errors are considered preventable. The report indicated that improving inpatient safety required strong and visible leadership, an organizational culture to learn from errors, and changed collective professional norms and expectations (17).

The concept is an adaptation of safety culture, a concept that has been highlighted in the reports of the Chernobylin 1986 nuclear industry disaster. Poor safety culture was identified as the main cause of the accident. This thesis consists of four studies investigating different aspects of safety culture in health care and the implications for patient safety. While interest in safety culture began in the nuclear and airline industries, safety culture has become an increasingly recognized area of interest in relation to patient safety in health care (18).

In the 19th century, Tylor in 1871 defined culture very broadly as "the complex whole that includes knowledge, beliefs, art, law, morals, customs and any other capacity and habits acquired by man as a member of society". Although there are numerous definitions of the concept, most agree that culture is created from the experience of dealing with social situations and involves symbols that facilitate interaction (19).

Culture as unwritten rules in social life that have been accepted and are considered functional. There is also broad agreement that culture is learned and derived from one's social environment, it should be distinguished from human nature, on the one hand, and from an individual's personality, on the other. Culture is a collective phenomenon considered because it is shared with people living and/or interacting within the same social environment in which it was learned (18).

Patient safety and its relationship to the incidence of adverse events

Patient safety in the health care sector that applies safety science methods with the goal of achieving a reliable health care delivery system (20). Patient safety is also an attribute of healthcare systems; it minimizes the incidence and impact of, and maximizes recovery from, adverse events (21). Patient safety is a way of doing things as an emerging discipline. It seeks to identify essential characteristics and each of its components.

The great diversity of possible etiologies and disease manifestations makes system design in healthcare a unique challenge. However, the reality is that most conditions are common and of common etiology, allowing for optimal design, if not infallible results, systems can be designed to

meet that need for most protocols with adaptive options (15).

Strengths and threats around patient safety as seen by nursing professionals

Threats to safety

The main threats detected revolved around the following categories: Profession as a corporate barrier; health care organization and infrastructure, which included five subcategories: clinical variability, lack of protocols and absence of leadership, scarce material resources; inadequate proportion of health care professionals and lack of teamwork; care pressure and time; lack of incentives and motivation, absence of reliable safety indicators; communication and safety culture; safety education (18).

The organization and infrastructure of health care act as barriers to safety due to the existence of high clinical variability, the lack of protocols and the absence of clear leadership in the area of safety, manifested by insufficient dissemination of quality plans, protocols, etc., in addition to professionals, limited participation in their development. Other limiting factors are routines, lack of interprofessional protocols, lack of support from management to implement and develop a safe intervention, discontinuity of care or the inexistence of a process-based risk catalog. The participants express the need for the patient safety culture to reach all the organizational layers of the health center with a view to its effective establishment, which requires a great effort on the part of the administration (19).

The time factor is important. In addition to the lack of time during working hours to address patient safety issues and teach other professionals and the lack of real time to carry out activities and reach consensus on procedures, there is the use of professionals' working time to perform tasks and not detect complications. Another limiting factor is the lack of globally accepted and accepted indicators to analyze and evaluate patient safety, despite the evidence of work being done (19).

Regarding safety and error communication culture, a lack of communication and adverse event (AE) reporting culture is manifested, as well as difficulties in accepting human error for fear of being punished if AE is reported, misunderstanding of the population due to the lack of an error culture and the fact that error reporting may mean a problem for other professionals (15).

Insufficient education on clinical safety issues, as well as lack of specific training on process-related risks, inadequate knowledge management in this area, and lack of training on literature searches and the search for evidence. A final issue is the danger of information saturation in the field of safety at risk (18).

Strengths and opportunities

With respect to strengths and opportunities, participants' responses revolved around six aspects: organizational change; promotion of safety culture; education and professional development; patient relations; research; and strategic planning (15).

The opportunity for organizational change is feasible when professionals accept issues related to patient safety and due to the novelty and the great media repercussion of the topic. The existence of management teams that motivate the promotion of institutional changes needs clear leadership by a group of trained professionals, in which the figure of the nurse serves as a guarantee of patient safety; this will require the creation of an internal committee in each of the centers, with interdisciplinary sections in multidisciplinary teams (19).

