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RESEARCH ARTICLE

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## COMPUTERIZATION AS A STRATEGY FOR IMPROVEMENT IN THE USE OF THE SITUATION ROOM IN HEALTH: PERCEPTION OF THE PROFESSIONALS OF THE BASIC CARE OF JOÃO PESSOA-PB

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### ABSTRACT

**Objective:** Describe the perception of professionals in the Primary Care teams of João Pessoa-PB about the computerization of the work process in the Health Situation Room. **Methodology:** Exploratory, descriptive study, with a qualitative approach accomplished from June to August 2019, at Family Health Units in João Pessoa - PB, with a population of 200 health teams and a sample of 74 people, represented by one of their higher education professionals. **Results:** In the perception of professionals, computerization is seen as a strategy that can promote improvements in the use of the health situation room, since it can act as a tool to enhance the work process in primary care, subsidizing decision making and contributing to the improvement of professional and management practices. **Conclusion:** It is possible to improve tools to collect, store and process a large volume of data at high speed, systematizing all the content obtained. This strategy both facilitates its use and understanding and expands the manager's ability to interpret them correctly and combine them according to the moment and the context.

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## INTRODUCTION

The use of information is fundamental to the decision-making process in several areas of knowledge, being of fundamental relevance in the health area, as it allows managers and professionals to assess the situation of a given territory, in order to formulate planning and implementation actions of strategies to face the problems identified (Lunkes *et al.*, 2016; Sellera *et al.*, 2019). To effectively develop its role, health information needs to be organized and standardized. A strategy that has been adopted to respond to this need is the creation and use of the Health Situation Room, which has become relevant in the health work decision process (Brasil, 2016).

According to the Pan American Health Organization (PAHO<sup>1</sup>), the Health Situation Room<sup>2</sup> consists of a set of data grouped in a specific spreadsheet and fed directly by professionals or through information systems, thus allowing to know the reality, the profile of the enrolled population, their needs and vulnerabilities, as well as the work developed by the health sector and its impact on a specific population range. It can be understood by the territory of a basic health unit, a health district, municipality, state or even a country (OPAS, 2010).

<sup>1</sup>Translator's note: in portuguese Organização Pan-Americana da Saúde (OPAS)

<sup>2</sup>Translator's note: in portuguese Sala de Situação de Saúde (SDSS)

The advancement and appearance of new technological resources has led to several possibilities for the application of technology in different economic and social sectors, among which is the health sector. It is observed, today, that the information previously stored only on paper, today is made available digitally, providing fast and wide access to health information (Alves *et al.*, 2015). In this respect, health informatics is undoubtedly a great ally of the needs for greater advances in the computerization of health care processes and records, as well as in communication methods, enabling an effective situational strategic planning. (Gandini *et al.*, 2002). Based on the different contexts in which health informatics operates, the importance of its use is verified due to the complexity existing in all subdivisions of health and their work processes. Therefore, the use of information technology and computerized systems is necessary to achieve better control and management of the information produced and used by both professionals and health managers. However, the process of computerization of services at all levels of care in the Unified Health System (UHS<sup>3</sup>) has been taking place gradually and, in some scenarios, is not being properly valued. As a result, services such as primary care still need modernization in their work routine, including the computerization of work processes with data and use of the Situation Room, as occurs in João Pessoa, Paraíba. This problem constitutes an important barrier in the process of monitoring, planning and evaluating the work process of the health teams, hindering the decision-making process. According to Pereira *et al.* (2012), Information Technology (IT<sup>4</sup>) and its computerized systems are essential in the health area, mainly in the improvement of a service, in view of enabling the integrity of the information made available, through policies for valuing quality and safety in the system, in addition to policies for modeling for the correct data entry, uniting information science technologies with computer science in order to optimize work processes in the health area. In this perspective, on the basis of the above and the fact that the Situation Room is not yet computerized in the municipality in question, the following question emerged: What is the perception of professionals in the primary care teams of João Pessoa-PB about computerization in the use of the Health Situation Room? Thus, the present study aims to describe the perception of professionals in the primary care teams in João Pessoa-PB about the computerization of the work process of the Health Situation Room.

## MATERIALS AND METHODS

This is an exploratory, descriptive study, with a qualitative approach. The qualitative approach is widely used as a means for the development of research that seeks ways to try to understand what is beyond quantifiable, in other words, they propose to analyze the subjectivity and the interviewee's discourse in a systematic and precise way (Minayo, 2010). The research was carried out from June to August 2019, at Family Health Units (FHU<sup>5</sup>) in João Pessoa - PB belonging to all health districts. The structure of the municipality consists of a total of 200 health teams, divided into five health districts. The planning stage of the survey applied to obtain the data opted for the sampling plan stratified by districts in the city of João Pessoa. The target population was defined as the Family Health Teams in the city of João Pessoa, as a reference. Therefore, a defined sample was made up of 74 (seventy-four) health teams, so that each of the João Pessoa Family Health Teams was represented by one of their higher education professionals - doctors, nurses and dentists - who worked in some of the primary care services in the city of João Pessoa-PB, Brazil, being selected based on the following criteria: Being a professional with a higher education degree working in a family health team in the aforementioned municipality, having been active for at least six months and agree to participate in the research. The necessary information for the development of the research was obtained through the technique of semi-structured interviews, carried out in the health units where the members of the sample exercise work activities. It should be noted that all interviews were preceded

