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Patient safety culture in the Primary Health Care

Cultura de segurança do paciente na Atenção Primária à Saúde

Cultura de seguridad del paciente en la Atención Primaria de Salud

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ABSTRACT

Objective: To evaluate thepatient safety culturein thePrimary Health Care (PHC). **Method:** A cross-sectional study with 349 health professionals and PHC managers from a city of Rio Grande do Sul, Brazil. The tool used was Safety Attitudes Questionnaire Ambulatory Version. Data-independent double typing and descriptive and inferential statistical analysis were performed. **Results:** The total score varied between 3.4 and 8.4 with mean (7.0 ± 1.3), positive evaluation in the "Patient Safety" domain (8.2 ± 2.0). Working on the Family Health Strategy and having five to 12 years of work was significant for positive culture. The recommendations to improve the safety culture were: Implementation of protocols, training, communication improvement and resolvability. **Conclusion:** The patient safety culture prevailed. Establishing a constructive safety culture with safe behaviors represents factors for improving patient safety in Primary Care settings.

Descriptors: Patient Safety; Primary Health Care; Patient Care Team; Organizational Culture; Quality of Health Care.

RESUMO

Objetivo: Avaliar a cultura de segurança do paciente na Atenção Primária à Saúde (APS). **Método:** Estudo transversal, com 349 profissionais da saúde e gestores da APS de um município do Rio Grande do Sul, Brasil. O instrumento utilizado foi *Safety Attitudes Questionnaire Ambulatory Version*. Realizou-se dupla digitação independente dos dados e a análise estatística descritiva e inferencial. **Resultados:** O escore total variou entre 3,4 e 8,4 com média (7,0±1,3), avaliação positiva no domínio "Segurança do Paciente" (8,2±2,0). Trabalhar na Estratégia de Saúde da Família e ter de cinco a 12 anos de trabalho foi significativo para cultura positiva. As recomendações para melhorar a cultura de segurança foram: Implantação de protocolos, capacitações, melhoria da comunicação e resolutividade. **Conclusão:** Prevaleceu a avaliação negativa da cultura de segurança do paciente. Estabelecer uma cultura de segurança construtiva, com comportamentos seguros representa fatores para aprimorar a segurança do paciente em ambientes de cuidados primários.

Descritores: Segurança do Paciente; Atenção Primária à Saúde; Equipe de Assistência ao Paciente; Cultura Organizacional; Qualidade da Assistência à Saúde.

RESUMEN

Objetivo: Evaluar la cultura de seguridad del paciente en la Atención Primaria de Salud (APS). **Método:** Estudio transversal, con 349 profesionales de la salud y gestores de la APS de un municipio de Rio Grande do Sul, Brasil. El instrumento utilizado fue *Safety Attitudes Questionnaire Ambulatory Version*. Se realizó doble digitación independiente de los datos y el análisis estadístico descriptivo e inferencial. **Resultados:** La puntuación total varía entre 3,4 y 8,4 con media (7,0 ± 1,3), evaluación positiva en el dominio "Seguridad del Paciente" (8,2 ± 2,0). Trabajar en la Estrategia de Salud de la Familia y tener de cinco a doce años de trabajo fue significativo para la cultura positiva. Las recomendaciones para mejorar la cultura de seguridad fueron: Implantación de protocolos, capacitaciones, mejora de la comunicación y resolutividad. **Conclusión:** Prevalece la evaluación negativa de la cultura de seguridad del paciente. Establecer una cultura de seguridad constructiva, con comportamientos seguros, representa factores para mejorar la seguridad del paciente en ambientes de atención primaria.

Descriptores: Seguridad del paciente; Atención Primaria de Salud; Grupo de Atención al Paciente; Cultura Organizacional; Calidad de la Atención de Salud.

INTRODUCTION

Patient safety has been a worldwide theme in recent years, especially in the last decade. Being fundamental to quality of care, it has become important for health professionals who aim to provide safe and efficient care to patients[1]. Patient safety is important in all three levels of health care: Primary, Secondary and Tertiary Care, since care involves the promotion and prevention of Incidents and Adverse Events (AE), a survey of the causes of these events, the management of resources effective organizational leadership and the strengthening of the safety culture[2].

In Brazil, Primary Health Care (PHC) is the main form of access to the Brazilian Unified Health System (SUS – *Sistema Único de Saúde*), and the first point of contact for patients with the service. The SUS, created by the Brazilian Federal Constitution in 1988, was defined with universal and egalitarian principles, in the conception that health is a right of everyone and the duty of the State, being organized from the guidelines of decentralization, comprehensive care and participation of the society. The implementation of SUS led to the expansion of the Primary Care Network, where through the decentralization process services were expanded and Health Care Networks (RAS-*Rede de Atenção à Saúde*) were strengthened. SUS has responsibility for the management and health care of the population, requiring a participatory team and committed to its users[3-4] .