Working in clinically safe environments makes healthcare professionals feel good and, in the long term, working safely decreases workloads and reduces costs, professional motivation and work engagement; for this purpose, the potential of several resources is available: digital history; emerging home automation; self-monitoring and prevalence cuts in centers; care safety indicators; incorporation of emerging technologies; evaluation of care practices; prevention of medication errors; etc. (12).

organizational culture; collaborative and participatory work; and promoting the belief that change and improvement are possible. Nursing can adapt to new ways of working and the increased awareness of healthcare professionals will enable reporting of safety-related adverse events without punitive effects for the professional (1).

On the other hand, the economic investments of some entities in research on the subject are growing, making safety a priority line of research. As a result of the increase in the number of publications on this topic, other professionals know what we do and this can help to improve safety (15).

Finally, with respect to strategic planning, the following opportunities for improvement are perceived:
- The Ministry funds many of the resources needed to improve patient safety;
- The health system is working to produce indicators and standards, in which patient safety is a priority;
- Introduction of safety policies in health facilities;
- Strategies and policies influence local, regional and national programs;
- Establishment of strategic lines by the central and autonomous government;
- Creation of synergies with different institutions of the Spanish National Health System;
- Strategies are designed at the global level and implemented at the local level. (19)

Quality and patient safety indicators in nursing practice

The evaluation of health services is required as part of the routine in health work, which allows the identification of weaknesses and opportunities for improvement. In this perspective, the nursing team's care actions should be monitored, with the objective of knowing their results and establishing best practices based on evidence (16).

Quality indicators can be a means to measure and evaluate nursing actions. The management tools that guide the way to excellence in care consist of the way in which health professionals verify an activity, monitor aspects related to a given reality and evaluate what is happening to patients, indicating the efficiency and effectiveness of the process and organizational results (14).

On the international scene, the use of indicators to measure hospital performance has become standard practice in recent years. A study conducted in the Netherlands, for example, verified the statistical association between the pressure injury prevention process and the occurrence of skin lesions, showing that their prevalence is related to the quality of care; therefore, monitoring this process indicator may provide information for future changes (13).

At the national level, studies on care evaluation indicate that nurses value the use of quality indicators to evaluate the performance of nursing work; therefore, these tools should be management instruments for health professionals, with the objective of improving the care provided. They also indicate that the evaluation of care through indicators is very important for the management of best practices in nursing, providing subsidies for decision making related to the quality and safety of services (5).

The main objective was to determine the level of patient safety culture among the nursing staff of the Homero Castanier Crespo Hospital.

II. METHODOLOGY

Type of research

A non-experimental, descriptive-correlational, prospective cross-sectional study with a quantitative approach was carried out.

Population

The population consisted of 161 nurses and auxiliary nurses of the Homero Castanier Crespo Hospital, located in the city of Azogues in the province of Cañar - Ecuador. The hospital is the main assistance center of the province of Cañar, where care is provided in different specialties: internal medicine, geriatrics, surgery, gynecology, pediatrics, cardiology, gastroenterology, rheumatology, nephrology, psychiatry, clinical neurology, hematology, vascular surgery, pediatric cardiology, traumatology, plastic surgery, dentistry, otorhinolaryngology, neurosurgery, , maxillofacial, psychology, ophthalmology and urology.

Sample

We worked with the total population that agreed to participate in the research, that is, 161 workers, including nurses and auxiliary nurses of the Homero Castanier Crespo Hospital.

Inclusion criteria

Health personnel of the Homero Castanier Crespo Hospital were included: nurses and nursing assistants who agreed to participate in the study voluntarily.

Exclusion criteria

All those who did not agree to participate in the study and those who were not working on the days of data collection for different reasons were excluded.

Instrument

Two questionnaires were used for data collection, which are described below**.**

-The questionnaire consisted of 6 questions to collect sociodemographic data on health personnel: age, sex, academic level, time working in the hospital, hours of work per week and type of contract.

The instrument used to collect information on patient safety culture was the Medical Office Survey on Patient Safety Questionnaire -MOSPS, (20) this questionnaire was translated, validated and adapted to Spanish by Benachi et al, which has 7 dimensions totaling 58 variables to be studied, and global score questions on patient safety, the answers will be measured by means of a Likert-type scale; This tool helped to reliably assess the behaviors and attitudes of the health area staff related to patient safety, allowing to obtain information on the safety culture and identify the strengths and weaknesses of the staff, in the sections will be rated with: Section A: Your Work Area/Unit: strongly disagree; disagree; disagree; indifferent; agree; strongly agree; Section B: Your Boss/Supervisor: strongly disagree; disagree; disagree; indifferent; agree; strongly agree; Section C: Communication: Never, Rarely, Sometimes, Most of the time, Always; Section D: Frequency of Reported Events: Never, Rarely, Sometimes, Most of the time, Always; Section E: Degree of Patient Safety: Excellent, Very Good, Fair, Poor, Poor, Bad; Section F: Your Facility (Hospital/Area, County, etc. in the case of Primary Care): 1 strongly disagree, 2 disagree, 3 indifferent, 4 agree, 5 strongly agree; Section G: Number of Notified Events: No notification, 1 to 2 notifications, 3 to 5 notifications, 6 to 10 notifications, 11 to 20 notifications, 21 notifications or more; the questions are grouped according to four criteria: Your Service/Unit, your hospital, communication in the service or unit and complementary information.