by the presentation and reading of the Free and Informed Consent Term (ICF<sup>6</sup>), leaving the interviewees with a copy of it. After the collection phase, a data survey was carried out, in which it was possible to identify the perception of the professionals of the primary care teams in João Pessoa-PB about the computerization of the work process of the health situation room. In order to preserve the interviewees' identity, the nomenclature P1 to P74 was used to differentiate the speeches of the professionals who participated in the research. The entry and quality control of the quantitative data obtained were performed using Microsoft Excel software, while the analysis of the qualitative data obtained was performed using the Bardin method, which describes the content analysis, consisting of a thematic categorization of the content itself inserted in the speech of the interviewees, through systematic techniques, through a pre-analysis of the collected data, followed by the exploration of the material and the treatment of the results (Bardin, 2011). The study was guided by ethical aspects in research involving human beings, recommended in Resolution 466/12 of the National Health Council<sup>7</sup>, which discusses the involvement with human beings in research. This study was approved by the ethics committee, having a favorable opinion through the CAAE: 08805318.8.0000.5188.

## RESULTS AND DISCUSSION

There was a predominant female participation (81%), in the age group of 30 to 59 years old (47.2%) and with training in nursing (58.1%). Most of the sample had up to 10 years of professional experience (41.9%), up to 10 years of experience in the Family Health Strategy (51.4%) and a service provider (82.4%). Through semi-structured interviews, the perception of the sample professionals about the computerization of the Health Situation Room in the city of João Pessoa-PB was explored, since this process has not yet been carried out. From these speeches, it was realized that computerization is seen as a strategy capable of optimizing the use of the health situation room. In this context, it was possible to list two categories: computerization as a strategy for improving the use of the health situation room and computerized health situation room as a tool to enhance the work process in primary care.

### Category 01: Computerization as a strategy for improving the use of the health situation room

Although the Health Situation Room used in primary care is not yet used in a computerized format by all health teams, professionals are able to see that performing this modernization process would facilitate its use.

*“Computerization is good because it could facilitate data handling. In addition, it could reduce the errors that occur in the data provided on paper and even the loss of these records over time” P02*

*“You could virtually have greater security in sending the numbers and a return of the data sent, a better control of these numbers over the months that we inform” P05*

*“With computerization, you could reduce rework in data collection and still have easy and immediate access to indicators, saving time and making work with the situation room more dynamic.” P28*

*“Computerized, the room would have easy presentation and manipulation of data, better visualization of our team's data and even better transmission of data produced for management” P52*

*“You already have so much paperwork. Not only the situation room but all the systems that we need to use should be all*

<sup>3</sup>Translator's note: in portuguese Sistema Único de Saúde (SUS)

<sup>4</sup>Translator's note: in portuguese Tecnologia da Informação (TI)

<sup>5</sup>Translator's note: in portuguese Unidades de Saúde da Família (USF)

<sup>6</sup>Translator's note: in portuguese Termo de Consentimento Livre e Esclarecido (TCLE)

<sup>7</sup>Translator's note: in portuguese Resolução 466/12 do Conselho Nacional de Saúde

*virtual. Avoids the accumulation of paper, the loss of records, facilitated the sending to the district and even the use of this data” P61*

According to Samicoet *et al.* (2002) regardless of the form of use, computerized or physical, it is essential that the data compiled in the Situation Room represent the reality of a population with clarity, objectivity and reliability and that the data can be analyzed, interpreted to guide health actions for assisted persons. However, the perception of professionals is that computerization could guarantee greater ease, quality and security in the consolidation, transmission and use of the data fed, in addition to simpler and faster access. Furthermore, computerization represents to the interviewees the possibility of greater practicality and agility in the handling of health data, resulting in a better organization of work and in gaining time in view of the various demands they have in the routine of the health service.

