THE LONG ROAD TO AN EFFICIENT SAFETY CULTURE

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ABSTRACT

**Introduction/Objective** Patient safety must be the priority of the healthcare provider. Theoretical foundations should be combined with educational experiences following the development of knowledge, skills and attitudes for effective patient safety. Adverse event reporting should include learning from mistakes, supporting an environment that encourages reporting without blame or fear of punishment. The healthcare system needs to be made as safe as possible for both the patients and all those providing healthcare. Improving and developing the quality of healthcare requires knowledge, selection and application of specific methods and tools tailored to the capabilities of individual healthcare institutions.

**Keywords:** patient safety, safety climate, safety culture, nurse

INTRODUCTION

Patient safety is defined as the prevention of errors and adverse effects aimed at patients and associated with health care. The World Health Organization (WHO) points out that healthcare has become more effective during recent decades, but also more complex and that these complexities may challenge efforts to improve patient safety as risks may increase [1].

As defined by the Agency for Healthcare Research and Quality (AHRQ), patient safety culture is ‘the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organization's health and safety management’. [2]

According to the World Health Organization (WHO) Global Patient Safety Action Plan 2021–2030, patient safety is defined as “a framework of organized activities that create cultures, processes, procedures, behaviours, technologies and environments in health care that consistently and sustainably reduce risks, reduce the occurrence of avoidable damage, make the error less likely and reduce its impact when it occurs” [3].

Learning, open communication, teamwork, support and management engagement are recognized as key aspects of patient safety culture [4, 5, 6].

Different frameworks are available in the context of patient safety that represent different conditions that create errors and contribute to factors that can help categorize different sources of risk [7].

According to data derived from the literature that includes an increasing number of EU member states, about 8% -12% of patients suffer some damage as a result of treatment errors [8].

Worldwide predictions of a shortage of nurses by 2025, driven by a retiring workforce and an ageing population, increases the need to develop a deep understanding of the impact of nurse staffing on patient safety. Furthermore, identifying the mechanisms and all possible outcomes that can be affected by unsafe staffing in hospitals raises international interest [9].
Amalberty and Vincent ask "what strategies can we adopt to protect patients when health systems and organizations are under stress and simply cannot provide the standard of care they strive for". Given that many healthcare organizations are in an almost constant state of stress due to the large volume of work, lack of staff, patients of high complexity, new technologies, fragmented and conflicting payment systems and many other problems, it was necessary to think and react earlier.

These stressors bring mid-level managers and front-line staff into situations where they can compromise their standards and be unable to provide the highest quality care. The authors provide guidelines for addressing the uncertainty of providing safe care in times of organizational stress, including principles for managing risk in difficult conditions, examples of managing these tensions in other high-risk industries, and a health and research and development agenda [10].

Unfavourable working conditions lead to the rationalization of nursing care interventions. Care streamlining causes adverse events, such as some of the most common events, including treatment errors, falls, infections, pressure sores, and critical incidents [11, 12, 13, 14].

Many nurses reflect on the problem of overwork in the process of providing nursing care. Results show that the nurses do not have enough time to perform the necessary nursing tasks [15].

Working as a nurse can produce consequences such as avoiding contact with patients, negative performance self-assessment and several other responses that can negatively affect personal and professional well-being and functioning [16].

Healthcare policymakers and managers should consider patient safety culture to be a top priority and work to create a safe environment that promotes event reporting [17].

**OBJECTIVE**

This article aims to point out the importance of the inexhaustible and very interesting topic of safety culture as a basis for further research and strategy creation.

**METHODS**

This is a qualitative research paper, based on a scientific review of the literature. Relevant articles for this review have been identified by searching digital databases: PubMed, Medline and Google Scholar. The search was retrospective and covered a timeframe of five years. Twelve articles were selected to review by introducing keywords relevant to the subject. The keywords used were: patient safety, safety climate, safety culture, nurse.

**RESULTS**

The results include a review and analysis of 12 published scientific articles between 2017 and 2021 (Table 1).