Procedure

To carry out this study, the study population was identified, a permit request and approval was issued at the Homero Castanier Crespo Hospital, the online survey was applied through the platform: docs.google. com/forms, for which the participant had to first accept the informed consent and after that the survey was generated that allowed data collection, from this the data of each subject, in rows, only an identifying code of subject number was assigned, no personal data was recorded as: names, surnames, email, therefore, the subjects cannot be identified; after obtaining

data, the tabulation and analysis of the surveys was performed.

Subsequently, an online educational intervention (ZOOM) on patient safety was carried out.

The research recognizes the subjectivity of the subjects who are part of the research process, which implies that the ideologies, identities, judgments and prejudices, and all the elements of culture are included in the purposes, the problem, the object of study, the methods and instruments; they become part of the selection of resources that are used to carry out research work and disseminate the results and interpretations of the study (22).

Ethics determines facets and scope of the dignity of the individual under study as a participant. It recognizes the person as a central individual in the ethical field, expressed as a legal participant, with rights of response and argumentation that must be recognized as autonomous; and this recognition is the basic element to reach the knowledge of the truth of the propositions and the correctness of the rules (23).

The research is determined by the principles that are:

Beneficence - Non-maleficence

A common feature of the professional codes of conduct and those specific to research is the principle of non-maleficence, so the purpose of the research is to contribute to general knowledge, being the study directly beneficial to the subject, so these studies can generate and improve nursing knowledge, clarifying that participants have no vested interest in this research, there is only personal interest, benefits and academic prestige (22).

Confidentiality

The ICN Code for Nurses in Research states that: Nurses acting as data collectors must recognize that they are now engaged in two separate roles, according to the professional code they cannot disclose confidential information even to members of the research team. Therefore, dissemination of the results of data collection will be approached anonymously to protect the privacy of the participant (22).

Informed consent

The informed and voluntary consent of the research subjects was applied to ensure that the participants have fully understood what has been proposed, which means that they are aware of the possible risks or discomfort. In addition, it ensures that participants have understood their right to withdraw at any time. To maintain the self-determination of participants, they must be fully informed about the study and its purpose. Consent should be obtained freely, with full awareness of the implications (22).

However, consent may be an important ethical issue for nurses when dealing with persons with diminished autonomy, such as children, the elderly, the mentally ill, etc. Nurses should ensure that consent has been obtained from the individual, when possible, or from their family members or guardians (23).

Therefore, the ethics committee approved this study, in which the respondents were not forced to participate in the study, so after accepting the informed consent form to participate in the study voluntarily, they answered the questions in the questionnaire without identification. In order to provide privacy to the participants, the study was strictly anonymous. In addition, to provide confidentiality, participants completed the online questionnaire, which did not ask for specific identification data.

Statistical analysis

A descriptive analysis was performed using percentages, frequencies, measures of central tendency (specific objective 1), followed by a normality test using Shapiro Wilk (W). Parametric tests were used. Therefore, a mean difference analysis was performed using Student's t-test for independent samples (specific objective 2). For the aforementioned statistical analyses, InfoStat and SPSS (26) were used.

III. RESULTS

First specific objective: To characterize the individuals included in the study, according to sociodemographic variables and level of culture of research interest.

