

# Patient Safety Culture in Health Organizations: Scoping Review

REVIEW

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## Abstract

**Objective:** Identify and map the forms to evaluate the patient safety culture in health organizations.

**Method:** Scoping review, developed based on the method proposed by the Joanna Briggs Institute. Data collection occurred in June 2016 in 15 international databases. Descriptive statistics was used for data analysis.

**Results:** The sample consisted of 75 publications. Among the eleven instruments identified to evaluate the safety culture, the Hospital Survey on Patient Safety Culture questionnaire and the Safety Attitudes Questionnaire had the greatest international repercussion, since they were adapted, validated and used in different continents and contexts.

**Conclusion:** The synthesis of the instruments enabled clarifying their characteristics, and how they can be important tools to support and accompany changes in the safety culture over time.

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## Keywords

Patient's safety; Organizational culture; Nursing.

## Introduction

In the world scenario, health organizations mobilize to ensure the quality of health care provided to the population. Therefore, they realize the importance of instituting policies that will guide strategies and actions for safe health practices.

In that context, patient safety (PS) stand out as a priority strategy, widely discussed on the world stage. It consists of reducing risk of unnecessary harm associated with health care to an acceptable minimum, based on current knowledge, available resources and the context in which care is embedded [1].

Thus, safe actions based on the quality of care and seeking to disseminate a safety culture to patients and health professionals are essential. In the meantime, the safety culture is considered a strong indicator and an important diagnostic tool for assessing the quality of health services [2-3].

The safety culture consists of the product of values, attitudes, competencies and patterns of individual and group behavior, which determine the commitment, style and proficiency of managing a healthy and safe organization [4].

For a health organization to have a positive safety culture, it must have the following characteristics: all workers must take responsibility for their own safety, as well as of their colleagues, patients and family; prioritize security over financial and operational goals; encourage and reward the identification, reporting and resolution of security-related problems; promote organizational learning, from the occurrence of incidents; and provide resources, structure and accountability for effective maintenance of security [2].

Therefore, the incorporation of a safety culture in the health institutions demands great efforts and incessant work. The change in attitudes and actions in health care activities is slow and time-consuming, as well as requires knowledge and participation of all who make up an agency of health service provision. Thus, it is essential to join those efforts to guarantee PS and contribute to the adhesion of an effective safety culture [2].

However, in order to establish the strategies for implementing a positive safety culture in health institutions, the first need is to know the safety culture of those institutions and the context involving them [5].

Moreover, knowing the current safety culture in health institutions is an important process in the search for actions to improve the quality of the provided care.

One way to meet that need is to carry out safety culture assessments. That process should be obtained with the aid of evaluation instruments, which may be the most diverse [6].

Given the exposed, with the scope of subsidizing the evaluation of safety culture in health services, it is worth noting the interest in knowing which instruments are used in that process. Therefore, the research questions are: how is the patient safety culture evaluated in health organizations? And what are the tools used for it?

The objective is to identify and map the forms to assess the patient safety culture in health organizations.

## Method

This is a scoping review, developed based on the method proposed by the Joanna Briggs Institute, Reviewers Manual 2014, second theoretical framework [7]. This type of review provides a mapping of the main concepts that support a research area, as well as clarifies the work definitions and/or the conceptual boundaries of a topic through the available evidence [8].

The research question was elaborated based on the PCC strategy (P - Population; C - Concept; C - Context). Therefore, the definition was P: Health Organizations; C: Safety Culture; and C: Evaluation of the patient safety culture in health organizations.

The study population consisted of researches related to the evaluation of the patient safety culture in health organizations (hospitals, clinics, basic units, among others).

There was inclusion of surveys, fully published in the Portuguese, Spanish, English or French language and that had as object of investigation the evaluation of the patient safety culture in health or-

ganizations. There was exclusion of editorials, experience reports, theoretical essays, reflection studies and reviews, as well as surveys that did not present abstract and online complete text.

The search was performed in June 2016, in the following databases: Cochrane CENTRAL, Educational Resources Information Center (ERIC), South African National Theses and Dissertations (ETD Portal), US National Library of Medicine (Pubmed), Cumulative Index to Nursing & Allied Health Literature (CINAHL), Theses and Dissertations of the Coordination for Improvement of Higher Education Personnel (CAPES), Web of Science, SCOPUS, Latin American and Caribbean Literature in Health Sciences (LILACS), Academic Archive Online (DIVA), Europe E-theses Portal (DART), Electronic Theses Online Service (ETHOS), PsychINFO, Scientific Repository Open Access Portugal (RCAAP), Theses Canada.