**CONCLUSION**

Patient safety must be the priority of the healthcare provider. Theoretical foundations should be combined with educational experiences following the development of knowledge, skills and attitudes for effective patient safety.

Adverse event reporting should include learning from mistakes, supporting an environment that encourages reporting without blame or fear of punishment. The healthcare system needs to be made as safe as possible for both patients and all those providing healthcare.

Ensuring job satisfaction through adequate staff numbers, providing incentives and maintaining a collegial environment requires strategic planning and institutional policies at a higher administrative level. Programs or strategies aimed at improving performance and teamwork skills can be useful for improving the safety culture in hospitals.

Improving and developing the quality of healthcare (patient safety) requires knowledge, selection and application of specific methods and tools tailored to the capabilities of individual health care institutions.

Nurses, as the most numerous members of health teams, have the right and obligation to know all the parameters that can contribute to the quality of their work running smoothly and to the greatest benefit of patients. The effectiveness of the process requires a common framework, a partnership that guarantees synergies between healthcare institutions, healthcare professionals and patients. Continuing education of nurses is necessary, as well as the inclusion of courses on patient safety at all levels of education.

This article aims to point out the importance of safety culture and that this topic is an inexhaustible and very interesting basis for further research and creating strategies.

**Conflicts of Interest**

Authors have no conflicts of interest to declare.
REFERENCES


Table 1. Overview of research studies and outcomes

<table>
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<th>Article, Authors, Year, Main aims</th>
<th>Materials and methods</th>
<th>Results</th>
<th>Conclusion</th>
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| **Rationing of Nursing Care and Patient Safety** (18)  
Izabela Witczak et al., 2021 | „This cross-sectional study involved 245 nurses and was performed between April–June 2019 in four hospitals in Wrocław, Poland. The standardized and relevant research tools such as the Hospital Survey on Patient Safety Culture and the Perceived Implicit Rationing of Nursing Care (PIRNCA) were used. The data was submitted to hierarchical multiple regression analysis. The study was approved by the Bioethics Committee and was followed with the STROBE guidelines.“ | „The PIRNCA scores were negatively correlated with the HSOPSC subscales, which indicates that more frequent rationing of nursing care was associated with lower levels of patient safety parameters. It was shown that the highest level of unfinished nursing care was associated with decreases in patient safety factors linked with supervisor manager.“ | „Our study indicated the presence of nursing care rationing. Regarding patient safety, we found insufficient numbers of medical personnel and excessive personnel workload for providing safe care to patients, a lack of transparency in handling adverse event reports and analyses, and a lack of cooperation between hospital units regarding patient safety.“ |
| **Patient safety culture and associated factors among health care professionals at public hospitals in Dessie town, northeast Ethiopia** (19)  
Fentaw Mohammed et al. 2019 | „Facility-based quantitative study was employed from March 15 – April 30, 2019, in public hospitals in Dessie town. Four hundred and twenty-two health care professionals were recruited to complete a structured pretested self-administered questionnaire. The data was cleaned, coded and entered into Epi Info-7 and exported to SPSS version 20. Data were further analyzed using bivariate and multivariate logistic regression analyses. Variables with a P value of < 0.05 in multivariate analysis were declared as statistically significant at 95% CI.“ | „Of the 422 recruited a total of 411 participants completed the survey with a response rate of 97.4%. Close to half (184(44.8%)) of the participants indicated good patient safety culture. Good patient safety culture was positively associated with working in primary hospital (AOR = 2.56, 95% CI = 1.56, 4.21). On the other hand, good patient safety culture was negatively associated with professionals’ age between 25–29 year (AOR = 0.25, 95% CI = 0.09–0.67) and working in Pediatrics ward (AOR = 0.39, 95% CI = 0.17–0.9) and in emergency ward (AOR = 0.25, 95%CI = 0.09–0.67).“ | „The overall level of patient safety culture was under 50%. Good patient safety culture had positive association with working in primary hospital and negative association with professionals’ age between 25–29 year, 30–34 year and working in pediatrics and emergency ward. Implementing actions that support all dimensions of safety culture should be promoted at all levels of hospitals.“ |