The population studied consisted of 161 nursing professionals of the Homero Castanier Crespo Hospital. The statistical results of the variables studied are as follows;

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Table 1. *Distribution of the nursing staff at Hospital Homero Castanier Crespo according to socio-demographic variables*

SOCIO-DEMOGRAPHIC VARIABLES		f	%
AGE	20-29 years old	22	13,7%
	30-39 years old	83	51,6%
	40-49 years old	40	24,8%
	50 - 59 years old	16	9,9%
SEX	Male	9	5,6%
	Female	152	94,4%
WORKING TIME	Less than 11 months	15	9,3%
	Between 1 year - 5 years	53	32,9%
	Between 6 years and 10 years	37	23,0%
	More than 10 years	56	34,8%
TYPE OF CONTRACT	Occasional contract	54	33,5%
	Temporary contract	12	7,5%
	Permanent contract	95	59,0%
WORK AREA	Emergency	13	8,1%
	Operating Room	27	16,8%
	Gynecology	18	11,2%
	Neonatology	15	9,3%
	Pediatrics	11	6,8%
	Surgery - traumatology	11	6,8%
	Internal medicine	17	10,6%
	Outpatient consultation	11	6,8%
	Hemodialysis	2	1,2%
	Obstetric center	14	8,7%
	ICU	15	9,3%
	Other	7	4,3%

The study population of nursing personnel consisted of 161 professionals, including nurses and auxiliary nurses of the Homero Castanier Crespo Hospital. According to age, the most prevalent range was found to be 30-39 years with 51.6% (f=83); with respect to sex, the female prevailed with 94.4% (f=152); in relation to the number of years working in the hospital, 34% (f=56) were found to have worked more than 10 years, followed by 1 year - 5 years with 32.9% (53); according to the type of contract, 59.0% (f=95) worked in the hospital with a permanent contract. .

Table 2*. Distribution of the nursing staff at Hospital Homero Castanier Crespo according to the level of patient safety culture* - Section B: Your hospital

Think about your department/unit/work area in your facility.	**Very much in agreement**		**Agreed**		**Neither agree nor disagree**		**Disagree**		**Strongly disagree**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1.The health care staff supports each other in this unit.	53	32,9	76	47,2	7	4,3	8	5,0	17	10,6
2. We have enough staff to cope with the workload.	6	3,7	27	16,8	37	23,0	61	37,9	30	18,6
3. When we have a lot of work, we work as a team to get it done.	51	31,7	77	47,8	8	5,0	10	6,2	15	9,3
4. In this unit, staff treat each other with respect.	59	36,6	75	46,6	4	2,5	5	3,1	18	11,2
5. The staff in this unit work longer hours than would be convenient for patient care.	16	9,9	55	34,2	37	23,0	33	20,5	20	12,4
6. We have activities aimed at improving patient safety.	56	34,8	77	47,8	7	4,3	3	1,9	18	11,2
7. We have more replacement or casual staff than is desirable for patient care.	5	3,1	32	19,9	36	22,4	48	29,8	40	24,8
8. Staff feel that their mistakes are being used against them.	13	8,1	42	26,1	39	24,2	48	29,8	19	11,8
9. When a failure is detected, measures are put in place to prevent it from happening again.	48	29,8	83	51,6	7	4,3	7	4,3	16	9,9

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10. It is only by chance that no further errors occur in this unit.	13	8,1	39	24,2	43	26,7	41	25,5	25	15,5
11. When someone is overloaded with work, he usually finds help from his colleagues.	56	34,8	69	42,9	16	9,9	3	1,9	17	10,6
12. When an adverse effect is reported, it feels that the person is being judged and not the problem.	19	11,8	43	26,7	40	24,8	35	21,7	24	14,9
13. After introducing changes to improve patient safety, we evaluate their effectiveness.	42	26,1	82	50,9	13	8,1	10	6,2	14	8,7
14. Frequently, we work under pressure trying to do too much, too quickly.	12	7,5	36	22,4	37	23,0	51	31,7	25	15,5
15. Patient safety is never compromised by doing more work.	22	13,7	63	39,1	23	14,3	32	19,9	21	13,0
16. Employees are afraid that the mistakes they make will be recorded in their files.	22	13,7	60	37,3	35	21,7	19	11,8	25	15,5
17. In this unit we have problems with patient safety.	10	6,2	42	26,1	29	18,0	48	29,8	32	19,9
18. Our procedures and systems are effective in preventing errors.	43	26,7	71	44,1	21	13,0	8	5,0	18	11,2

In this section we take as strengths considering more than 75% of the summed score between strongly agree and agree, given by the domains of each of the following dimensions: Healthcare personnel support each other in this unit with 81% (f=129). When we have a lot of work, we work as a team to finish it with 79.5% (f=128); In this unit, staff treat each other with respect 83.2% (f=134); We have activities aimed at improving patient safety with 82.6% (f=133); When a failure is detected, measures are put in place to prevent it from happening again with 81.4% (f=130), When someone is overworked, they usually find help from their colleagues with 77.7% (f=125); After introducing changes to improve patient safety, we evaluate their effectiveness with 77% (f=124).

