Assessment of patient safety culture in Primary Health Care
Avaliação da cultura de segurança do paciente na Atenção Primária à Saúde
Evaluación de la cultura de seguridad del paciente en la Atención Primaria de Salud

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https://doi.org/10.6018/eglobal.503031

Received: 30/11/2021
Accepted: 4/01/2022

ABSTRACT:
Introduction: The assessment of patient safety culture in Primary Health Care enables the analysis of the commitment of professionals and organizations in the continuous provision of effectively and safe care from the moment the user enters the service.
Objective: To analyze patient safety culture in Primary Health Care.
Material and Method: Cross-sectional research carried out in Basic Health Units. Data collection took place in 2019, with 29 health professionals, through the instrument Survey on Patient Safety Culture for Primary Care. Data were analyzed according to the recommendations of the instrument.
Results: In the dimensions of culture, Teamwork (65.23%), and Continuity of care (52.59%) stood out as positive; in the negative answers, Work pressure and pace (49.14%) and Staff training (33.33%) stood out; and, among neutral answers, Patient safety and quality issues (56.55%) and Exchange of information with other institutions (51.72%) were the highest.
Conclusions: No strong dimensions were identified for the patient safety culture; therefore, it has been shown that the patient safety culture in the health units investigated is incipient.

Key words: Patient Safety; Organizational Culture; Quality of Health Care; Primary Health Care; Cross-Sectional Studies.

RESUMO:
Introdução: A avaliação da cultura de segurança do paciente na Atenção Primária à Saúde possibilita a análise do status de comprometimento dos profissionais e das organizações na viabilização contínua de um cuidado efetivamente seguro desde o momento da entrada do usuário no serviço.
Objetivo: Analisar a cultura de segurança do paciente na Atenção Primária à Saúde.
Resultados: Nas dimensões de cultura destacaram-se como positivas o Trabalho em equipe (65,23%) e o Acompanhamento do cuidado ao paciente (52,59%); nas respostas negativas a Pressão e ritmo de trabalho (49,14%) e o Treinamento da equipe (33,33%) e, como respostas neutras a Segurança do paciente e problemas de qualidade (56,55%) e a Troca de informações com outras instituições (51,72%).

Conclusões: Não foram identificadas dimensões fortes para a cultura de segurança do paciente, logo, revela-se que a cultura de segurança do paciente nas unidades de saúde investigadas apresenta-se incipiente.

Palavras chave: Segurança do Paciente; Cultura Organizacional; Qualidade da Assistência à Saúde; Atenção Primária à Saúde; Estudos Transversais.

RESUMEN:

Introducción: La evaluación de la cultura de seguridad del paciente en Atención Primaria de Salud permite analizar el estado de compromiso de los profesionales y organizaciones en la viabilidad continua de una atención eficazmente segura desde el momento en que el usuario ingresa al servicio.

Objetivo: Analizar la cultura de seguridad del paciente en Atención Primaria de Salud.

Material y Método: Investigación transversal realizada en Unidades Básicas de Salud. La recolección de datos se realizó en 2019, con 29 profesionales de la salud, a través del instrumento Encuesta sobre Cultura de Seguridad del Paciente en Atención Primaria. Los datos se analizaron de acuerdo con las recomendaciones del instrumento utilizado.

Resultados: En las dimensiones de cultura se destacaron como positivas el Trabajo en equipo (65,23%) y Seguimiento de la atención al paciente (52,59%); en las respuestas negativas, Presión y tasa de trabajo (49,14%) y Formación de equipos (33,33%) y, como respuestas neutrales, la Seguridad del paciente y Problemas de calidad y (56,55%) e Intercambio de información con otras instituciones (51,72%).

Conclusiones: No se identificaron dimensiones fuertes para la cultura de seguridad del paciente, por lo que se revela que la cultura de seguridad del paciente en las unidades de salud investigadas es incipiente.

Palabras clave: Seguridad del Paciente; Cultura Organizacional; Calidad de la Atención de Salud; Atención Primaria de Salud; Estudios Transversales.