Initially, there was use of the Mesh strategy, with "Health" AND "organizations" AND "Safety culture" AND "Process Assessment" to search for studies in Pubmed and CINAHL, in order to identify which keywords were most frequent in Publications. There were 5,758 articles in Pubmed and 16,029 in Cinahl, whose texts were fully available. They were analyzed until the saturation of the keywords.

Then, there was the analysis of the publications to identify the keywords for each item of the PCC strategy. The general strategy adopted was the search for the studies with the Boolean operators: ((Health Services OR hospital OR Health care OR Health and Safety Executive OR Structure OR high reliability organization OR hospital development) AND (Safety culture OR Patient safety OR safety management OR safety performance OR safety culture OR safety climate OR Safety attitudes questionnaire OR Questionnaire surveys OR Questionnaires OR Questionnaire OR Process evaluation OR evaluation OR Self-Assessment Framework OR Self-Assessment)). The search strategy

was adapted according to the specificities of each base, maintaining the similar combination of the descriptors.

There were 1,154,108 publications without filters, including theses, dissertations and articles. With the application of the filters in all bases, 51,274 publications were located. Next, the titles and summaries of all documents found were read to identify possible studies to include in the review, which were analyzed with a complete reading.

After reading, 199 publications were pre-selected, being 11 articles excluded for duplicity, resulting in a sample of 188 publications for the search and complete analysis. Among the 188 publications, there was exclusion of 60 publications for they did not evaluate the safety culture in the health services; 24, for they were not researches; and 29 for the full text was not available. The final sample consisted of 75 publications.

The studies of the final sample were analyzed using the following data: type of study (article, dissertation or thesis), year of publication, country of origin, objective, study method, method used to evaluate the patient safety culture and conclusions.

Simple descriptive statistics was used for the analysis of the material, using absolute and relative frequency calculations.

There was no need for ethical appreciation, since one worked with data from public domain.

## Results

The selected studies were published in the time dimension from 2003 to 2016. There was predominance of publications on safety culture assessment tools in 2013 and 2015, with 17 (22.67%) and 18 (24.00%) published studies, respectively. The database with the largest number of included studies was the Web of Science (26; 34.68%). Articles represented the largest number of publications, with 55 (73.33%) (**Table 1**).

**Table 1.** Characterization of publications according to databases (n=75). Natal/RN, 2016.

Variables	n	%
Databases		
Web of science	26	34.68
Theses and Dissertations CAPES	10	13.33
Trove	9	12.00
LILACS	6	8.00
Scientific Repository of Open Access of Portugal (RCAAP)	6	8.00
Cochrane CENTRAL	4	5.33

Variables	n	%
SCOPUS	4	5.33
ERIC	2	2.67
DIVA	2	2.67
Electronic Theses Online Service (EThOS)	2	2.67
South African National ETD Portal	1	1.33
Cinahl	1	1.33
DART	1	1.33
Theses Canada	1	1.33
Pubmed	-	-
PsychINFO	-	-

**Table 2.** Characterization of publications by title, type of study, author/year of publication, and country of origin (n=75). Natal/RN, 2016.

P	Title	Authors	Country	Year
P1	A patient safety culture: validation of a measurement instrument for the Brazilian hospital context	Reis CT.	Brazil	2013
P2	The patient safety culture in a teaching hospital of Minas Gerais	Luiz RB.	Brazil	2013
P3	The importance of health risk management practices: improving the quality of service and evaluating the patient safety culture	Saraiva JMG.	Portugal	2013
P4	A novel tool for organizational learning and its impact on safety culture in a hospital dispensary	Sujan MA.	England	2012
P5	A questionnaire survey exploring healthcare professionals' attitudes towards teamwork and safety in acute care areas in South Korea	Kim SE, Kim CW, Lee SJ, Oh JH, Lee D H, Lim TH,	South Korea	2015
P6	Patient safety in organizational culture as perceived by leaderships of hospital institutions with different types of administration	Silva NDM.	Brazil	2014
P7	A survey of patient safety culture in an operating room setting in Abu Dhabi	Chellan J.	United Arab Emirates	2010
P8	Adaptation and validation for Portuguese of the Nursing Home Survey on Patient Safety Culture questionnaire (NHSPSC)	Costa IMD.	Portugal	2013
P9	Cross-cultural adaptation of safety culture tool for Primary Health Care	Timm M.	Brazil	2015
P10	Adverse events analysis as an educational tool to improve patient safety culture in primary care: a randomized trial	González-Formoso C, Martín-Miguel MV, Fernández-Domínguez MJ, Rial A, Lago-Deibe FI, Ramil-Hermida L	Spain	2011
P11	An evaluation of a patient safety culture tool in Saudi Arabia	Alonazi MS.	Saudi Arabia	2010
P12	Analysis of the safety culture at a teaching hospital of the Central-West region of Brazil	Tobias GC.	Brazil	2013
P13	Application of the Safety Attitudes Questionnaire (SAQ) in Albanian hospitals : A cross-sectional study	Gabrani1 A, Hoxha A, Simaku A, Gabrani JC.	Albania	2015
P14	Assessing the safety attitudes questionnaire (SAQ), German language version in Swiss university hospitals - a validation study	Zimmermann N, Küng K, Sereika SM, Engberg S, Sexton B, Schwendimann R.	Switzerland	2013
P15	Assessment of safety culture by surgical unit nursing teams	Marinho MM, Radünz V, Barbosa SDF.	Brazil	2014
P16	Evaluation of the patient safety culture in a hospital center of the Central Region	Sousa AMD.	Portugal	2013
P17	Cluster randomized, controlled trial on patient safety improvement in general practice: a study protocol	Verbakel NJ, Langelaan M, Verheij TJ, Wagner C, Zwart DL.	Holland	2013