Table 3.- Section B: Your hospital

Dimensions	**Very much in agreement**		**Agreed**		**Neither agree nor disagree**		**Disagree**		**Strongly disagree**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1. My superior/boss makes favorable comments when he/she sees work done in accordance with established procedures.	55	34,2%	67	41,6%	18	11,2%	12	7,5%	9	5,6%
2. My superior/boss seriously considers suggestions from staff to improve patient safety.	43	26,7%	86	53,4%	8	5,0%	7	4,3%	17	10,6%
3. When work pressure increases, my superior/boss wants us to work faster, even if it puts patient safety at risk.	9	5,6%	18	11,2%	38	23,6%	63	39,1 %	33	20,5%
4. My superior/boss ignores patient safety problems, even though they are repeated over and over again.	8	5,0%	22	13,7%	34	21,1%	58	36,0 %	39	24,2%

In this section after the evaluation, the following dimensions are taken as strengths: My superior/boss makes favorable comments when he/she sees a job done in accordance with established procedures 75.8% (f= 122); My superior/boss takes seriously the suggestions of the personnel to improve patient safety 80.1% (f= 129).

Table 4.- Section C: Communication in your department/unit

	Most of the time		**Sometimes**		**Rarely**		**Never**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1. We are informed about the changes made as a result of the events that we have reported.	76	47,2%	63	39,1%	19	11,8%	3	1,9%
2. Staff freely comment if they see something that could adversely affect patient care.	67	41,6%	69	42,9%	19	11,8%	6	3,7%
3. We are informed about errors that are made on this unit.	72	44,7%	57	35,4%	27	16,8%	5	3,1%
4. Staff feel free to question the decisions or actions	20	12,4%	77	47,8%	35	21,7%	29	18,0%

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of those in higher authority.								
5. In this unit, we discuss how errors can be prevented from happening again.	80	49,7%	64	39,8%	15	9,3%	2	1,2%
6. Staff are afraid to ask questions when something is apparently not right.	15	9,3%	78	48,4%	35	21,7%	33	20,5%

The following dimensions are taken as strengths in this section: We are told about changes made from events we have reported 86.3% (f= 139); Staff freely comment if they see something that could negatively affect patient care 84.5% (f= 136); We are told about errors that are made in this unit 80.1% (f= 129); In this unit, we discuss how errors can be prevented from happening again 89.5% (f= 144).

Table 5.- Section D: Frequency of Reportable Events

	Always		**Most of the time**		**Sometimes**		**Rarely**		**Never**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
1. When an error is made, but is discovered and corrected before it affects the patient, how often is it reported?	51	31,7%	43	26,7%	36	22,4%	25	15,5%	6	3,7%
2. When an error is made, but does not have the potential to harm the patient, how often is it reported?	44	27,3%	48	29,8%	34	21,1%	26	16,1%	9	5,6%
3. When an error is made that could harm the patient, but does not, how often is it reported?	46	28,6%	37	23,0%	42	26,1%	29	18,0%	7	4,3%

In this section, the frequency of reported events is low and is demonstrated in the following dimensions with the usual frequency: When an error is made, but is discovered and corrected before affecting the patient, how often is it reported? 31.7% (f= 51); When an error is made, but does not have the potential to harm the patient, how often is it reported? 27.3% (f= 44); When an error is made that could harm the patient, but does not, how often is it reported? 28.6% (f= 46).

Table 6.- Section E: Degree of Patient Safety

	Excellent		**Very Good**		**Acceptable**	
	f	**%**	**f**	**%**	**f**	**%**
Please give your department/unit/work area an overall patient safety rating.	41	25,5%	98	60,9%	22	13,7%

In this section, in the Patient Safety Grade, 60.9% (f= 98), refer to it as very good, followed by 25.5% (f= 41) who define patient safety as excellent in the area where they work.

