

Information Technology and Quality of Service during COVID-19 in a Health Center, ICA 2022

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Abstract— The use of health information technology allows improving health care that could not be performed during the pandemic, in addition to controlling patients whose diagnoses are chronic can be treated remotely, so the research objective is to determine the Information Technology and quality of service during COVID-19 in a health center, Ica 2022. It is a quantitative correlational study, with a total population of 206 workers who filled out a questionnaire with sociodemographic data and information and communication technology instruments; and the scale of quality of care of health services. In the results, 92.2% (n=190) of the participants always frequently use information and communication technologies; and 7.8% (n=16) sometimes use information and communication technologies. In conclusion, workshops should be held to promote the importance of the use of information and communication technologies, in order to improve care processes in the establishment.

Keywords- Information Technology, Quality of health care, pandemic, coronavirus.

I. INTRODUCTION

From the first steps of humanity we have foreseen revolutionary resources that improve our quality of life through different technologies, born product of the needs of people, information technologies (IT), although it is currently known as Information and Communication Technologies (ICT) [1] [2].

ICTs today are used in different fields that allow the processing, management, storage, care and sharing of information from different technological resources, for example, it has brought many benefits in the area of health [3][4], since, during the coronavirus pandemic (COVID-19), the digitization of health records, care remotely, and the processing of surveys executed by health workers virtually and that this has allowed the decrease in the contagion by COVID-19 of the workers who perform these tasks [5][6].

While it is true, the consequences of COVID-19, nationally and internationally, have generated an imbalance in the quality of care by health professionals [7][8], given that a high demand for patients, scarce human resources, workers who tested positive and internal conflict, has allowed the health system to

collapse, leaving vulnerable the health system that during the pandemic has been very compromised [9][10].

But that, when seeking strategies that allow the improvement of care to the high demand of patients, the Pan American Health Organization (PAHO) in conjunction with the World Health Organization (WHO), prioritized information that required the use of ICTs during the COVID-19 pandemic, where health services, Use these methods to allow consultations to patients who could not be seen in person during the pandemic [11].

Therefore, the use of ICTs has allowed improving and increasing access to care in a timely manner, and helps facilitate the evaluation, diagnosis and treatment in suspected or positive people in a safe and effective manner, in which it minimizes any risk of transmission of COVID-19 [12][13].

Therefore, the research objective was to determine the Information Technology and quality of service during COVID-19 in a health center, Ica 2022.

II. METHODOLOGY

A. Research type and Design

In the study, according to its properties is quantitative, with respect to its methodology is non-experimental correlational [14].

B. Population

The population is made up of a total of 206 workers of a health center in Ica.

C. Inclusion Criteria

- Workers who have been working in the health center for more than 2 years
- Workers between 25 and 50 years old
- Workers who voluntarily agree to participate in the study.

D. Technique and Instrument

The technique used was the survey, in which through the data collection instruments, ICT Use Questionnaire and the Health Services Care Quality Scale (ECAS).

The Questionnaire on the use of ICT, is a questionnaire that presents 15 items distributed in 3 dimensions (Data collection in the population to be investigated, data processing and data interpretation), in which their response alternatives are handled by a Likert scale, where: "1=never", "2=sometimes" and "3=always". Where the final score varies from 1 to 45 points [15].

As for the reliability of the instrument, it was given through Cronbach's Alpha obtaining a score of 0.7 ($\alpha > 0.6$) for the 15 items of the instrument.

In the ECAS instrument, it is made up of 50 items distributed in 5 dimensions (structure, process-result, accessibility/opportunity, professional skills and continuity of management. In which the response alternatives are measured by a Likert-type scale, where: "1 = bad", "2 = fair", "3 = good" and "4 = very good", in which its final score is 50 to 200 points, so the higher the score, the higher the quality of service in the health center [16].

As for the reliability of the instrument, it was given through Cronbach's Alpha obtaining a score of 0.888 ($\alpha > 0.6$) for the 50 items of the instrument.

E. Place and Application of the Instrument

The respective workers of the health center were coordinated with each other, in addition to informing the head of the establishment about what is going to be done, in addition to providing the necessary information to the workers and thus have the necessary knowledge of what is going to be done in the study.