(P)	Title	Authors	Country	Year
P18	Communication and patient safety: perception of the nursing staff of a teaching hospital	Massoco ECP, Melleiro MM.	Brazil	2015
P19	Cross-cultural adaptation of the Safety Attitudes Questionnaire - Short Form 2006 to Brazil	Carvalho REFL, Cassiani SHB.	Brazil	2012
P20	Patient safety culture in a hospital in the central region, perception of professionals	Costa MFSP.	Portugal	2014
P21	Patient safety culture from the perspective of nurses	Correa RD.	Brazil	2015
P22	Patient safety culture: the nurse's perception at an oncological hospital	Carrera SA.	Brazil	2013
P23	Assessment of patient safety culture in intensive care from the health team's perspective	Minuzzi AP.	Brazil	2014
P24	Patient safety culture: perceptions and attitudes of workers at hospital institutions of Santa Maria	Baratto MAM.	Brazil	2015
P25	Culture and climate of patient safety in maternity school: perceptions of nurses in intensive care	Fernandes LGG.	Brazil	2014
P26	Determination of the patient safety culture among nurses working at intensive care units	Yilmaz Z, Goris S.	Turkey	2015
P27	Development and applicability of Hospital Survey on Patient Safety Culture (HSOPS) in Japan	Ito S, Seto K, Kigawa M, Fujita S, Hasegawa T.	Japan	2011
P28	Effects of patient safety culture interventions on incident reporting in general practice: A cluster randomized trial a cluster-randomized trial.	Verbakel NJ, Langelaan M, Verheij TJ, Wagner C, Zwart DL.	Holland	2015
P29	Evaluation of patient safety culture among family and community medicine residents in a hospital A and E department	Jaraba BC, Sartolo RM, Villaverde RM, Espuis A. L, Rivas JM.	Spain	2013
P30	Evaluation of the culture of safety: survey of clinicians and managers in an academic medical center	Pronovost PJ, Weast B, Holzmueller CG, Rosenstein B J, Kidwell RP, Haller KB	USA	2003
P31	Evaluation of the patient safety culture in neonatal intensive care	Tomazoni A, Rocha PK, Kusahara DM, Souza AIJD, Macedo TR.	Brazil	2015
P32	Factors associated with the patient safety climate at a teaching hospital	Luiz RB, Simões ALDA, Barichello E, Barbosa MH.	Brazil	2015
P33	Hospital survey on patient safety culture in China	Nie Y, Mao X, Cui H, He S, Li J, Zhang M.	China	2013
P34	Implementation of Patient Safety and Patient-Centeredness Strategies in Iranian Hospitals	Hashjin AA, Kringos DS, Manoochehri J, Ravaghi H, Klazinga NS.	Iran	2014
P35	Interventions in health organizations to reduce the impact of adverse events in second and third victims	Mira JJ, Lorenzo S, Carrillo I, Ferrús L, Pérez-Pérez P, Iglesias F et al.	Spain	2015
P36	Investigating patient safety culture across a health system: multilevel modelling of differences associated with service types and staff demographics	Gallego B, Westbrook MT, Dunn A G, Braithwaite J.	Australia	2012
P37	Leadership and patient safety culture: perceptions of professionals in a university hospital	Kawamoto AM, Oliveira JLC, Tonini NS, Nicola AL.	Brazil	2016
P38	Measuring patient safety culture in Taiwan using the Hospital Survey on Patient Safety Culture (HSOPSC)	Chen IC, Li HH.	China	2010
P39	Measuring patient safety culture: an assessment of the clustering of responses at unit level and hospital level.	Smits M, Wagner C, Spreeuwenber GP, Van Der Wal G, Groenewegen PP.	Holland	2009
P40	Measuring safety climate in elderly homes	Yeung KC, Chan CC.	China 2012	2015
P41	Multilevel psychometric properties of the AHRQ hospital survey on patient safety culture	Sorra JS, Dyer N.	USA	2010
P42	Nurse-reported patient safety climate in Swiss hospitals	Ausserhofer D, Schubert M, Engberg S, Blegen M, Geest S.	USA	2012