In this context, PHC is understood as a key component of health care. Therefore, the improvement of the safety culture in this environment should be a priority for the management of the health units[5]. Although much of the population's health care is provided at PHC, the theme "Patient Safety Culture" is still little explored in this context.

Safety culture is conceptualized as the set of values, attitudes, skills and behaviors that determine commitment to health and safety management, aiming to substitute guilt and punishment for the opportunity to learn from failures and improve health care[6]. This commitment on the part of managers and professionals is very important, since incidents related to care are also present in the context of PHC, but are still poorly visualized.

In this sense, the evaluation of the patient safety culture from the perspective of PHC multiprofessional teams is essential and urgent. Understanding a health institution's setting from a safety culture analysis is the starting point for action to change for incident reduction and assurance of safe health care[4]. The reason why, the interest in factors related to the patient safety outside the hospital environment has increased[7].

In some countries, such as the United States, Australia and Portugal, patient safety has been studied and explored. In Brazil, the theme gained greater visibility in 2013, starting with the implementation of the National Patient Safety Program (*Programa Nacional de Segurança do Paciente*). However, it should be considered that there is still little investment in Brazilian research in this setting[8].

From the research question "How is the patient safety culture at PHC, from the perspective of health professionals?"

OBJECTIVE

This study aims to evaluate the patient safety culture in Primary Health Care of a municipality of Rio Grande do Sul, Brazil.

METHOD

Ethical aspects

This project was approved by the Research Ethics Committee of the *Universidade Federal de Santa Maria*, and performed according to the Resolution 466/2012 of the National Health Council (*Conselho Nacional de Saúde*) that establishes standards for research involving human beings. All participants received information regarding the research, as objective, justification, relevance of the study, risks and benefits, as well as legal and ethical issues. After agreeing to participate in the study, all professionals received the questionnaire with the Informed Consent Form (ICT) in two copies.

Design, place of study and period

Cross-sectional study, carried out at the PHC of a municipality in the countryside of Rio Grande do Sul, Brazil. The municipality's Municipal Health Office is responsible for the PHC public network, which is comprised of Basic Health Units (BHU) and Family Health Strategies (FHS). The BHU includes Primary Care teams. The FHS encompasses Family Health Teams and Mixed Units. The BHU, in general, are composed of general practitioner, gynecologist, pediatrician, dentist, nurse, nursing technician and some have Community Health Agent (CHA). At the FHS, the health team is composed of a doctor, nurse, nursing technician, dentist and Dental Office Assistant (DOA), CHA and some have a nutritionist, pharmacist and physiotherapist. The Mixed Units usually have two teams, offering the population Emergency Care and BHU services[9].

The data collection took place from February to August 2016. Participants were professionals who work in the teams of BHU, FHS and Mixed Units.

Population; criteria of inclusion and exclusion

The population was composed of all health professionals and managers of the municipality, which are part of the following professional categories: Nurses, nursing technicians, CHA, doctors, dentists, oral health assistants, nursing auxiliaries, physiotherapists, physical educators, doctors, psychologists, pharmacists, nutritionists, social workers and speech therapists, totaling 349 professionals. Inclusion criteria: Professionals who have been in the unit for at least one month. Those who were away from work during the data collection period were excluded. Participants were approached by the research coordinator and previously trained students. It occurred during the work shift, with prior scheduling of a more favorable date and time, so that it did not affect the progress of work.

Study protocol

The Brazilian version[2] of the Safety Attitudes Questionnaire Ambulatory Version (SAQ-AV), originally developed by the University of Texas, was used to be used in ambulatories[10]. There are 62 questions divided into nine domains (Work Satisfaction, Teamwork Culture, Working Conditions, Communication, Patient Safety, Permanent Management, Unit Management, Stress Recognition, Error) and a question about having previously answered the questionnaire. Responses were assessed on a five-point Likert scale ranging from

Strongly Disagree to Strongly Agree and Not Applicable. SAQ-AV also provides a space for participants to cite three recommendations to improve patient safety in their health facility.

Additional questions were added to the tool by the researchers about sociodemographic and labor variables (age, sex, marital status, schooling, professional category, work unit, bond with the institution, work shift, time of experience in PHC, unit, likes his work, chose to work in the unit, had training, another job, form of contact with the patient).

Analysis of results and statistics

The data were organized in the Epi-Info® program, version 6.4, with double independent typing. After analysis of differences in typing, data were analyzed in the PASW Statistics® (Predictive Analytics Software, SPSS Inc., Chicago - USA) 18.0 for Windows.

For each SAQ-AV question, scores ranging from 2 to 10 were established, being: 2 "Strongly Disagree"; 4 "Lightly Disagree"; 6 "Neutral"; 8 "Lightly Agree" and 10 "Strongly Agree"[2]. SAQ-AV analysis was performed with SAQ-AV Total and by domains. For the descriptive analysis of SAQ-AV, the sum of the responses to the 62 items was performed[6]. The response of the items was added in order to calculate the score of each domain divided by the total number of items in the domain. Scores with values ≥ 7.5 are considered positive indicators of safety attitudes. SAQ-AV domains were classified according to cut-off point for safety culture and dichotomized in negative (<7.5) and positive (≥7.5) culture[2].