<table>
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<tr>
<th>Measuring safety in older adult care homes: a scoping review of the international literature (20)</th>
<th>Evolution of Culture on Patient Safety in the Clinical Setting of a Spanish Mutual Insurance Company: Observational Study between 2009 and 2017 Based on AHRQ Survey (21)</th>
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<td>The review aimed to identify measures that could be used as indicators of safety for quality monitoring and improvement in older adult residential or nursing care homes.</td>
<td>The goal of this paper is to analyze the safety culture (PS) between the years 2009 and 2017. Methods: A cross-sectional survey focused on PS and developed by the American Agency for Healthcare Research and Quality (AHRQ), was conducted in 2009 and in 2017 among all healthcare workers at Mutualia, anonymously and voluntarily.</td>
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<td>„Systematic searches for journal articles published in the English language from January 1st 1970, without restriction to the study location or country, were conducted in Web of Science, Scopus and PubMed on July 28th 2019. Inclusion criteria were: peer-reviewed journal articles; qualitative or quantitative studies of older adult nursing and/or residential care homes; and related to any aspect of safety in care homes, including the safety of HC provision in the care home.”</td>
<td>„A cross-sectional survey focused on PS, and developed by the American Agency for Healthcare Research and Quality (AHRQ), was conducted in 2009 and 2017 among all healthcare workers at Mutualia, anonymously and voluntarily.”</td>
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<td>„A total of 45 articles were included after review of the title/abstract or full text against the inclusion criteria. Key information was extracted and charted. These findings were then mapped to the Safety Measurement and Monitoring Framework in healthcare (SMMF), adapted by the research team to reflect the care home context, to determine the coverage of different aspects of safety, as well as potential gaps.”</td>
<td>„The overall response rate was similar in both 2009 and 2017 (37.2% and 38.5%, respectively). The average rating obtained showed a significant improvement over the period (7.7 vs. 8.1, p &lt; 0.05). Itemizing by the question, the main strengths were found in management support, organizational learning and continuous improvement, and, especially, in teamwork. Regarding weaknesses, the two lowest scores were those which refer to the balance between clinical safety and workload and the freedom to question the decisions made by superiors.”</td>
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<td>„The findings indicate that there is a range of available safety measures used for quality monitoring and improvement in older adult care homes. These cover all five domains of safety in the SMMF. However, there are potential gaps. These include user experience, psychological harm related to the care home environment, abusive or neglectful care practice and the processes for integrated learning. Some of these gaps may relate to challenges and feasibility of measurement in the care home context.”</td>
<td>„The results obtained from the PS surveys show that the overall PS-culture in our institution has increased, suggesting that the strategies focused on the improvement of PS-culture were well adopted among our personnel. The overall score places Mutualia at similar levels to those reached by the AHRQ and Spanish National Health System.”</td>
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**Patient safety culture among European cancer nurses—An exploratory, cross-sectional survey comparing data from Estonia, Germany, Netherlands, and United Kingdom (22)**

Lena Sharp et al., 2019.

To explore the differences in perceived patient safety culture in cancer nurses working in Estonia, Germany, the Netherlands, and the United Kingdom, an exploratory cross-sectional survey was conducted. In 2018, 393 cancer nurses completed the 12 dimensions of the Hospital Survey on Patient Safety Culture. The mean score for the overall patient safety grade was 61.3. The highest-rated dimension was “teamwork within units” while “staffing” was the lowest in all four countries. Nurses in the Netherlands and the United Kingdom scored higher on “communication openness,” the “frequency of events reported,” and “non-punitive response to errors” than nurses from Estonia or Germany. We found statistically significant differences between the countries for the association between five of the 12 dimensions with the overall patient safety grade: overall perception of patient safety, communication openness, staffing, handoffs and transitions, and non-punitive response to errors.