P	Title	Authors	Country	Year
P43	Open wide: Looking into the safety culture of dental school clinics	Ramoni R, Walji MF, Tavares A, White J, Tokede O, Vaderhobli R, Kalenderian E.	USA	2014
P44	Organizational Climate Determinants of Resident Safety Culture in Nursing Homes	Arnetz JE, Zhdanova LS, Elsouhag D, Lichtenberg P, Luborsky MR, Arnetz BB.	USA	2011
P45	Patient safety culture - opportunities for healthcare management : The Safety Attitudes Questionnaire - Short Form 2006, Norwegian version - 1) Psychometric properties, 2) Variation by organizational level and 3) by position	Deilkås E.	Norway	2010
P46	Patient safety culture and related factors in a network of Spanish public hospitals	Gama ZADS, Oliveira ACDS, Hernández PJS.	Spain	2013
P47	Patient Safety Culture and the Association with Safe Resident Care in Nursing Homes	Thomas KS, Hyer K, Castle NG, Branch LG, Anel R, Weech-Maldonado R.	USA	2012
P48	Patient Safety Culture Based on Medical Staff Attitudes in Khorasan Razavi Hospitals, Northeastern Iran	Davoodi R, Shabestari MM, Takbiri A, Soltanifar A, Sabouri G, Rahmani S et al.	Iran	2013
P49	Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement	El-Jardali F, Sheikh F, Garcia NA, Jamal D, Abdo A.	Arabia	2014
P50	Patient safety culture in a teaching hospital: differences in perception existing in the different scenarios of this institution	Silva-Batalha EMSD, Melleiro MM.	Brazil	2015
P51	Patient Safety Culture in a Turkish Public Hospital: A Study of Nurses' Perceptions About Patient Safety	Top M, Tekingündüz S.	Turkey	2014
P52	Patient Safety Culture: Sample of a University Hospital in Turkey	Ugurluoglu O, Ugurluoglu E, Payziner PD, Ozatkan Y.	Turkey	2012
P53	Patient safety subcultures among registered nurses and nurse assistants in Swedish hospital care: a qualitative study	Danielsson M, Nilsen P, Öhrn A, Rutberg H, Fock J, Carlfrjord S.	Sweden	2014
P54	Perception of organizational support, engagement, and patient safety	Cruz AMRT.	Brazil	2015
P55	Perceptions of patient safety culture amongst health care workers in the hospitals of Northeast Libya	Rages S.	Libya 2014	2015
P56	Psychometric properties of the Hospital Survey on Patient Safety Culture for hospital management	Hammer A, Ernstmann N, Ommen O, Wirtz M, Manser T, Pfeiffer Y	Belgium, Denmark, Ireland, France, Italy, Holland, Norway, Portugal, Scotland, Sweden, Switzerland, Turkey, United Kingdom	2011
P57	Psychometric properties of the hospital survey on patient safety culture, HSOPSC, applied on a large Swedish health care sample	Hedsköld M, Pukk-Härenstam K, Berg E, Lindh M, Soop M, Øvretveit J	Sweden	2013
P58	Relationship of safety climate and safety performance in hospitals	Singer S, Lin S, Falwell A, Gaba D, Baker L.	USA	2009
P59	Safety Culture in the Maternity Units: a census survey using the Safety Attitudes Questionnaire	Raftopoulos V, Savva N, Papadopoulou M.	Cyprus	2011
P60	Safety culture in the operating room of a public hospital in the perception of healthcare professionals	Carvalho PA, Göttems LBD, Pires MRGM, de Oliveira MLC.	Brazil	2015
P61	Safety culture perceptions of pharmacists in Malaysian hospitals and health clinics: a multicenter assessment using the Safety Attitudes Questionnaire	Samsuri SE, Lin LP, Fahrni ML.	Malaysia	2015