Table 7.- Section F: Your Center (in the case of Primary Care)

	Strongly Agree		**Agreed**		**Neither agree nor disagree**		**Disagree**		**Strongly disagree**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1. The management of this facility fosters a work environment that promotes patient safety.	98	60,9	21	13,0	29	18,0	11	6,8	2	1,2
2. The services/units in this facility do not coordinate well with each other.	27	16,8	21	13,0	39	24,2	58	36,0	16	9,9
3. Patient information is lost, in part, when patients are transferred from one service/unit to another.	28	17,4	15	9,3	27	16,8	65	40,4	26	16,1
4. There is good cooperation between services/units in the center that need to work together.	56	34,8	24	14,9	49	30,4	24	14,9	8	5,0
5. Important patient information is often lost during shift changes.	18	11,2	14	8,7	24	14,9	68	42,2	37	23,0
6. In this facility, it is often uncomfortable to work with staff from other services/units.	17	10,6	13	8,1	59	36,6	39	24,2	33	20,5
7. The exchange of information between services/units in this facility is often	14	8,7	19	11,8	32	19,9	70	43,5	26	16,1

problematic.										
8. The actions of the center's management show that patient safety is a high priority.	82	50,9	17	10,6	45	28,0	13	8,1	4	2,5
9. The facility management only seems to be interested in patient safety after an event has occurred.	19	11,8	19	11,8	43	26,7	57	35,4	23	14,3
10. The facility's services/units work together in a coordinated manner to provide the best care for patients.	92	57,1	13	8,1	39	24,2	11	6,8	6	3,7
11. Shift changes are problematic for patients at this facility.	10	6,2	18	11,2	26	16,1	64	39,8	43	26,7

By consolidating the evaluation obtained, it is determined that these components are generally perceived positively by the nursing staff, but do not reach the percentage necessary to be considered strengths.

Table 8.- Section G: Number of Events Reported

		f	**%**
1. Does your facility have a procedure for reporting incidents or adverse events?	Yes	154	95,7
	No	7	4,3
2. In the past 12 months, how many times have you reported an incident or adverse event in writing to your manager or others? Check ONE response.	No notification	110	68,3
	1 to 2 notifications	49	30,4
	3 to 5 notifications	1	0,6
	6 to 10 notifications	1	0,6

When analyzed with respect to events reported in the last year, 68.3% (f=110) stated that they had not reported any incident or adverse event, and 30.4% (f=49) stated that they had reported between 1 and 2 notifications.

Prior to the analysis of the results corresponding to the second specific objective, the sample normality test was performed.

Table 9.- Shapiro-Wilk Normality Test

	Shapiro-Wilk		
	Statistician	**gl**	**Sig.**
Patient safety	.772	161	.000

To accept a normal distribution, the statistical significance value (p value) must be greater than 0.05, corresponding to a confidence interval of 95%. On this occasion, it is observed that the statistical significance value (p) has been 0, less than 0.05, therefore, it means that the sample does not follow a non-normal distribution.

Second specific objective: To compare the level of patient safety culture and the sociodemographic characterization of the study population.

Table 10.- Group statistics corresponding to the test T Student

Group statistics					
SEX		**N**	**Mean**	**Standard deviation.**	**Standard error of the mean**
PATIENT_SAFETY	MALE	2.11	.500	.167	.167
	FEMALE	2.33	.621	.050	.050
AGE		N	Mean	Standard deviation.	Standard error of the mean
PATIENT_SAFETY	20-29 YEARS	2.18	.664	.142	.142
	30-39 YEARS	2.18	.587	.064	.064
ACADEMIC LEVEL		N	Mean	Standard deviation.	Standard error of the mean
PATIENT_SAFETY	BACHILLER	2.14	.515	.056	.056
	THIRD LEVEL	2.17	.685	.086	.086
WORK TIME		N	Mean	Standard deviation.	Standard error of the mean
PATIENT_SAFETY	BETWEEN 6 YEARS AND 10 YEARS	1.95	.468	.077	.077
	OVER 10 YEARS	2.09	.640	.086	.086

	OLD				
CONTRACT TYPE		N	Mean	Standard deviation.	Standard error of the mean
PATIENT_SAFETY	OCCASIONAL CONTRACT	2.17	.637	.087	.087
	PERMANENT CONTRACT	2.05	.608	.062	.062
WORK AREA		N	Mean	Standard deviation.	Standard error of the mean
PATIENT_SAFETY	Emergency	13	2.00	0.000	0.000
	Operating Room	27	**2.15**	.534	.103

According to the results of the Student's t-test, presented in table 10, those with the highest mean values have a higher level of patient safety culture. The results are consistent with those presented in Table 11, which shows the relationship between each of the sociodemographic variables and the degree of patient safety.

Table 11. Patient safety and sociodemographic characterization of the study population.