**The long way ahead to achieve an effective patient safety culture: challenges perceived by nurses (23)**

Jamileh Farokhzadian et al., 2018.

The safety culture has recently attracted the attention of healthcare organizations. Considering the importance of the roles of nurses regarding patient safety, their knowledge and experiences of the challenges that influence patient safety culture can facilitate the development and implementation of better strategies. This study aimed to explore the nurses’ experiences of the challenges influencing the implementation and integration of safety culture in healthcare. A qualitative study with deep and semi-structured individual interviews was carried out using a purposive sampling method to select 23 nurses from four hospitals affiliated with a large medical university in Southeast Iran. Data were analysed using the conventional content analysis of Lundman and Graneheim. Data analysis reflected the main theme of the study, “A long way ahead of safety culture.” This theme includes four categories: 1) inadequate organizational infrastructure, 2) insufficient leadership effectiveness, 3) inadequate efforts to keep pace with national and international standards, and 4) overshadowed values of team participation.

“While practical strategies for creating a safety culture may seem simple, their implementation is not necessarily easy. There are several challenges ahead for cultivating an effective and positive safety culture in healthcare organizations. To keep pace with international standards, healthcare managers must employ modern methods of management in order to overcome the challenges faced by the institutionalization of safety culture and to make a difference in the healthcare system.”
**Patient safety culture in Norwegian nursing homes (24)**

Gunnar Tschudi Bondevik et al., 2017.

Patient safety culture concerns leader and staff interaction, attitudes, routines, awareness and practices that impinge on the risk of patient-adverse events. Due to their complex multiple diseases, nursing home patients are at particularly high risk of adverse events. Studies have found an association between patient safety culture and the risk of adverse events. This study aimed to investigate safety attitudes among healthcare providers in Norwegian nursing homes, using the Safety Attitudes Questionnaire – Ambulatory Version (SAQ-AV). We studied whether variations in safety attitudes were related to professional background, age, work experience and mother tongue.

„In February 2016, 463 healthcare providers working in five nursing homes in Tønsberg, Norway, were invited to answer the SAQ-AV, translated and adapted to the Norwegian nursing home setting. Previous validation of the Norwegian SAQ-AV for nursing homes identified five patient safety factors: teamwork climate, safety climate, job satisfaction, working conditions and stress recognition. SPSS v.22 was used for statistical analysis, which included estimations of mean values, standard deviations and multiple linear regressions. P-values <0.05 were considered to be significant.“

„Out of the 463 employees invited, 288 (62.2%) answered the questionnaire. Response rates varied between 56.9% and 72.2% across the five nursing homes. In multiple linear regression analysis, we found that increasing age and job position among the healthcare providers were associated with significantly increased mean scores for the patient safety factors teamwork climate, safety climate, job satisfaction and working conditions. Not being a Norwegian native speaker was associated with a significantly higher mean score for job satisfaction and a significantly lower mean score for stress recognition. Neither professional background nor work experience were significantly associated with mean scores for any patient safety factor.“

„Patient safety factor scores in nursing homes were poorer than previously found in Norwegian general practices, but similar to findings in out-of-hours primary care clinics. Patient safety culture assessment may help nursing home leaders to initiate targeted quality improvement interventions. Further research should investigate associations between patient safety culture and the occurrence of adverse events in nursing homes.“

**A cross-sectional survey on patient safety culture in secondary hospitals of Northeast China (25)**

Jiang, K et al., 2019.

This study aims to explore the culture of patient safety in secondary hospitals in Heilongjiang, Northeast China, and to explore the implications of the culture of patient safety and practice through the perspectives of different healthcare professionals.

“A cross-sectional survey using the SAQ was conducted to ascertain the status of patient safety culture in nine secondary hospitals across the six dimensions of the SAQ. Among the 900 participate staff members, 665 completed the questionnaire. Descriptive statistics were used to calculate the general means and SD’s of the patient safety culture dimensions and other numerical variables. F-test and multivariate regression analyses were used to statistically analyze the differences in perceptions of safety culture considering the differences in demographic characteristics. All statistical analyses were performed using SPSS v. 22.0.”