P	Title	Authors	Country	Year
P62	Survey on patient safety climate in public hospitals in China	Zhou P, Bundorf MK, Gu, J, He X, Xue D.	China	2015
P63	Swedish translation and psychometric testing of the safety attitudes questionnaire (operating room version)	Göras C, Wallentin FY, Nilsson U, Ehrenberg A.	Sweden	2013
P64	The characteristics of patient safety culture in Japan, Taiwan and the United States	Fujita S, Seto K, Ito S, Wu Y, Huang CC, Hasegawa T.	Japan	2013
P65	The effect of executive walk rounds on nurse safety climate attitudes: a randomized trial of clinical units	Thomas EJ, Sexton JB, Neilands TB, Frankel A, Helmreich RL.	USA	2005
P66	The impact of nurse working hours on patient safety culture: a cross-national survey including Japan, the United States and Chinese Taiwan using the Hospital Survey on Patient Safety Culture	Wu Y, Fujita S, Seto K, Ito S, Matsumoto K, Huang CC, Hasegawa T.	Japan	2013
P67	The patient safety culture as perceived by staff at two different emergency departments before and after introducing a flow-oriented working model with team triage and lean principles: a repeated cross-sectional study	Burström L, Letterstål A, Engström M L, Berglund A, Enlund M.	Sweden	2014
P68	The Psychometric Properties of the Farsi Version of "Hospital Survey on Patient Safety Culture" In Iran's Hospitals	Moghri J, Arab M, Saari AA, Nateqi E, Forooshani AR, Ghiasvand H et al.	Iran	2012
P69	The safety attitudes questionnaire - ambulatory version: psychometric properties of the Norwegian translated version for the primary care setting	Bondevik GT, Hofoss D, Hansen EH, Deilkås ECT.	Norway	2014
P70	Translation, cultural adaptation and validation of the safety attitudes questionnaire - short form 2006 for Portugal	Saraiva DMRF.	Portugal	2015
P71	Translation and cross-cultural adaptation of the Brazilian version of the Hospital Survey on Patient Safety Culture: initial stage	Reis CT, Laguardia J, Martins M.	Brazil	2012
P72	Understanding and Changing the Patient Safety Culture in Canadian Hospitals	Law MP.	Canada	2011
P73	Validity and reliability of Turkish version of "Hospital Survey on Patient Safety Culture" and perception of patient safety in public hospitals in Turkey.	Bodur S, Filiz E.	Turkey	2010
P74	What Does a Hospital Survey on Patient Safety Reveal About Patient Safety Culture of Surgical Units Compared With That of Other Units?	Shu Q, Cai M, Tao HB, Cheng ZH, Chen J, Hu YH, Li G.	China	2015
P75	Workforce perceptions of hospital safety culture: development and validation of the patient safety climate in healthcare organizations survey	Singer S, Meterko M, Baker L, Gaba D, Falwell A, Rosen A.	USA	2007

P: Publications.

**Table 2** presents the characterization of the publications (P) included in the scoping review, according to the title, authors, country of origin and year of publication. They are represented by the letter "P", followed by the sequence number from 01 to 75, total of the final sample.

The method to evaluate the predominant safety culture in all continents was the use of questionnaires (73; 97.30%). Among them, the Hospital

Survey on Patient Safety Culture (HSOPSC) was the most used in all the places where the researches were performed (47; 62.70%). In South America, that instrument was used in 13 studies, which is equivalent to 17.33% of the publications analyzed in this scoping (**Table 3**).

Regarding the objectives of the publications, there was a thematic categorization according to the research focus, and most studies carried out the

**Table 3.** Methods of evaluating safety culture in South America, North America, Asia, Europe and Oceania, according to type of study (n=75). Natal/RN, 2016.