INTRODUCTION

Patient safety (PS) encourages safe practice to reduce unnecessary harm caused by assistance to an acceptable minimum level. Therefore, continuous efforts must be aimed at establishing a safety culture for the patient in health institutions(1).

As a result, aiming to direct our attention to the essential actions and safety practices in health care, international goals and campaigns from the World Health Organization (WHO) and the Institute of Healthcare Improvement (IHI) stand out as sources that can aid managers to disseminate safety culture in health systems(2).

In the Brazilian setting, the National Program of Patient Safety (PNSP) is a tool to be considered, as patient safety is considered in all axes that serve as a base for its construction: encouragement of safe care practices, involvement of the citizen in their own safety, more researches on the topic and its inclusion in graduation syllabi(3).

Therefore, patient safety culture is understood as the development of a set of beliefs shared by the collaborators of an organization who support safe practices throughout the health work process. As a result, its evaluation makes it possible to analyze how committed workers and organizations are to continuously enable the provision of care that is effectively safe(4,5).
That said, it is essential for the safety culture of the patient to be implemented in all levels of health care, since strengthening it conditions and structures the institutional development of measures that make viable improvements in the quality of the assistance provided, reducing adverse effects (AE)\(^6\).

Among the many complex fields in health services, Primary Health Care (PHC) stands out, not only because it is the entryway into the other health services, but also because it is a setting of assistance that presents risks to the users, while, nonetheless, most investigations about patient safety culture are directed at hospital care\(^7\).

Therefore, it is paramount to carry out studies about the safety culture of the patient in the PHC, to identify weaknesses and strengths that may make the establishment of a culture of patient safety in this context more difficult — or optimize it.

From this perspective, the guiding question of this research was: What are the characteristics of the safety culture of the patient developed in the PHC of a capital in the Brazilian Northeast? Its objective was analyzing the patient safety culture in the PHC of a capital of the Brazilian Northeast.

**METHOD**

This is a descriptive, cross-sectional, quantitative research, carried out in the Primary Health Care Units (UBS) and Family Health Units (USF) that form and structure the primary health care network of a capital of the Brazilian Northeast which is organized in five sanitary districts (South, West, East, North I, and North II).

The population of this study was formed by the workers from the health units of the North I sanitary district, since it has the highest number of workers (403) among the districts. Data collection took place from March to June 2019, during the morning and/or afternoon. Workers who had formal work bonds with the health unit for at least 12 months were included. We excluded those who were in vacation and/or on leave due to other factors in the period of collection. Those hired for specific periods of time were also excluded.

For data collection, the instrument Medical Office Survey on Patient Safety Culture (MOSPSC) was used, in a version previously translated and adapted for the culture of Brazil. This version is formed by 51 questions in nine sessions that allow to ascertain the status of patient safety culture. The sessions from A to G have subitems with multiple choice variables in a 5-point Likert scale, to measure the construct "patient safety"; session H addresses professional practices; and session I allows for the subjective evaluation of the topic in the workplace\(^8\).

Quantitative data were tabulated in the software Statistical Package for the Social Sciences (SPSS) and analyzed according with relative and absolute frequencies. In regard to the percentage of each dimension, when ≥75% of responses were positive, it was considered to be a strength, while ≥50% negative responses were seen as a weakness\(^9\).
The research is in accordance with the ethical precepts determined by Resolution No. 466/2012 from the National Council of Health and was approved by Substantiated Opinion No. 3.192.943 from the Research Ethics Committee on March 12, 2019, CAAE: 08003219.6.0000.5537.

RESULTS

The final sample of the study included 29 participants, due to the eligibility criteria. It was formed by a nurse (3.4%), two nursing technicians (6.9%), 11 community health agents (37.9%), nine endemic control agents (31%), two managers (6.9%), one administrative technician (3.4%), one dental surgeon (3.4%), one worker responsible for organizing schedules (3.4%), and one receptionist (3.4%).