The SAQ-AV reliability analysis was performed by the Cronbach Alpha Coefficient and the Kolmogorov-Smirnov test to test the data normality. Descriptive analysis of categorical variables was performed using absolute (N) and relative (%) frequencies. For the quantitative variables, mean and Standard Deviation were used when they presented symmetrical and median distribution and interquartile range, if asymmetric distribution. SAQ-AV reliability analysis was performed using the Cronbach Alpha Coefficient and the Kolmogorov-Smirnov test to test the normality of the data. In all analyzes, a statistically significant association was considered when there was a value of $p < 0.05$.

The recommendations cited by the participants were organized according to similarity and classified into dimensions.

RESULTS

Of the 349 workers, 7 (2%) were away from work due to leave for health treatment. Thus, the eligible population was 342 professionals. 43 (12.6%) refused to participate in the study, 39 (11.4%) were not located or did not return the questionnaire after three attempts. 260 workers answered the questionnaire. In this total, it was still necessary to exclude 6 (2.3%) questionnaires that contained blank questions. With this, 254 (74.3%) professionals participated effectively in the study. These were divided by the performance sectors: Management (coordinators), BHU, FHS and Mixed Units.

Female professionals (81.1%), aged between 22 and 39 years (53.6%), married or living with a partner (65%) and had a graduation (61.8%), predominated. As for the professional category, 62 (24.4%) were CHA, 50 (19.7%) nurses, 43 (16.9%) nursing technicians, 42 (16.5%) doctors, 23 (9.5%), dentists, 9 (3.5%) oral health assistants, 7 (2.8%) nursing auxiliaries and 18 (7.1%) others (physiotherapists, physical educators, psychologists, pharmacists, nutritionists, social workers and speech therapists).

The majority of the population worked in FHS (44.1%), had mixed work shift (84.6%) and statutory regime (86.6%). As for the experience, they worked at PHC for more than 13 years (36%), unit experience time up to one year (33.6%).

In relation to having another work activity, 200 (78.7%) did not have it, 146 (57.7%) chose to work in their health unit, 246 (97.2%) said they liked their job, 144 (57.1%) had some training and the contact with the patient was predominantly direct (96.1%).

The results of the factors that interfere in the patient safety, according to the sociodemographic and labor characteristics of the participants, make up Tables 2 and 3.

Regarding the relationship between SAQ-AV domains, sociodemographic and occupational characteristics, the "Work Satisfaction" domain presented a positive safety culture with statistical significance in the categories CHA (N=31; 51.7%), nursing technician (N=29; 70.7%), doctors (N=23; 54.8%) and nursing assistant (N=4; 57.1%) and direct contact with the patient (N=123; 51.3%). Dentists obtained a higher percentage for negative evaluation (N=15; 65.2%).

Table 1 – Descriptive analysis of the Safety Attitudes Questionnaire - Ambulatory Version domains in Primary Health Care, Rio Grande do Sul State, Brazil, 2016 (N=254)

SAQ Domains	Respondent		Mean	Standard Deviation	Median	IQ Interval*			Min	Max	α**
	n	%				25	50	75			
SAQ-AV Total	217	85.4	7.0	1.3	7.0	6.0	7.0	7.3	3.4	8.4	0.86
Work satisfaction	250	98.4	7.3	1.0	7.3	7.0	7.3	8.2	3.3	10.0	0.41
Teamwork Culture	252	99.2	7.2	2.0	7.3	6.3	7.3	9.0	1.3	10.0	0.39
Working Conditions	242	95.3	5.0	1.3	5.0	4.0	5.0	5.4	1.4	10.0	0.42
Communication	242	95.3	7.1	1.2	7.2	6.3	7.2	8.1	2.3	10.0	0.76
Patient Safety	254	100.0	8.2	1.8	8.7	7.3	8.7	10.0	0.0	10.0	0.63
Permanent Education	250	98.4	6.5	2.1	6.7	4.7	6.7	8.0	7.0	10.0	0.55
Unit Management	251	98.8	7.4	2.1	7.5	6.0	7.5	9.5	0.0	10.0	0.69
Stress Recognition	245	96.5	6.3	1.1	6.4	5.8	6.4	6.9	1.3	9.3	0.27
Error	252	99.2	5.0	2.0	5.5	4.0	5.5	6.0	0.0	9.0	0.35

*Note: *Interquartile Interval; ** Cronbach alpha; SAQ - Safety Attitudes Questionnaire.*

Table 2 – Analysis of the Safety Attitudes Questionnaire - Ambulatory Version, according to socio-demographic variables and professional category of Primary Health Care workers, Rio Grande do Sul State, Brazil, 2016, (N=254)