“The respondents rated job satisfaction as the highest among all six dimensions of the SAQ, followed in order by teamwork climate, working conditions, and stress recognition (the lowest). There were significant differences among the dimensions of patient safety culture and other factors, such as gender, age, job position, and education. Compared with previous studies, teamwork climate and working conditions scores were quite high, while stress recognition score was very low. We also found differences in patient safety culture by demographic characteristics.”

“The findings revealed the patient safety culture attitudes of healthcare workers in secondary hospitals of Heilongjiang, and provided baseline data for related future research. This evidence may also help government health policymakers and hospital administrators understand related challenges and develop strategies to improve patient safety culture in secondary hospitals of China and perhaps also in other developing countries.”
Nurses’ perception of patient safety culture and its relationship with adverse events: a national questionnaire survey in Iran (26)

Edris Kakemam et al., 2021

Patient safety culture is an important factor in determining hospitals’ ability to address and reduce the occurrence of adverse events (AEs). However, few studies have reported on the impact of nurses’ perceptions of patient safety culture on the occurrence of AEs. Our study aimed to assess the association between nurses’ perception of patient safety culture and their perceived proportion of adverse events.

A cross-sectional survey was carried out among 2295 nurses employed in thirty-two teaching hospitals in Iran. Nurses completed the Persian version of the hospital survey of patients’ safety culture between October 2018 and September 2019.

This is a cross-sectional, descriptive study with a convenient sample of 424 nurses, working in four governmental hospitals. The Attitudes to Patient Safety Questionnaire III, a validated tool consisting of 29 items that assess patient safety attitudes across nine main domains, was used.

Patient safety culture among nurses working in Palestinian governmental hospital: a pathway to a new policy (27)

Abu-El-Noor et al., 2019

Providing safe care helps to reduce mortality, morbidity, length of hospital stay and cost. Patient safety is highly linked to attitudes of health care providers, where those with more positive attitudes achieve higher degrees of patient safety. This study aimed to assess attitudes of nurses working in governmental hospitals in the Gaza-Strip toward patient safety and to examine factors impacting their attitudes.

In governmental hospitals showed overall only slightly positive attitudes toward patient safety with a total score of 3.68 on a 5-point Likert scale, although only 41.9% reported receiving patient safety training previously. The most positive attitudes to patient safety were found in the domains of ‘working hours as a cause of error’ and ‘team functioning’ with scores of 3.94 and 3.93 respectively, whereas the most negative attitudes were found in ‘importance of patient safety in the curriculum’ with a score of 2.92. Most of the study variables (age and years of experience), did not impact nurses’ attitudes. On the other hand, some variables (the speciality and the hospital, were found to significantly influence reported patient safety attitudes with nurses working in surgical specialities, showing more positive attitudes.