Methods Used for Safety Culture Assessment	Types of Study							
	Article		Dissertation		Theses		Total	
	n	%	n	%	n	%	n	%
<b>South America</b>								
Hospital Survey on Patient Safety Culture (HSOPSC)	6	10.91	6	35.30	1	33.30	13	17.33
Safety Attitudes Questionnaire (SAQ)	3	5.45	4	23.50	-	-	7	9.33
<b>North America</b>								
Safety Organizing Scale (SOS)	1	1.82	-	-	-	-	1	1.33
Manchester Patient Safety Culture Assessment Tool (MaPSCAT)	-	-	1	5.90	-	-	1	1.33
Hospital Survey on Patient Safety Culture (HSOPSC)	4	7.27	-	-	-	-	4	5.40
Nursing Home Survey on Patient Safety Culture (NHSPSC)	1	1.82	-	-	-	-	1	1.33
Safety Climate Scale (SCS)	1	1.82	-	-	-	-	1	1.33
Executive Walking Rounds (EWR)	1	1.82	-	-	-	-	1	1.33
Medical Office Survey on Patient Safety Culture (MOSOPS)	1	1.82	-	-	-	-	1	1.33
<b>Asia</b>								
Hospital Survey on Patient Safety Culture (HSOPSC)	18	32.73	-	-	2	66.70	20	26.66
MARQuIS questionnaire	1	1.82	-	-	-	-	1	1.33
Safety Attitudes Questionnaire (SAQ)	1	1.82	-	-	-	-	1	1.33
<b>Europe</b>								
Safety Attitudes Questionnaire (SAQ)	5	9.10	2	11.80	-	-	7	9.33
Hospital Survey on Patient Safety Culture (HSOPSC)	7	12.70	3	17.60	-	-	10	13.33
Questionnaire prepared by the researchers	1	1.82	-	-	-	-	1	1.33
Safety culture questionnaire solely (SCOPE)	1	1.82	-	-	-	-	1	1.33
Manchester Patient Safety Framework (MaPSaF); SAQ; HSOPSC	1	1.82	-	-	-	-	1	1.33
Nursing Home Survey on Patient Safety Culture (NHSPSC)	-	-	1	5.90	-	-	1	1.33
Walk Rounds	1	1.82	-	-	-	-	1	1.33
<b>Oceania</b>								
Safety Attitudes Questionnaire (SAQ)	1	1.82	-	-	-	-	1	1.33
<b>Total</b>	<b>55</b>	<b>100.00</b>	<b>17</b>	<b>100.00</b>	<b>3</b>	<b>100.00</b>	<b>75</b>	<b>100.00</b>

**Table 4.** Thematic categories of the objectives of the studies included in the scoping review. Natal/RN, 2016.

Objectives of the publications	n	%
Cross-culturally translate, adapt and validate the instruments	13	17.33
Evaluate safety culture in hospitals	54	72.00
Assess the safety culture in primary health care (PHC)	1	1.33
Assess the safety culture in different services - comparison	1	1.33
Evaluate the safety culture in long-term care institutions for the elderly (LTCIE)	1	1.33
Assess the safety culture in universities and training schools of health professionals who provide services	2	2.68
Develop a safety culture assessment tool	1	1.33
<b>Total</b>	<b>75</b>	<b>100.00</b>



evaluation of the safety culture in hospitals (54; 72.00%), as presented in **Table 4**.

The studies that carried out the evaluation of the patient safety culture in public and private hospitals stood out (54, 72.00%), followed by the evaluation of the safety culture in LTCIE (3; 4.00%), both performed on P40, P44 and P47.

The evaluation of safety culture in services of universities and training schools of health professionals was carried out in P43 and P45. Those studies were included because those sites provide health services to the community. Only one (1.33%) study carried out the evaluation of the culture in the PHC, carried out in P10.

Furthermore, P36 (1.33%), developed in Australia with 14,054 workers in 46 organizations, classified in 18 types of service, from the public health system, characterized as the only one that evaluated the culture in different types of services.

Regarding the method of the analyzed studies, descriptive studies (21; 28.00%) represented the largest number. Regarding the level of evidence, according to the Melnyk Fineout-Overholt classification [9], there was predominance of levels VI (64; 85.30% - descriptive studies) and VII (6; 8.00% - Content validity test). The quantitative approach prevailed (67; 89.30%), followed by the mixed one (6; 8.00%) and qualitative (2; 2.70%).

The instruments used in the surveys evaluated were characterized according to composition and measurement, presented in **Table 5**.

Regarding the conclusions of the analyzed studies, they showed that the HSOPSC instrument was considered adequate in the evaluation studies of the patient safety culture. Used by 38 (50.70%) surveys, it demonstrates acceptance for measuring the patient safety culture and allowing the visualization of the items that need improvement and,

**Table 5.** Characteristics of the composition and measurement of the instruments for evaluating the safety culture identified in the scoping review. Natal/RN, 2016.