Variable	Negative Culture (<7.5)		Positive Culture (≥7.5)*		*p* value**
	n	%	n	%	
Sex					0.761
Male	31	77.5	9	22.5	
Female	141	79.7	36	20.3	
Age					0.074
22 to 39 years	76	72.4	29	27.6	
40 to63 years	74	83.1	15	16.9	
Marital status					0.666
Married or with a partner	111	79.9	28	20.1	
Single or without a partner	58	77.3	17	22.7	
Schooling					0.225
High school	56	74.7	19	25.3	
Higher education	116	81.7	26	18.3	
Professional category					0.050
Community Health Agent	37	80.4	9	19.6	
Nurse	36	80.0	9	20.0	
Nursing technician	22	66.7	11	33.3	
Doctor	28	75.7	9	24.3	
Dentist	20	87.0	3	13.0	
Oral health assistant	7	77.8	2	22.2	
Nursing auxiliary	5	83.3	1	16.7	
Others***	17	94.4	1	5.6	

*Note: *Cut-off; **Pearson Chi-square test; *** Physiotherapist, physical educator, psychologist, pharmacist, nutritionist, social worker, speech therapist.*

In the "Teamwork Culture" domain, it was observed that single professionals (N=50; 58.8%) and who were working up to one year (N=49; 58.3%) presented significantly higher percentages for positive culture. Professionals with medium level education (N=58; 60.4%), who had been working for more than 6 years in the same health unit (N=51; 60.7%), who had indirect contact with patients (N=9; 90.0%) presented higher percentages for negative culture (p <0.05). The domain "Working Conditions" did not present a statistically significant relation with the sociodemographic and labor variables.

In the "Communication" domain, nursing technicians (N=25; 64.1%) presented higher percentages of positive evaluation; the other categories were classified with higher percentages for negative culture (p=0.009). FHS professionals presented a meaningful difference for positive culture (N=53; 51.5%); professionals whose experience in PHC was less than 4 years (N=42; 54.5%) and greater than 13 (N=59; 68.6%) and those with direct contact with the patient (N=126; 54.3%) showed higher percentages for negative culture (p <0.05).

With the highest percentages for positive culture of the Patient Safety domain, FHS workers (N=86; 76.8%) who worked in the afternoon shift (N=7; 70%), with experience between 5 and 12 years in the PHC (N=63; 79.7%) and who had a direct relationship with the patient (N=166; 68.0%) presented a significant relationship. "Permanent Education" showed significantly higher percentages for negative culture with female professionals (N=141; 69.5%), higher education level (N=114; 72.6%), working in BHU (N =47; 83.9%), with experience in PHC for more than 13 years (N=64; 72.7%), who had not had training (N=88; 82.2%) and had another job (N=41; 78.8%). Among the professional categories, only the CHA (N=31; 52.5%) were classified with positive culture in this domain.

Table 3 – Analysis of the Safety Attitudes Questionnaire - Ambulatory Version, according to labor variables of Primary Health Care professionals, RS, Brazil, 2016, (N=254)

Variable	Negative Culture (<7.5)		Positive Culture (≥7.5)*		*p* value
	n	%	n	%	
Sector of performance					0.042**
BHU	41	82.0	9	18.0	
FHS	66	73.3	24	26.7	
Mixed Unit	53	81.5	12	18.5	
Management	12	100.0	-	-	
Workshift					0.185**
Morning	23	88.5	3	11.5	
Afternoon	7	87.5	1	12.5	
Mixed	142	78.0	40	22.0	
Bond					0.494***
Hired	26	83.9	5	16.1	
Approved in public contest	146	78.5	40	21.5	
PHC time experience					0.001***
Up to 4 years	58	82.9	12	17.1	
5 to 12 years	42	63.6	24	36.4	
More than 13 years	68	88.3	9	11.7	
Time working in this unit					0.844***
Up to 1 year	57	77.0	17	23.0	
2 to 5 years	55	79.7	14	20.3	
More than 6 years	59	80.8	14	19.2	
If like their job					0.721****
Yes	167	79.1	44	20.9	
No	4	80.0	1	20.0	
Chose working in that unit					0.877***
Yes	101	78.9	27	21.1	
No	71	79.8	18	20.2	
Had any training					0.292***
Yes	87	76.3	27	23.7	
No	83	82.2	18	17.8	
Has another job					0.193***
Yes	38	86.4	6	13.6	
No	134	77.5	39	22.5	
Form of contact with the patient					0.209****
Direct	163	78.4	45	21.6	
Indirect	9	100.0	-	-	

*Note: *Cut-off; ** Chi-Square test with correction; *** Pearson Chi-square test; **** Fisher's Exact Test; BHU - Basic Health Units; FHS - Family Health Strategies; PHC - Primary Health Care.*

It was evidenced that professionals who have direct contact with the patient (N=147; 61.10%) were classified for positive culture related to the "Unit Management" domain, when compared to those who have indirect contact with the patient (N=8; 80%) (p<0.05). Professionals aged 40-63 years (N=91; 91%) and management professionals (N=12; 100%) were significantly classified with higher percentages for low stress recognition. The relationship between the "Error" domain and labor variables found that professionals who chose to work in their health care unit (N=139; 95.9%) had higher percentages for negative culture (p <0.05).