Despite the insufficient patient safety training received by the participants in this study, they showed slightly positive attitudes toward patient safety with some variations among different hospitals and departments. A special challenge will be for nursing educators to integrate patient safety in the curriculum, as a large proportion of the participants did not find the inclusion of patient safety in the curriculum useful. Therefore, this part of the curriculum in nurses’ training should be targeted and developed to be related to clinical practice. Moreover, hospital management has to develop non-punitive reporting systems for adverse events and use them as an opportunity to learn from them.
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<th>Nurses' perception regarding patient safety climate and quality of health care in general hospitals in Japan (46)</th>
<th>The survey was conducted at general hospitals with 200 beds or more using the Patient Safety Climate Scale and the Modified multiple-item scale for consumer perceptions of health care service quality. “Significant positive correlations were found among nurses’ perception towards patient safety and health care service quality. The experience of nurses as members of the committee on patient safety and their employment position did not show any significant difference in the perception towards patient safety and health care services quality. Perceptions of health care service quality were lower among those with 6- to 10-year experience than with over 21 years.”</th>
<th>In the perception of nurses and nurse managers’ continuous improvement, perceptions towards patient safety were related to reliability, assurance, responsiveness and empathy in health care service quality.”</th>
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<td>Nurses' Perceptions of Patient Safety Culture in Three Hospitals in Saudi Arabia (47)</td>
<td>A convenience sample of 351 nurses working in three general hospitals in the central region of Saudi Arabia was surveyed in this study using the Hospital Survey of Patients' Safety Culture (HSOPSC) from October 2016 to April 2017.”</td>
<td>“From the 12 composites of the HSOPSC, the nurses perceived only the following two patient safety areas as strengths: teamwork within units and organizational learning-continuous improvement. Six areas of patient safety were identified as weaknesses, namely overall perception of patient safety, handoffs and transitions, communication openness, staffing, frequency of events reported, and non-punitive response to errors. Nationality, educational attainment, hospital, length of service in the hospital, work area or unit, length of service in the current work area or unit, current position, and direct patient contact or interaction were significant predictors of the nurses’ perceived patient safety culture.”</td>
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<td>Nurses' perceptions of patient safety culture: a mixed-methods study (48)</td>
<td>We aimed to explore patient safety culture as perceived by the nursing staff in two public hospitals in Catalonia, Spain. A mixed-methods design was employed using a questionnaire, in-depth interviews, and non-participant observations.”</td>
<td>“62% of the nursing staff rated patient safety as &quot;Acceptable&quot; but was not higher because of work pressure and lack of resources as perceived by staff. &quot;Teamwork within units&quot; had the highest rate of positive responses, and &quot;Staffing&quot; had the lowest rate. EU showed more negative results than the other two units.”</td>
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PREGLEDNI RAD

DUG PUT DO EFIKASNE SIGURNOSNE KULTURE

Amina LUČKIN¹,²*, Arzija PAŠALIĆ³, Almedina ALIHODŽIĆ², Elmedina MRKULIĆ², Alma MIZDRAK², Sadžida DELIĆ², Zineta MULAOSMANOVIĆ², Nino ALIĆ²

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SAŽETAK

Uvod/Cilj Sigurnost pacijenata se definiše kao prevencija grešaka i štetnih efekata na pacijente u vezi sa zdravstvenom zaštitom. Kultura sigurnosti pacijenata je „proizvod individualnih i grupnih vrijednosti, stavova, percepcija, kompetencija i obrazaca ponašanja koji određuju posvećenost, te stil i stručnost u pravljanju zdravlju i sigurnošću u organizaciji“. Poboljšanje percepcije PSC u zdravstveni sektor igra ključnu ulogu u unapređenju njihovog ukupnog kvaliteta, efikasnosti i produktivnosti. Ovaj članak treba da ukaže na značaj bezbednosne kulture, kao i to da ova tema predstavlja neiscrpan izvor informacija i osnov za dalja istraživanja u cilju kreiranja strategija.


Zaključak: Sigurnost pacijenata mora biti prvi prioritet pružaoca zdravstvene zaštite. Teorijske osnove treba kombinovati sa obrazovnim iskustvima prateći razvoj znanja, veština i stavova za efektivnu bezbednost pacijenata. Izvještavanje o štetnim događajima treba uključivati učenje na greškama, podržavanje okruženja koje ohrabruje prijavljivanje bez krivice i strah od kazne. Zdravstveni sistem treba učiniti što sigurnijim kako za pacijente, tako i za sve one koji pružaju zdravstvenu zaštitu. Unapređenje i razvoj kvaliteta zdravstvene zaštite zahtijeva poznavanje, odabir i primjenu specifičnih metoda i alata prilagođenih mogućnostima pojedinih zdravstvenih ustanova.

Ključne riječi: sigurnost pacijenata, sigurnosna klima, sigurnosna kultutra, medicinska sestra