		Degree of patient safety					
		Acceptable		**Very Good**		**Excellent**	
		f	(%)	**f**	(%)	**f**	(%)
SEX	MALE	**0**	0.0%	**6**	3.7%	**3**	1.9%
	FEMALE	**22**	13.7%	**92**	57.1%	**38**	23.6%
AGE	20-29 YEARS	**3**	1.9%	**12**	7.5%	**7**	4.3%
	30-39 YEARS	**8**	5.0%	**52**	32.3%	**23**	14.3%
	40-49 YEARS	**7**	4.3%	**26**	16.1%	**7**	4.3%
	50 - 59 YEARS	**4**	2.5%	**8**	5.0%	**4**	2.5%
	60 - 69 YEARS	**0**	0.0%	**0**	0.0%	**0**	0.0%
ACADEMIC LEVEL	HIGH SCHOOL	**6**	3.7%	**61**	37.9%	**18**	11.2%
	THIRD LEVEL	**10**	6.2%	**32**	19.9%	**21**	13.0%
	FOURTH LEVEL	**6**	3.7%	**5**	3.1%	**2**	1.2%
WORK TIME	LESS THAN 11 MONTHS	**4**	2.5%	**7**	4.3%	**4**	2.5%
	BETWEEN ONE YEAR - 5 YEARS	**4**	2.5%	**29**	18.0%	**20**	12.4%
	BETWEEN 6 YEARS AND 10 YEARS	**5**	3.1%	**29**	18.0%	**3**	1.9%
	MORE THAN 10 YEARS	**9**	5.6%	**33**	20.5%	**14**	8.7%
TYPE OF CONTRACT	OCCASIONAL CONTRACT	**7**	4.3%	**31**	19.3%	**16**	9.9%
	TEMPORARY CONTRACT	**0**	0.0%	**7**	4.3%	**5**	3.1%
	PERMANENT CONTRACT	**15**	9.3%	**60**	37.3%	**20**	12.4%
WORK AREA	Emergency	**0**	0.0%	**13**	8.1%	**0**	0.0%
	Operating Room	**2**	1.2%	**19**	11.8%	**6**	3.7%
	Gynecology	**1**	.6%	**10**	6.2%	**7**	4.3%
	Neonatology	**4**	2.5%	**10**	6.2%	**1**	.6%
	Pediatrics	**1**	.6%	**3**	1.9%	**7**	4.3%
	Surgery - Traumatology	**3**	1.9%	**7**	4.3%	**1**	.6%
	Internal Medicine	**5**	3.1%	**5**	3.1%	**7**	4.3%
	Outpatient	**0**	0.0%	**10**	6.2%	**1**	.6%
	Hemodialysis	**0**	0.0%	**2**	1.2%	**0**	0.0%
	Obstetric Center	**2**	1.2%	**5**	3.1%	**7**	4.3%
	ICU	**2**	1.2%	**10**	6.2%	**3**	1.9%
	Other	**2**	1.2%	**4**	2.5%	**1**	.6%

In order to compare the level of patient safety culture and the sociodemographic characterization of the study population, the data presented in Table 10 will be analyzed. These percentages correspond to 57.1% (f=92) of women, 32.3% (f=52) in the age range of 30-39 years, 37.9% (f=61) of high school level, 20.5% (f=33) of those who have been working for more than 10 years,

37.3% (f=60) correspond to those who have a permanent contract, and 11.8% (f=19) belong to those who work in the operating room. This means that most of them consider patient safety to be very good.

Table 12.- Relationship between sociodemographic variables and patient safety

CORRELATIONS							
		AGE	**SEX**	**ACADEMIC LEVEL**	**WORK TIME**	**TYPE OF CONTRACT**	**WORK AREA**
Patient Safety	Correlation coefficient	,057	,081	,063	,078	,100	,001
	Sig. (bilateral)	,474	,309	,424	,324	,207	,987
	N	161	161	161	161	161	161

When analyzing the correlation between the sociodemographic variables and patient safety, it is observed that there is no significant relationship, since the correlation values are very close to zero.