Chart 1 - Recommendations for improving patient safety culture in Primary Health Care, Rio Grande do Sul State, Brazil, 2016

Dimension	Recommendation
Protocols	Implement protocols for Patient Safety and standardize care protocols (acute, chronic and emergency diseases).
Skills	Training, courses, seminars, Permanent Education and research.
	Periodic team meetings to organize the work process and feedback of the activities carried out.
Working environment and infrastructure	Appropriate accessibility for users with special needs.
	Supply of materials for Urgency and Emergency care.
	Proper sterilization center.
Working Conditions and Overload	Sufficient number of professionals to meet the demand.
	Availability of specialists for reference care.
	Fixed and full-time medical staff.
Communication	Effective communication between professionals and users. Strengthen the reception of users. Identify patients correctly. Guide patients on the safe treatment and use of medications. Coordination more active and open to suggestions regarding the problems of unity
Error	Admit and dialogue about the error. Identify incidents.
	Medical prescriptions with legible letters.
Resolvability	Finish what is possible from the service in the unit and refer for reference when necessary.
	Referral and resolvable counter-referral.
	Discuss with the team the causes of the incidents and the behaviors adopted.
	Risk stratification by clinical and social criteria of users.

The recommendations pointed out by the participants to improve the patient safety culture in the PHC services are described in Chart 1. Regarding the index of the answers to this question, (N=118; 46.5%) indicated at least one recommendation.

DISCUSSION

It is evidenced that the majority of the participating professionals were CHA. The CHA number per health unit should be between eight and 12 CHA, which is sufficient to cover 100% of the registered population, not exceeding a maximum of 750 people per CHA[11]. Nurses accounted for 19.7% and doctors 16.5% of the participating professionals, among the professional categories, the one with the highest number of losses and difficulty in collecting the data was the doctor. Besides the difficulty to find them, because they worked in more than one health unit, many were not willing to answer the questionnaire. In the literature, it is considered that a possible reason for greater participation of nurses could be that they are present for longer in health units than doctors[12].

The professional experience time at PHC was over 13 years, similar to another study with SAQ-AV that found professionals aged 11 to 20 years[13]. This time can favor the planning, the organization, the knowledge of the assigned area, the registered users, the strengthening of the bond, collaborating for a better safety culture.

The general evaluation of the safety culture in the municipality surveyed was negative (7.0 ± 1.3). In relation to the nine domains, only the "Patient Safety" domain presented a positive percentage for safety culture (8.2 ± 1.8). Almost all domains presenting negative scores for safety culture show the precariousness of the health service in PHC. This is worrying, as there may be implications for safe and quality care practice[14].

The way practitioners and coordinators of institutions deal with errors, communication difficulties in the complexities involving health care, turnover, and absenteeism are intertwined with work satisfaction[14-15]. The nurses had a higher percentage for negative culture in the field "Work Satisfaction". The level of satisfaction of nurses is decreasing worldwide, and the main factors of this dissatisfaction are the lack of professionals to make up the team, lack of professional recognition and high pressure in the work environment[16].

Teamwork is essential in health care. Factors that influence professionals to remain satisfied and participative should be valued as they encourage positive attitudes towards personal and professional well-being. This study did not show a significant relationship between the professional categories and the domain "Teamwork culture". Authors point out that the CHA perform their activities directly in the patients' homes and in the community. Sometimes he does not have frequent contact with other professionals, resulting in a different relationship of teamwork compared to those who share the same workspace for most of the day[2].

It is important that PHC teamwork is strengthened with a basic core of professionals willing to critically reflect on the solutions that are applicable to delivering a safe culture in your unit. An institution composed of a well-connected team, united and willing to work together provides a safe assistance and consequently reduces the chances of errors and AE[17].

In FHS teams, teamwork becomes a challenge, since for the good performance of the assistance it is necessary the collaboration and cooperation of a multidisciplinary team articulated and engaged in seeking possibilities for safe practice. Teamwork is a strategy to strengthen and promote the quality of care and health care practices in SUS. Therefore, for the FHS teams, it is a commitment that requires reorganization, trust, collective work and joint responsibility of the team together with the user[18].

In this study, communication was negatively evaluated. Effective communication between professionals, between the user and the service is the link for safety in the care. Organizations with a positive, resolute and satisfactory safety culture are characterized both by the involvement of patients in their care and by effective communication[19]. A Spanish study on the prevalence of AE in PHC evidenced that most of them could have been avoided, that communication problems and organizational factors were the root of many AE[1]. A Brazilian study showed that the communication failure between professionals and users is a contributing factor for the occurrence of PHC incidents[8]. Communication between professionals and users should be promoted in an open and clear manner and the doubts shared for the good understanding of all.