Regarding their complementary education, three (10.3%) workers are post-graduated (lato-sensu or stricto sensu postgraduation). Furthermore, it was found that all participants have only one formal job.

It stands out that only three workers (10.3%) stated to have a course or other form of training in PS. Table 1 includes the sociodemographic and professional characterization of the participants of the research.

Table 1. Sociodemographic and professional characterization of the Primary Health Care workers.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>72,40</td>
</tr>
<tr>
<td>Male</td>
<td>08</td>
<td>27,60</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower than 30</td>
<td>03</td>
<td>10,34</td>
</tr>
<tr>
<td>30 to 50 years</td>
<td>18</td>
<td>62,07</td>
</tr>
<tr>
<td>Above 50 years old</td>
<td>08</td>
<td>27,59</td>
</tr>
<tr>
<td><strong>Monthly Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 3 MWs*</td>
<td>25</td>
<td>86,20</td>
</tr>
<tr>
<td>3 to 5 MWs*</td>
<td>03</td>
<td>10,30</td>
</tr>
<tr>
<td>More than 5 MWs*</td>
<td>01</td>
<td>03,40</td>
</tr>
<tr>
<td><strong>Time working in the unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 6 months to less than 2 years</td>
<td>07</td>
<td>24,10</td>
</tr>
<tr>
<td>From 2 to 4 years</td>
<td>10</td>
<td>34,50</td>
</tr>
<tr>
<td>More than 4 years</td>
<td>12</td>
<td>41,40</td>
</tr>
<tr>
<td><strong>Time since graduation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>10</td>
<td>34,50</td>
</tr>
</tbody>
</table>
Table 2 shows the relative mean of the responses from PHC workers about their perceptions in regard to the culture of patient safety in the context of the dimensions investigated.

It stands out that the dimensions with 75% or more positive answers are evaluated as strengths. On the other hand, those with 50% or more negative responses are considered to be in need of critical attention.

**Table 2.** Mean percentage of responses of Primary Health Care workers per dimension of patient safety, according with the MOSPSC^{(8)}

<table>
<thead>
<tr>
<th>Safety culture dimensions from the MOSPSC</th>
<th>% Positive responses</th>
<th>% Neutral responses</th>
<th>% Negative responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication openness</td>
<td>38,79</td>
<td>41,38</td>
<td>19,83</td>
</tr>
<tr>
<td>Communication about error</td>
<td>51,72</td>
<td>43,10</td>
<td>05,17</td>
</tr>
<tr>
<td>Exchange of information with other institutions</td>
<td>14,66</td>
<td>51,72</td>
<td>33,62</td>
</tr>
<tr>
<td>Office processes and standardization</td>
<td>35,34</td>
<td>33,62</td>
<td>31,03</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>42,53</td>
<td>47,13</td>
<td>10,34</td>
</tr>
<tr>
<td>Overall perceptions of patient safety and quality</td>
<td>21,55</td>
<td>47,41</td>
<td>31,03</td>
</tr>
<tr>
<td>Leadership support for patient safety</td>
<td>36,11</td>
<td>41,67</td>
<td>22,22</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>52,59</td>
<td>42,24</td>
<td>05,17</td>
</tr>
<tr>
<td>Patient safety and quality issues</td>
<td>21,03</td>
<td>56,55</td>
<td>22,41</td>
</tr>
<tr>
<td>Staff training</td>
<td>36,78</td>
<td>29,89</td>
<td>33,33</td>
</tr>
<tr>
<td>Teamwork</td>
<td>61,23</td>
<td>26,72</td>
<td>12,07</td>
</tr>
<tr>
<td>Work pressure and pace</td>
<td>31,90</td>
<td>18,97</td>
<td>49,14</td>
</tr>
</tbody>
</table>

PHC workers showed, as their greatest strength, teamwork — although it did not reach the minimum percentage (≥75%) required to be considered an actual strength; their greatest weakness, on the other hand, was the work pressure and pace, whose score almost reached 50% of negative responses. Furthermore, there was a high number of neutral responses from the participants. Therefore, many weaknesses were noticed and must be discussed for an efficient safety culture to be achieved in the UBS health service.