Third specific objective: To carry out an educational intervention for nursing personnel on patient safety. An educational intervention was carried out with the purpose of improving knowledge on patient safety, the educational process was carried out through the ZOOM platform where topics related to patient safety were covered. This is summarized in the following table:

Table 13.- *Didactic unit plan*

OBJECTIVE	**CONTENTS**	**METHOD**	**TEACHING ASSISTANTS**
To improve the knowledge of the nursing staff of the Homero Castanier Crespo Hospital on patient safety.	-Patient identification. - Effective communication. - Safety in the medication process. - Safety in procedures. - Reduction of the risk of Healthcare Associated Infections (HAI). - Reducing the risk of patient harm due to falls. - Recording and analysis of sentinel events, adverse events and near misses. • Cultura de seguridad del paciente	E-learning, which is a method of learning through the Internet, was used.	- Digital Presentation - Educational videos

III. DISCUSIÓN

The safety culture includes the knowledge of safe practices, the adequate management of the norms to avoid any complication, in addition to all the safe guidelines that promote correct health care (2).

The study found that, according to age, the most prevalent range is 30-39 years with 51.6%; the female sex prevails with 94.4%; 34% work for more than 10 years in the hospital, followed by 32.9% between 1 year and 5 years; 59.0% work in the hospital with a permanent contract; these data affirm the results of different studies which affirm that nursing is a career selected by the female sex (5, 7, 9, 25, 26).

In this study, the patient safety culture was analyzed where it can be observed that there are strengths such as: When we have a lot of work, we work as a team to finish it with 79.5%; In this unit, the staff treats each other with respect 83.2%; We have activities aimed at improving patient safety with 82.6%; When any failure is detected, measures are put in place to prevent it from happening again with 81.4%, When someone is overloaded with work, they usually find help in their colleagues with 77.7%; After introducing changes to improve patient safety, we evaluated their effectiveness with 77%; which is consistent with studies where they determine that effective teamwork and improved organizational learning help hospital policy makers and nursing managers to improve a culture of patient safety, reduce the length of hospital stay and improve the safety of clinical trials(8,12,17).

In addition, effective nursing practice can also facilitate a culture of safety, which encourages nurses to participate in decision making and implement strategies to maintain nurse leadership skills (20,21,22). Studies show that people in the same workplace can support each other to get the job done well, safely, and in a timely manner, with an increasingly strong patient safety culture (5,7,12).

In the study referring to communication with the management of the service there are strengths such as: My superior/boss makes favorable comments when he/she sees a job done in accordance with established procedures 75.8%; My superior/boss takes seriously the suggestions of the staff to improve patient safety 80.1%.

We are informed about changes made from events we have reported 86.3%; Staff comments freely if they see

something that could negatively affect patient care 84.5%; We are informed about errors that are made in this unit 80.1%; In this unit, we discuss how errors can be prevented from happening again 89.5%.

The frequency of reported events is low and is demonstrated in the following dimensions with the usual frequency: When an error is made, but is discovered and corrected before affecting the patient, how often is it reported? 31.7%; When an error is made, but does not have the potential to harm the patient, how often is it reported? 27.3%; When an error is made that could harm the patient, but does not, how often is it reported? 28.6%. In units with better reporting, there are fewer incidents of errors with equipment and more collaboration with experts. Therefore, management should encourage staff awareness and compliance in error reporting, as it contributes to developing a strong safety culture.

Hospitals should pay close attention to the weaknesses identified in this study because they represent threats to patient safety. Understanding hospital nurses' perceptions of patient safety culture is equally important for Hospital Management to strengthen patient safety culture from the nursing staff's point of view (10,14,18,26). Nurses with lower workloads tend to have a better perception of patient safety, and vice versa. Therefore, nurse staffing policies are of paramount importance to improve patient safety culture (24, 26).

These dimensions have aspects that can negatively or positively affect patient safety in the hospital. Lack of coordination between hospital units is associated with errors and unexpected events. Good communication and a proactive response to staff recommendations to improve patient safety can help avoid errors. Currently, assessment of patient safety culture is carried out by many international accreditation organizations (12, 18, 24, 27). Above all, strengthening patient safety requires a strong commitment from healthcare organizations.

IV. CONCLUSIONES

Safety culture is fundamentally a local issue, in the sense that there can be wide variations in the perception of safety culture within the same organization. The perception of safety culture may be high in one unit of a hospital and low in another, or high among management and low among front-line workers.

Individual nurse burnout negatively affects perceptions of safety culture. These variations likely contribute to the disparate results of interventions aimed at improving the safety climate and reducing errors. Therefore, organizational leadership must be deeply involved and attentive to the issues faced by nursing staff, and must understand the established norms that often guide behavior.

Many determinants of safety culture depend on interprofessional relationships and other local circumstances, so safety culture change occurs at the local level. Consequently, improving safety culture often must emphasize incremental changes in the day-to-day behaviors of nursing staff.

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