Instrument	Composition	Its evaluation
Hospital Survey on Patient Safety Culture (HSOPSC)	12 dimensions, 42 items, in which six are personal information. Distributed on five likert scales	Patient safety culture
Safety Attitudes Questionnaire (SAQ)	6 domains, 41 items. Distributed on five likert scales	Patient safety culture
Safety Organizing Scale (SOS)	9 items, related to behavior. Distributed on seven likert scales	Patient safety climate in health care organization
Manchester Patient Safety Culture Assessment Tool (MaPSCAT)	10 dimensions that depict aspects of patient safety culture in five progressive levels of safety maturity	Patient safety culture
Nursing Home Survey on Patient Safety Culture (NHSPSC)	42 items and measures 12 dimensions of the Patient Safety Culture	Safety Culture in Nursing Home
Safety Climate Scale (SCS)	Set of questions on the following areas: teamwork; security climate; stress; job satisfaction; management; work conditions	Safety climate within health organizations
Executive Walking Rounds (EWR)	A guide consisting of eight questions, which comprise the pertinent attitudes to Patient Safety	Safety climate
Medical Office Survey on Patient Safety Culture (MOSOPS)	51 questions, measuring 12 dimensions of the Patient Safety construct	Patient safety culture
MARQuIS questionnaire	199 questions, divided into four sections that include general hospital information and three sections with patient management strategies	Safety culture
Safety culture questionnaire solely (SCOPE)	43 items divided over eight dimensions	Patient safety culture
Manchester Patient Safety Framework (MaPSaF)	10 critical dimensions of patient safety in five progressive levels of safety maturity	Safety culture

therefore, subsidize actions to promote safety culture.

The P48, P12 and P31 used that tool and focused on the need to emphasize the approach to coping with errors. Nonetheless, P12 and P20 portrayed the improvement in communication; and P31 and P3, the awareness of professionals and communication of good working practices, adequate risk management and continuous improvement; and promotion of improvements in the care process in search for excellence.

In the 15 (20.00%) surveys that used the Safety Attitude Questionnaire (SAQ), the predominant outcomes were: the need for greater attention by the hospital management to the domains, working conditions and management of the unit and the hospital seen as negative points in P2; and, in P15, the need for improvements regarding safety culture in the hospital environment, in order to encourage the reporting of errors and strengthen the non-punishment culture; and challenges related to communication and collaboration among team professionals.

P21 and P32 indicate predominance of domains with unsatisfactory scores in the institution's safety culture and only one with a positive result, which refers to the need for changes in several aspects of the safety culture within the hospital organization.

P24, P61 and P59 also confirmed actions aimed at greater visibility of the error, since only a third of those surveyed considered that the error was adequately addressed and that health professionals learned from them and did not know the means to address the issues concerning the occurrence of adverse events. There was also an improvement of the perception of safety culture and the number of medication errors decreased due to the group-specific interventions to improve the safety culture. The teamwork and the safety climate in the group were considered the most positive points, and the administrative support, feedback, and communication, the negative ones.

P6, P19, P70, P14 and P69 used the SAQ and concluded that its version translated and adapted into Portuguese, German, Norwegian, Swedish and Albanian languages proved to be easy to reproduce and apply, valid and reliable. In P45, the same instrument was acceptable, with good psychometric properties, as well as being a useful tool to measure various aspects of the patient safety culture in the context of primary care, and to map the patient's safety culture of wards and departments.

However, the reliability analysis of the SAQ in P63 and P3 suggested that some of the items needed to be refined to establish their internal consistency, but stood out in the psychometric aspects and presented a good construct validity.

Two studies (2.70%; P44 and P8) applied the Nursing Home Survey on Patient Safety Culture (NHSPSC), concluding that it allows identifying the safety culture of the organization, the definition of strategies and the awareness of professionals. There was a lack of studies to examine the use of that questionnaire with larger samples.

P53 and P65 contemplated the Walk Rounds, highlighting that important study method to generate results in order to improve the patient safety culture, and demonstrated that professionals should make care efforts in favor of the patient regarding safety, assumptions, values and norms.

In P65, the Walk Round presented a positive effect on the safety-related attitudes of the nurses who participated in the evaluation sessions. The participants understood them as a promising tool to improve the safety climate and the wider construction of the safety culture.

## Discussion

The health organizations have developed studies, related to the theme in question, driven by the transformations in that area. The actions promoted in 2011 by the World Health Organization (WHO) that launched the six international goals

of patient safety (PS) [1], and, above all, in Brazil, there was the implementation of the National Patient Safety Program (PNSP) in 2013 [2]. The number of publications since 2010 included in this study evidence those actions, with emphasis in 2013 and 2015.

According to P38 and P71, the HSOPSC instrument was the most used to evaluate the safety culture. Translated into English as Hospital Survey on Patient Safety Culture, the Agency for Healthcare Research and Quality (AHRQ) developed that questionnaire in the United States of America in 2004. P71, P27 and P19 considered the HSOPSC effective for evaluating the safety culture.

In the Brazilian scenario, the HSOPSC was applied in a teaching hospital with 25 nurses (26.3%), eight (8.4%) nursing technicians and 62 (65.3%) nursing auxiliaries, in P18. It identified that workers feel free to talk about negative care issues, 34 (35.8%) participants reported that "sometimes" they talk freely and 31 (32.6%), "almost always". Most participants (48; 50.5%) agreed with the assertion that their errors can be used against them, important points to be highlighted in the dimensions of openness for communication and incidents communication.