**DISCUSSION**

The number of participants in this study may be considered small when compared to the total number of workers in the sanitary district North I. This is due to the fact that
most workers were excluded because they did not have a formal work contract with the institution or had been working there for less than 12 months due to the political transition of the city being investigated and to the fact that there were new hires.

It should be mentioned that the foment of safety culture demands time, and the team must be used to the routines of the unit and have the necessary skills to carry out activities that are intrinsic to the service, such as immunization, welcoming the patient, consultations, and others. This statement was verified in a study\(^{(10)}\) where interviewees with formal work contracts and higher experience in the work environment had higher scores in the perception of safety culture.

Furthermore, considering the analysis of the data, it stands out that few workers have been educated or trained in PS. Therefore, it can be supposed that the development of patient safety culture in this environment is not homogeneous, since the set of actions and values must be understood and shared by all members of the team. To do so, the set of actions and values must be understood and shared by all members of the team, which requires encouragement to permanent education in health services and the transversal presence of this topic since the formation of the professionals\(^{(11)}\).

Another, more expressive issue, was the predominance of females, which is in accordance with literature findings\(^{(12)}\) about the socio-professional profile of workers in the PHC. Participants have indicated that they only have one formal job, which is a positive aspect when related with the culture of patient safety, due to the fact that it allows us to suppose that these professionals are under a lower workload when compared to individuals with multiple jobs. Thus, they have more time to contribute in the identification of issues that can be optimized in the unit they work in, thus strengthening the culture of safety of the patient in the service\(^{(1,12,14)}\).

Regarding the age of the participants, most of them are from 30 to 50 years old, and, in regard to work time, most have worked for more than four years. Both findings suggest that these workers are used to PHC working processes. Similary to the fact that these workers have only one job, this may be a positive characteristic in the construction and/or reinforcement of a culture of patient safety, since its multiple perceptions and experiences, when based on the needs of users and/or health units, encourage the elaboration of ideas/strategies in the short- or long-term, generating beneficial results that can be replicated\(^{(1,8,10,12,14)}\).

From the perspective of monthly income, most of them state that they earn less than three minimum wages. This factor has direct implications in the motivation and in the provision of safe care, since the devaluation of one's work is a negative determinant to the promotion of PS\(^{(13)}\). Therefore, it is necessary to create managerial, political, and/or economic plans to change or minimize this deficiency, especially associating them with measures that encourage training or recycling the knowledge of PHC professionals through courses, workshops, scientific events, and others.

Regarding the dimensions analyzed, none was characterized as a "strength" of the culture of patient safety in the PHC. However, "Teamwork", "Communication about error", and "Continuity of care", presented the higher percentages of positive responses.
In regard to teamwork, the involvement between management and direct assistance workers is essential, and all those involved must understand it as a way to enable changes and improvements in the context of PS, thus generating effective results in the care for patients\(^{(14)}\). This is because, when they act together, it is easier to see what their different perspectives have in common. As a result, the elaboration of parameters and/or working processes that aid in the assessment of patient safety become increasingly robust and practical\(^{(3,6,8,10)}\).

As a result, the importance of activities that can mitigate the errors in health care stand out. Thus, it is paramount for the team to have a broad and horizontal relation, based on collective learning and free from intellectual/scientific judgment\(^{(15)}\).

In this regard, communication about error may make it easier to construct this professional involvement, as it allows not only for the establishment of a bond of trust in the hierarchical levels of the organization, but also the identification of causes and the implantation of strategies/barriers to prevent and minimize the incidence of AEs\(^{(15)}\). However, there is a fragility in the communication between providers of health service, generating a discontinuity in the process of care due to their lack of access to information about attention, which can take place in regard to the scheduling of clinical consultations, the execution of exams, periods and times for vaccines and their priority groups, medication delivery, collective activities, among other actions that take place in the PHC\(^{(1,8,12,16-18)}\).