III. RESULTS

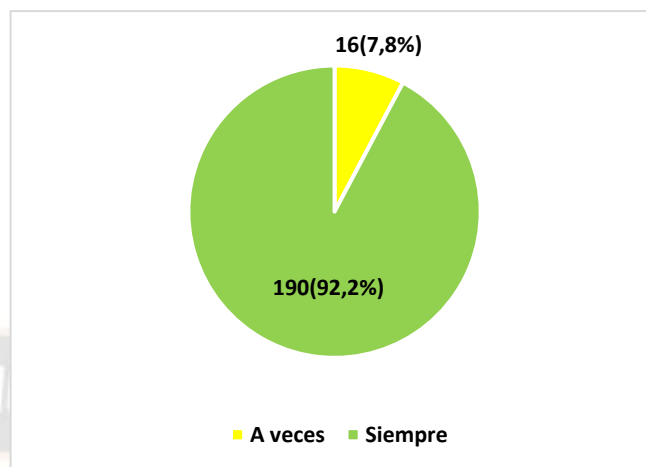


Figure 1. Frequency of the use of information and communication technologies during COVID-19 in a health center, Ica 2022

In figure 1, we can see in relation to the ICT variable, in which 92.2% of the participants always frequently use information and communication technologies; and 7.8% sometimes use information and communication technologies.

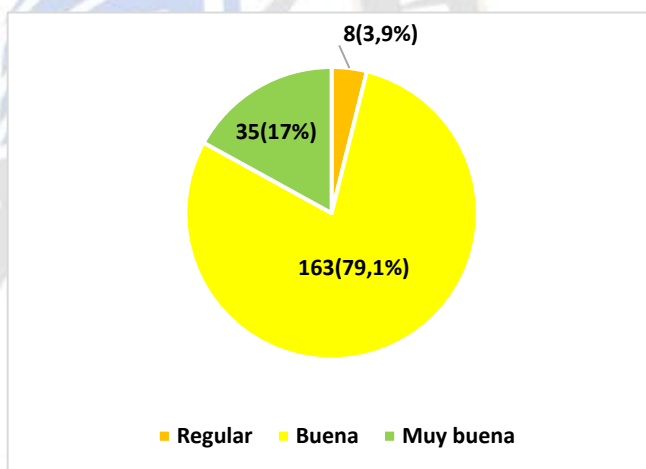


Figure 2. Quality of service during COVID-19 in a health center, Ica 2022

In figure 2, we can see in relation to the variable quality of service that, 17% of the participants have a very good quality of service, 79.1% a good quality of service and 3.9% a quality of regular service.

TABLE I. RELATIONSHIP OF INFORMATION AND COMMUNICATION TECHNOLOGY VARIABLES AND QUALITY OF SERVICE DURING COVID-19 IN A HEALTH CENTER, ICA 2022

			Quality of service			Total
			Regular	Good	Very good	
Information and communication technology	Sometimes	Recount	0	16	0	16
		% within Information and Communication Technology	0,0%	100,0%	0,0%	100,0%
	Always	Recount	8	147	35	190
		% within Information and Communication Technology	4,2%	77,4%	18,4%	100,0%
Total		Recount	8	163	35	206
		% within Information and Communication Technology	3,9%	79,1%	17,0%	100,0%

Chi-square tests

	Value	Gf	Asymptotic significance (bilateral)
Pearson's Chi-square	4,576 ^{to}	2	,101
Likelihood ratio	7,840	2	,020
Linear association by linear	1,548	1	,213
Number of valid cases	206		

A. 2 boxes (33.3%) have expected a count less than 5. The minimum expected count is .62.

In Table 1, we can see the relationship of the two main variables, in which it was determined by Pearson's chi-square statistical test (X^2). The significance level of the test obtained a value of 0.62 ($p > 0.05$) ($X^2 = 4.576$; $d.f = 2$). Therefore, an association hypothesis is not rejected, so there is statistical data that prove the relationship between information technology and communication with the quality of service. In which we can interpret it in that, 100% of the participants have a good quality of service but sometimes use ICTs; on the other hand, 4.2% of the participants have a regular quality of service but always use ICTs, 77.4% have a good quality of service and always use ICTs; Finally, 18.4% have a very good quality of service and always use ICTs.

IV. DISCUSSIONS

As for the variables, emphasis is given to the perspective of innovation and quality of care by the workers who work in the health institution.

Therefore, in terms of results, workers handle ICTs and also maintain a quality of service, this is because ICTs considerably influence workers, since it allows a virtual and non-face-to-face transition meeting in patients who come to be treated, given that due to the COVID-19 pandemic, this option of carrying out care remotely, allows patients to be attended and to perform their necessary care for their health and well-being, in addition to positively influencing the care that is carried out, since not being in direct contact, allows the spread and contagion of COVID-19, therefore when using ICTs, allows workers and in turn patients, to protect their health and not get infected by COVID-19.

V. CONCLUSIONS

It is concluded that, workshops on the use of ICTs and their importance within the health area are held.

It is concluded that training should be carried out for health center workers, which allows them to increase their knowledge about the use of ICTs and how it can benefit care in the face of the high demand of patients to be attended.

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