HSOPSC was adapted for the Nursing Home Survey on Patient Safety Culture (NHSPSC) for exclusive use by nursing teams. In P44, which collected data in the USA, efficiency, work environment, work stress and goal clarity were mentioned as flexible organizational factors that may be the focus of interventions to improve safety.

The study presented in P8, with 219 nurses working in five Continuum and Integrated Care Units (CICU) in the western region of the country, identified that there is still a way to pass through, in order to improve procedures related to errors reporting, take over and talk about them.

However, other instruments can be used to evaluate the Safety Culture, such as the Safety Attitudes Questionnaire (SAQ), which has been used in all continents, except North America.

A survey presented in P12, carried out at two university hospitals in Switzerland, with 319 questionnaires answered by 273 nurses and 46 physicians, identified that the SAQ was acceptable, with good psychometric properties and an adequate instrument to measure the safety climate of patients in Swiss hospitals.

The safety organizing scale (SOS) was applied in the P42 multicenter study in the USA, and measured the degree of involvement of nurses in care, namely: availability of a good "map" of talents and skills; mistakes and ways of learning from them; discussion about team skills; general activities of the work process; availability to solve problems related to the occurrence of adverse events.

Moreover, P42 found that most nurses (63.4%) reported that they were "consistently engaged" in only three of the nine patient safety behaviors measured. That study concluded that hospital leaders should strengthen the safety climate with specific enforcement methods to improve individual and team skills as well as redesign work processes.

P72 and P4 also used the Manchester Patient Safety Culture Assessment Tool (MaPSCAT), performed in North America and Europe. Respondents in P4 perceived MaPSCAT as a structured way to raise issues and a good way to provide information for management to identify opportunities for improvement.

P30 used the Safety Climate Scale (SCS), with a sample of 395 professionals, and pointed out that, among the professional components of the multi-professional teams, nurses obtained higher scores than the physicians to perceive patient safety. The supervisors had a greater commitment to patient safety than senior leaders.

Regarding the Walk Rounds, they are carried out by specialists and can assist in the expression of different aspects of the safety culture between nurses and nursing assistants. However, that method may be useful to facilitate discussions about patient safety among different professional groups, as presented in P53.

The Medical Office Survey on Patient Safety Culture (MOSOPS), pioneer in a dental clinic in the United States, was another method recommended in P43 to evaluate the patient safety culture. It is important to establish clinical and educational priorities to improve the care safety.

P34, conducted at 84 Iranian hospitals, adopted a self-report questionnaire titled "Methods of Assessing Response to Quality Improvement Strategies" (MARQuIS) to ensure the effective application of patient-safety and patient-centered strategies. It was applied to hospital and nursing managers and aimed to guide the compliance of standards for patient safety and patient-centered culture to increase organizational responsiveness and seek partnership with patients and their families.

In the framework of the analyzed instruments, P17 emphasizes SCOPE, characterized as a culture questionnaire for general practices. It derives from the HSOPSC and was validated in Dutch care practice.

In the primary care setting, the pioneer Dutch study presented in P17 examined, through the SCOPE intervention, the effect of a primary care intervention on patient safety behavior. That instrument enabled studying the effects and the implementation of such interventions, besides indicating an improvement in the behavior of the patient safety culture. It also showed that incident reporting is a measure of change in patient safety as an indicator of positive safety culture.

As evidenced by the scoping review, there is the diversity of instruments to measure the patient safety culture in the context of health organizations. In general, the used instruments proved to be relevant for identifying possible problems in those organizations, so that they provide subsidies to elaborate strategies of possible actions to improve the provision of health services.

## Conclusion

In this study, there were various elaborated and validated instruments to measure the culture of patient's safety. The most used were the Hospital Survey on Patient Safety Culture (HSOPSC) and the Safety Attitude Questionnaire (SAQ).

The adhesion of those instruments to this purpose is perceived by their psychometric characteristics, of easy application and fast filling. Therefore, a quantitative approach stands out in the analysis of the results obtained by those instruments.

Nevertheless, there is need for studies to develop instruments with a qualitative approach, in order to deepen knowledge about the perception of safety culture in relation to health professionals.

The number of bases consulted limited the study. Initially, the intention was to perform a broader search, but due to the misrepresentation of some sources of consultation in the CAPES Journals portal, the research was reduced to the bases described in the methodology.

As a contribution, a synthesis of the instruments that evaluate the safety culture in health organizations stands out. One will be able to consult, translate and cross-culturally validate them to use in different scenarios.

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