As a result, it is relevant to discuss the "Continuity of care", since it enables quality health care with improvements in the safety of attention, as it facilitates the tracking of the patient in this level of care and optimizes the relations between the several centers of health the form the primary health care network\(^{(3,5,6,14,17)}\).

It should be noted that, although no dimension had more than 50% of negative responses, the dimensions "Work pressure and pace", and "Staff training" had the highest percentage of negative responses. These dimensions are interrelated, as they suggest weaknesses in issues of education and in the work process in the context of the professional environment\(^{(18)}\).

In this context, the continued education of health workers is paramount, because, in addition to being a pillar to encourage the promotion of patient safety culture, it aims to promote the qualification and actualization of care provided to subjects, consequently leading to the recognition of the work activities inherent to the service\(^{(19,20)}\).

Furthermore, overworked professionals are factors that contribute for the formation of an unsafe institution that may put its users at risk and cause suffering to the worker. To generate positive changes in this reality, it is necessary for each collaborator to have well-defined work processes, which must be achieved through actions in the legislation sphere, to foment discussion and strengthen the process in the strategies of professional valorization as a way to guarantee rights and generate incentives\(^{(3,8,20-22)}\). Regarding neutral responses, the dimension "Exchange of information with other institutions" stood out. This aspect is considered to be important to ensure that the PHC service works satisfactorily, strengthening safety in the transition of care, considering the adequate communication of information about the patient aimed at avoiding mistakes, and reiterating the aspects from "Continuity of care" that are
relevant for the integration of the different services provided by the health network (14,17).

Moreover, understanding and discussing the domain "Patient safety and quality issues" is paramount, because safe and resolutive health care is the base for the improvement of the quality of assistance. As a result, it is necessary to structure previously defined work processes and to mobilize safe health care strategies to minimize issues related to the services, such as difficulties of access, the mistaken identification of the patient, and/or medication errors due to failures in the prescription or lack of revisions during consultations (1,4,11,23).

The active participation of users and their relatives in the process of self-care management should also be highlighted, due to the fact that more autonomy in clinical frameworks allows for broader beneficial measures, which, as they are developed by the patients and others in their daily lives, aid in the strengthening of patient safety, since it is understood as a set of ideas, knowledges, values and beliefs shared by all (5,17,18,21,23).

From this perspective, the shortcomings in health care can be diminished through the involvement of the team and managers in the dissemination of safe conducts; the training of workers; the optimization of communication between professionals; by enabling health care providers to understand and manage the AEs; and by motivating health workers to act in favor of PS (1,3,4,12,14,18,23).

The main limitation of this study is the fact that there were no specific observations from the investigators in regard to existing working processes developed by professionals in the final sample, due to the facts that the culture of safety involves more subjective social and/or cultural aspects and that the instrument used did not allow us to evaluate these. Nonetheless, the inclusion of a single sanitary district of the region evaluated may lead to results different from those from other districts, since the management of these other sectors is not the same, which may have a direct influence in the quality and/or level of the culture of patient safety culture that is developed in these services.

Thus, it is important to provide periodical training sessions to improve knowledge about the culture of patient safety in PHC workers, to find measures to diminish work pressure and pace, and to optimize the integration of managers, patients, and health workers, aiming to contribute for safe, quality, and participative care.

The results of this research also show that all dimensions analyzed need improvement for a homogeneous patient safety culture to be established. It is possible that the knowledge of this information by PHC nurses may help in the creation of plans of interventions that aim to improve these domains and, thus, to reach a better health care practice, since nurses are the main workers in this context of assistance when it comes to planning, coordination, and implementing permanent education initiatives.
None of the elements analyzed by the instrument reached the minimum of ≥75% positive responses, showing that patient safety culture in the PHC investigated is incipient. Therefore, it is pertinent to develop interdisciplinary teamwork in which communication is effective in the entire health care network, so the assistance provided can continue and bring benefits to the patients. Thus, we recommend further research with similar or distinct methodological approaches, to unveil broader perceptions or understandings about the culture of patient safety in several PHC contexts.

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