The "Patient Safety" domain showed a significant positive culture relationship with professionals from FHS teams, who worked in the afternoon shift, with experience in PHC between 5 and 12 years and who worked directly with the patient. Authors point out that more experienced professionals can help with the work routine and contribute to the performance of younger colleagues in the team. This relationship favors communication, teamwork, exchange of knowledge and experiences, a fact that will culminate in strengthening the safety culture[20]. A study showed that doctors presented significantly higher scores than nurses in relation to patient safety[12].

The "Permanent Education" domain presented negative culture, which can have consequences for patient safety. Permanent Education is a fundamental action because it is the meeting between the world of training and the world of work[2], the constant updating and development of critical thinking about their work. In the SAQ-AV validation study, negative scores were also evidenced in this domain[2]. Permanent Education is a form of incentive to share the everyday experiences and knowledge among employees.

A health team has responsibility for the prevention of incidents associated with health care; however, professionals are still little instrumented in their training to deal with these errors. It is necessary to change the current conception of the failures in the care process and, in this sense, to insert in the daily of the teams debates and discussions that promote an extended view of the professionals in face of the difficulties experienced[21]. Health units that rely on the work of professors, academics and residents of the different areas of Health can collaborate in this expanded view for patient safety, for Permanent Education and the construction of knowledge.

Results evidenced in this study lead to the reflection that professionals feel valued by the managers/coordinators of their health unit. Half of the professionals surveyed presented score 7.5 for the domain "Unit Management". The participation of managers in the supervision of daily activities, in the contact and appreciation of the work of their team are attitudes that promote the construction of a level of confidence and integration of the team. Management support for patient safety in the inclusion and recognition of the decision-making team is related to job satisfaction[14].

Stress recognition is one of the topics evaluated in the SAQ. It relates to patient safety, as it is largely associated with fatigue, anxiety, and lack of motivation for not doing the job in the expected way, with the support and motivation of the team. These stressors can influence the individual and collective performance of care and increase the risks for the occurrence of AE[22].

In this study, Stress Recognition was negatively evaluated by professionals aged 40-63 and by management professionals. Failure to recognize how performance is influenced by the stressful factors of the work environment is indeed disturbing and needs to be worked on with the team. Recognizing that stress from work demands can be a cause of illness, limiting work routines, and consequently resulting in reduced quality of care are perceptions that need to be valued by health professionals[23].

"Error" was one of the domains that presented the lowest mean score (5.0 ± 2.0) for safety culture; in contrast, the "Patient Safety" domain had the highest average. It is possible to think that the culture of learning with the errors does not become solid in many of the inserted health units of the study. Errors are difficult to discuss[24], since the culture of blame and punishment is still very present. However, discussing with the professionals about error and guilt can be a way to visualize the error as a learning opportunity to inhibit new occurrences related to the same situation.

Authors point out that the main errors cited by family health doctors are related to failures in prescription, correct examinations as well as abnormal laboratory results, medical records and medication distribution. Contributing factors for the occurrence of errors in these processes are related to the failure to coordinate the information among the professionals of the different services that provide health care[25].

To improve patient safety in the units surveyed, participants cited relevant and important recommendations. Among them, we have the implementation of Protocols. These are developed with the aim of facilitating the care process for Primary Health Care teams, to build an appropriate approach to user singularities, orderly and coordinated care, with the participation of all health staff[26].

They indicated the interest in skills and qualifications. Training is the key to quality of care and to achieving advances in patient safety. The learning actions qualify the health professionals so that they are aware of the responsibilities towards the patient[27].

Conditions and work overload have formed a dimension from the recommendations, such as the number of professionals sufficient to supply the demand and adequately perform its function. Work overload is a reflection of the lack of investment in PHC, leading to the reflection of important aspects for patient safety and worker health. The increase of chronic diseases and aging of the population are making the Primary Care more complex, being necessary investments and effectiveness in the referrral and counter-referral[1]. The recommendations made in this study show that professionals are willing to strengthen the safety culture in their unit and realize that communication contributes to PHC safety practices.

Study limitations

Availability of completing the questionnaire was one of the greatest difficulties encountered. Among the professional categories, the medical team presented the highest number of losses. It is also important to note the difficulty in collecting the questionnaires when it was necessary to leave the professional for him to participate. However, the collaboration and support of the coordination of the health unit in giving opportunity to the collection in days of team meetings stands out. This may be a good strategy to be used by other researchers in new studies.

Contributions to the sectors of Nursing, Health or Public Policy

In studying the safety culture at PHC, it is sought to make patient care increasingly efficient and safe in order to minimize incidents and reduce unnecessary costs. The findings of the study suggest that work processes should be reorganized, with the implementation of embracement and service flowcharts, which can be strengthened from the Risk Stratification in RAS. Strengthening of RAS and building partnerships can be a way to encourage the solidification of the safety culture in institutions.