*“Computerizing the Situation Room would bring practicality and agility to our work in family health” P17*

*“ Computerizing our work with the room and as a whole would be important and would bring benefits to us, such as greater agility and organization of our work routines” P38*

*“Computerizing would decrease the use of so much paper and become more organized. Today almost everyone has access to the internet on their cell phones and so they could use the situation room whenever and wherever they want. It would be much more practical” P41*

*“ With the situation room being computerized, it would have more agility in collecting information, faster data transmission, better access to professionals, saving paper and space, improving assessment and planning with the data and sending the data within the time stipulated by the managers” P50*

*“With computerization, it would be a more agile, practical, organized work and this even motivates the use of data by the team in their routine” P67*

*“With the digital room we could have a greater involvement of the entire team in the feeding and analysis of the data generated” P72*

By promoting a more practical and agile process, it is noted that the computerization of the use of the Situation Room can promote greater involvement of the entire health team in the consolidation and use of data. Thus, such a moment could be valued as an opportunity for the exchange of knowledge, communication and team interaction, seeking to hold together a discussion about their indicators and the reflection produced by them in the work process. After all, as described by Lanzoni and Meirelles (2012), the proposal for health work in primary care is based on a collective and multiprofessional development, in a horizontal, integrated and cooperative way, however, in some scenarios, it is still found permeated by fragmented actions and the presence of poor interactions between team members. This leads to a lack of collective responsibility and creates discontinuity in relation to work activities.

## **Category 02: Computerized health situation room as a tool to enhance the work process in Primary Care**

The Situation Room has become relevant in the health work process, since it enables the use of subsidiary information and an effective decision-making decision, thus being a significant space for interaction between teams, managers and an opportunity for self evaluation (Brasil, 2016). It is noticeable the health professionals' understanding of the benefits that the Situation Room is already providing in its manual format, currently used, but they express that

computerization could amplify its potentialities in view of the work process present in primary care.

*“The room is good, but with computerization it would be easier to compare data, analyze the team's performance and to outline new ways of working” P03*

*“It could be computerized to access the computer and even the cell phone, facilitating the consolidation of the team data, the evaluation of the indicators, the discussion of the team with the district, avoiding losing printouts and saving space in the unit, which already has many other papers used constantly” P10*

*“I see computerization as a way of improving the planning, monitoring and evaluation of the activities we carry out with the community. It would be great” P22*

*“By computerizing, it would facilitate the visualization of the local reality and the storage of data for future discussions on the needs of the team and the population served in the territory” P35*

*“Through a computerized situation room it would help in decisions and in promoting improvements in the teamwork process” P51*

*“Computerization could further benefit the team's adequate decision-making. It would be faster, more dynamic and more objective and would make our work more efficient” P58*

The aforementioned speeches show that health professionals recognize the significant role played by the Health Situation Room for the decision-making process in their work process, besides that, they realize that this importance also extends to the decision-making process of managers. This perception corroborates with the research by Albuquerque *et al.* (2013), which highlights that the Health Situation Room has the capacity to support decision-making processes for health professionals and managers, allowing for a dynamic process of planning, intervention and evaluation, with decisions aligned with the needs of the locality of activity.

*“I agree with the change from the paper situation room to a virtual one. Technology makes our daily lives easier and if we can count on it at work, even better. I was going to streamline and help people in the health team and managers in monitoring the work in primary care, seeing how we can improve” P09*

*“It would facilitate the quality of the teams' work and the vision of all professionals and managers to plan and promote health actions would be broader.” P18*

*“The computerized situation room could allow a better visualization of the data, with functions that signal when we reach or not our goals and thus better plan the actions together with managers, team professionals, intern students and the population” P36*

*“Computerizing would speed up the work process and also assess the health situation of our team's territory, as well as that of the entire municipality by the managers. I was going to optimize decisions” P44*

*“When computerized, the situation room would enable gains not only for the team's professionals, but also for the managers. It would be easier to plan and act together to improve our work process and the quality of the assistance we provide to users.” P62*

For Santos *et al.* (2017) one of the problems identified in health work is the great demand for bureaucratic work capable of becoming a

barrier for workers, given the accumulation of forms to be filled in daily, in addition to the work overload experienced by health professionals. These factors can encourage errors in filling in, lack of information, misinterpretation, disorganization of the flow of information and the work process. Through the advances that constantly occur in the area of information technology, it is possible to improve tools to collect, store and process a large volume of data at high speed, systematizing all the content obtained. This strategy both facilitates its use and understanding and expands the manager's ability to interpret them correctly and combine them according to the moment and context, always with the main objective of meeting the health needs of the population linked to that unit (Branco, 2006; Moroni *et al.*, 2017). Therefore, there is a need for greater reflection on the theme and studies to improve the Situation Room, with investments in technologies that can improve this tool and its potential, adding greater confidence and value in health decision-making. Thus, it will be possible to optimize its use, extracting even more benefits and reducing the obstacles that arise in its applicability.

## CONCLUSION

The development of this study exposed that, in the perception of Primary Care professionals, in João Pessoa, computerization is seen as a strategy that can promote improvements in the use of the health situation room and that, once computerized, can act as a potentializing tool for the Primary care work process, supporting decision making and contributing to the improvement of professional and management practices. Thus, it is expected to provide greater support for the computerization of the use of the health situation room, so that the data generated by the municipality itself are better organized, used, analyzed and valued, seeking to obtain more accurate results and significant impacts. in the work process of Primary Care professionals and managers, as well as in the care offered to users.

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