It was noticed the need to discuss the theme from the perspective of all professionals, with actions involving multiprofessional

teams. It is suggested that since the training process be approached about patient safety culture. Moreover, this study contributed to the perception of the importance of the formation of a *Núcleo de Segurança do Paciente* (freely translated as Patient Safety Nucleus) in the context of PHC.

CONCLUSION

From the perspective of the PHC health professionals surveyed, a negative evaluation of the safety culture was evidenced. The "Patient Safety" domain was the only domain that presented positive scores. The "Working Conditions" and "Error" domains were those that obtained the lowest averages. According to the recommendations of the professionals, it will be necessary to improve the patient safety culture, with a view to the elaboration of protocols, training planning, communication, work and infrastructure improvements, reduction of work overload, error prevention and greater resolvability.

Establishing a constructive safety culture with shared values, attitudes, and safe behaviors in daily practice are important factors in improving patient safety in Primary Care settings and teams. In this sense, it is important the dialogue on the theme between the team and in the context of the institutional reality, involving all care providers professionals, so that they are aware of their role in the prevention of incidents during the care.

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REFERENCES

1. Peña MPA, Casalengua ML, Cañadas GO, Busto CS, Varela AY, Fernández JAM. Are Spanish primary care professionals aware of patient safety? Eur J Public Health [Internet]. 2015 [cited 2016 Jul 10];25(5):781–87. Available from: https://academic.oup.com/eurpub/article/25/5/781/2399128
2. Paese F, Dal Sasso GTM. Patient safety culture in primary health care. Texto Contexto Enferm [Internet]. 2013 [cited 2016 Mar 10];22(2):302-10. Available from: http://dx.doi.org/10.1590/S0104-07072013000200005
3. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Política Nacional de Humanização da Atenção e Gestão do SUS. Redes de produção de Saúde [Internet]. Brasília (DF): Ministério da Saúde; 2009 [cited 2018 Oct 22]. 44 p. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/redes_producao_saude.pdf
4. Menicucci TMG. [The history of the public health reform in Brazil and of the Sistema Único de Saúde: changes, continuities, and the current agenda]. Hist Ciênc Saúde - Manguinhos [Internet]. 2014 [cited 2018 Mar 22];21(1):77-92. Available from: http://dx.doi.org/10.1590/S0104-59702014000100004. Portuguese.
5. Padoveze MC, Figueiredo RM. [The role of primary care in the prevention and control of healthcare associated infections]. Rev Esc Enferm USP [Internet]. 2014 [cited 2016 Mar 12];48(6):1137-44. Available from: http://dx.doi.org/10.1590/S0080-623420140000700023. Portuguese.
6. Ministério da Saúde (BR), Agência Nacional de Vigilância Sanitária (ANVISA). Resolução da Diretoria Colegiada (RDC) n. 36, de 25 de julho de 2013. Institui ações para a segurança do paciente em serviços de saúde e dá outras providências [Internet]. Diário Oficial da União: República Federativa do Brasil; 2013 [cited 2015 Sep 01]. Jul. 07, Seção 1: 32-33 p. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/anvisa/2013/rdc0036_25_07_2013.html
7. Timm M, Rodrigues MCS. Cross-cultural adaptation of safety culture tool for Primary Health Care. Acta Paul Enferm [Internet]. 2016 [cited 2017 Jan 09];29(1):26-37. Available from: http://dx.doi.org/10.1590/1982-0194201600005
8. Marchon SG, Junior WVM, Pavão ALB. Characteristics of adverse events in primary health care in Brazil. Cad Saúde Pública [Internet]. 2015 [cited 2018 Mar 22];31(11):2313-30. Available from: http://dx.doi.org/10.1590/0102-311X00194214
9. Prefeitura Municipal de Santa Maria (RS), Secretaria de Município da Saúde. Plano Municipal de Saúde 2013-2016 [Internet]. Santa Maria (RS): Secretaria de Município da Saúde; 2012 [cited 2018 Oct 22]. 46 p. Available from: http://sites.multiweb.ufsm.br/residencia/images/Disciplinas/PLANO%202013%20PRONTO.pdf
10. Modak I, Sexton JB, Lux TR, Helmreich RL, Thomas, EJ. Measuring safety culture in the ambulatory setting: the safety attitudes questionnaire-ambulatory version. J Gen Intern Med [Internet]. 2007 [cited 2015 Jun 10];1(22):1-5. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2227589/
11. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Política Nacional de Atenção Básica [Internet]. Brasília (DF): Ministério da Saúde; 2012 [cited 2015 May 2]. Available from: http://189.28.128.100/dab/docs/publicacoes/geral/pnab.pdf
12. Bondevik GT, Hofoos D, Hansen EH, Deilkås ECT. The safety attitudes questionnaire – ambulatory version: psychometric properties of the Norwegian translated version for the primary care setting. BMC Health Serv Res [Internet]. 2014 [cited 2015 Aug 1];14:139. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-14-139
13. Smits M, Keizer E, Giesen P, Deilkås, ECT, Hofoss D, Bondevik GT. The psychometric properties of the safety attitudes questionnaire in out-of-hours primary care services in the Netherlands. Plos One [Internet]. 2017 [cited 2017 Apr 04];12(2):1-12. Available from: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0172390

14. Alves DFS, Guirardello EB. Nursing work environment, patient safety and quality of care in pediatric hospital. Rev Gaúcha Enferm [Internet]. 2016 [cited 2017 Jan 17];37(2):e58817. Available from: http://dx.doi.org/10.1590/1983-1447.2016.02.58817

15. 15. Melo MB, Barbosa MA, Souza PR. Job satisfaction of nursing staff: integrative review. Rev Lat Am Enfermagem [Internet]. 2011 [cited 2017 Jan 10];19(4):1047-55. Available from: http://dx.doi.org/10.1590/S0104-11692011000400026

16. Cruz SP, Abellán MV. Professional burnout, stress and job satisfaction of nursing staff at a university hospital. Rev Lat Am Enfermagem [Internet]. 2015 [cited 2017 Jan 05];23(3):543-52. Available from: http://dx.doi.org/10.1590/0104-1169.0284.2586

17. Matiello, RDC, Lima EFA, Coelho MCR, Oliveira ERA, Leite FMC, Primo CC. Patient safety culture from the perspective of nurses. Cogitare Enferm [Internet]. 2016 [cited 2016 Dec 04];21(esp):1-9. Available from: http://docs.bvsalud.org/biblioref/2016/08/1495/45408-184743-1-pb.pdf

18. Garcia ACP, Lima RCD, Freitas PSS, Fachetti T, Andrade MAC. O trabalho em equipe na estratégia saúde da família. Rev Epidemiol Control Infect [Internet]. 2015 [cited 2017 Jan 07];5(1):31-6. Available from: http://dx.doi.org/10.17058/reci.v5i1.5314

19. Lima AS, Nicolato FV, Dutra HS, Bahia MTR, Farah BF. Permanent education in primary health care management in the brazilian public health system. Rev Enferm UFPE On Line [Internet]. 2015 [cited 2017 Jan 05];9(Suppl.4):8135-45. Available from: https://doi.org/10.5205/1981-8963-v9i4a10569p8135-8145-2015

20. Paranaguá TTB, Bezerra ALQ, Tobias GC, Ciosak SI. Support for learning in the perspective of patient safety in primary health care. Rev Lat Am Enfermagem [Internet]. 2016 [cited 2017 Jan 20];24:e.2771. Available from: http://dx.doi.org/10.1590/1518-8345.0784.2771

21. Wegner W, Silva SC, Kantorski, KJC, Predebon CM, Sanches MO, Pedro ENR. Education for culture of patient safety: Implications to professional training. Esc Anna Nery [Internet]. 2016 [cited 2017 Mar 2];20(3):e20160068. Available from: http://dx.doi.org/10.5935/1414-8145.20160068

22. Barbosa MH, Aleixo TCS, Oliveira KF, Nascimento KG, Felix MMS, Barichello E. Patient safety climate in medical and surgical units. Rev Eletr Enf [Internet]. 2016 [cited 2017 Jan 10];18:e1183. Available from: http://dx.doi.org/10.5216/ree.v18.39763

23. Fermo VC, Radünz V, Rosa LM, Marinho MM. Professional attitudes toward patient safety culture in a bone marrow transplant unit. Rev. Gaúcha Enferm [Internet]. 2016 [cited 2017 Jan 27];37(1):e55716. Available from: http://dx.doi.org/10.1590/1983-1447.2016.01.55716

24. Gabrani JC, Knibb W, Petrela E, Hoxha A, Gabrani A. Provider Perspectives on Safety in Primary Care in Albania**.** J Nurs Scholarsh [Internet]. 2016 [cited 2017 Feb 10];48(6):552-60. Available from: https://sigmapubs.onlinelibrary.wiley.com/doi/abs/10.1111/jnu.12236

25. Vincenti C, Amalberti R. Cuidado de Saúde mais Seguro: estratégias para o cotidiano do cuidado. 1 ed. Rio de Janeiro: Proqualis, ICICT/Fiocruz; 2016. 198 p.

26. Peña MPA, Casalengua MLT, Cañadas GO. Prioridades em seguridad del paciente em Atención Primaria. Editorial. Aten Primaria [Internet]. 2016 [cited 2017 Mar 08];48(1):3-7. Available from: http://www.elsevier.es/es-revista-atencion-primaria-27-articulo-prioridades-seguridad-del-paciente-atencion-S0212656715002474

27. Marinho MM, Radünz V, Barbosa SFF. Assessment of safety culture by surgical unit nursing teams. Texto Contexto Enferm [Internet]. 2014 [cited 2017 Jan 18];23(3):581-90. Available from: http://dx.doi.org/10.1590/0104-07072014002640012