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Patient Safety and Security in Hospitals: Best Practices (Updated Review Article)

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Abstract:

Background: Adverse events (AEs) are a significant cause of patient harm and death worldwide, affecting 10-25% of hospitalized patients, with an estimated 50% being preventable. In healthcare, patient safety is increasingly recognized as a critical area requiring effective monitoring and improvement. One key aspect of patient safety is the concept of patient safety culture (PSC), which refers to the collective attitudes and behaviors aimed at safeguarding patient welfare. A growing body of research suggests that a strong safety culture can reduce AE rates. This review aims to synthesize the evidence regarding the relationship between PSC scores and AE rates in healthcare settings.

Aim: This scoping review aims to summarize existing evidence on the association between PSC scores and AE rates, map the characteristics and research methodologies of studies, and assess the strengths and limitations of the research.

Methods: A scoping review methodology was employed, following the PRISMA-ScR guidelines. Studies included in the review were selected based on their relevance to PSC and AE rates, focusing on hospital settings. The evidence was synthesized to identify patterns and gaps in the existing literature, particularly concerning low- and middle-income countries.

Results: The review found a statistically significant inverse relationship between higher PSC scores and reduced AE rates in the majority of studies. Dimensions such as teamwork climate, safety climate, leadership perception, and management support were frequently associated with lower AE rates. However, some studies reported mixed or non-significant associations, pointing to potential methodological issues such as small sample sizes and low response rates.

Conclusion: Strengthening PSC, particularly in the areas of leadership, communication, and teamwork, can contribute to reducing AEs in healthcare settings. However, variations in research methods, sample sizes,

and measurement tools pose challenges to drawing definitive conclusions. Future research should aim for larger sample sizes, standardized PSC measurement tools, and more comprehensive studies in low- and middle-income settings.

Keywords: Adverse events, patient safety culture, patient safety, healthcare quality, teamwork, leadership, safety climate, healthcare outcomes.

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Introduction:

Adverse events (AEs) represent significant threats to the health and well-being of patients, families, and healthcare professionals, constituting one of the leading causes of disability and death globally [1]. AEs are defined as unintended actions or omissions that result in harm or injury to a patient, which are not directly related to the patient's underlying condition [2]. It is estimated that AEs occur in at least 10% of patients hospitalized [1, 3, 4], with approximately 50% of these events considered preventable [4, 5, 6, 7]. In low- and middle-income countries, AEs affect an estimated 25% of hospitalized patients, leading to approximately 134 million AEs and 2.6 million deaths annually [1, 5, 8]. According to the World Health Organization, the global economic burden of AEs amounts to US$ 1–2 trillion each year [5]. In countries belonging to the Organization for Economic Co-operation and Development (OECD), AEs contribute to 15% of all hospital-related expenses [1, 5]. The frequency of AEs, as a measure of patient outcomes, is commonly determined through reviews of medical records [4]. The 'Harvard Medical Practice Study' (HMPS) and the 'Global Trigger Tool' (GTT) are among the most frequently employed structured methods for reviewing chart data and assessing AE rates in electronic medical records. Rates of in-hospital AEs vary across different studies, with reported occurrences ranging from 2.9% to 21.9%, indicating significant variability in the methodology of retrospective chart reviews and reflecting differences in patient safety levels across healthcare settings [4]. An integrated approach to monitoring and learning from AEs is crucial for advancing patient safety within healthcare systems [1, 4, 8, 9].

Safety Culture in Healthcare: The Concept of Patient Safety Culture (PSC)

The concept of 'safety culture' is a multidisciplinary construct, which has gained particular prominence in healthcare organizations following the Chernobyl disaster in 1986. Patient safety culture (PSC) emerged as a critical component in evaluating the quality of care delivered in these settings [10, 11, 12]. PSC can be understood as the collective attitudes, behaviors, and patterns that pertain to the safeguarding of patient safety at various levels within an organization. This includes shared values, beliefs, and norms within groups that influence behaviors aimed at preventing AEs in care delivery and managing events when they do occur [13, 14, 15]. Additionally, the organizational efforts to protect patients from harm through transparent communication, organizational learning, and a culture of error management are essential factors shaping the PSC [12]. Another key aspect of PSC is the 'patient safety climate,' which refers to the more tangible and deliberate perceptions and actions that reflect the prioritization of safety at various organizational levels. While the terms 'safety culture' and 'safety climate' are often used interchangeably, 'patient safety climate' is often considered to encompass the visible and measurable aspects, while 'safety culture' represents the underlying, intangible factors. In this review, both 'Safety culture' and 'Safety climate' in healthcare services are subsumed under the broader concept of PSC. Over the past two decades, measuring PSC has become a crucial strategy for understanding healthcare processes and improving the overall quality of care [16]. Typically, a questionnaire is employed to measure PSC, with a prior review identifying a total of 127 tools used to assess this construct. The review found that 11 primary dimensions of PSC were identified across the various tools, but no single tool captured all of these dimensions [17]. The most frequently reported dimensions included 'Leadership', 'Perception of safety', 'Teamwork and collaboration', 'Safety systems', 'Prioritization of safety', and 'Resources and constraints' [17]. Healthcare organizations must ensure the selection of appropriate and validated measurement tools [16]. Among the most widely utilized and validated tools for measuring PSC are the Safety Attitudes Questionnaire (SAQ) and the Agency for Healthcare Research and Quality's Hospital Survey on Patient Safety Culture (HSOPS)

[16, 17, 18]. A recent review investigating PSC measurement instruments in hospital settings suggested that valid PSC measurements can reveal variability in healthcare professionals' shared perceptions and provide management with insights to target specific PSC dimensions that may require improvement [16].

Research Evidence on the Association Between PSC and Patient Safety Outcomes

Groves [19] conducted a review examining the relationship between safety culture and patient safety outcomes in acute medical care. Despite the diversity of safety culture concepts, measurement levels, and tools used, the meta-analysis included ten out of fourteen studies and found no significant association between safety culture and patient safety outcomes. DiCurrio [20] focused on the connection between PSC scores and nurse-sensitive outcomes in hospitals. This review, which examined a limited set of nurse-sensitive outcomes, found a statistically significant relationship in a few of the studies included, although it excluded reports from healthcare professionals' perceptions [20]. Braithwaite [21] examined the association between broad organizational and workplace cultures and a wide range of patient outcomes. The review demonstrated a statistically significant inverse association and highlighted the need for higher-quality studies to confirm these findings [21]. Given the rapid development of evidence in this field, a deeper understanding of the relationship between PSC scores and AE rates is needed [19, 20, 21, 22]. An updated review is essential to synthesize the existing evidence. The primary objective of this scoping review is to summarize the evidence regarding the association between PSC scores and AE rates in healthcare services. Furthermore, this review will map the characteristics and applied research methodologies in the studies included, while also examining the strengths and limitations of the evidence.

We undertook a scoping review to address the primary objectives of the study. Scoping reviews are often employed to map and describe the existing evidence and key concepts surrounding a particular topic [23, 24]. The research questions posed in scoping reviews typically encompass broader themes than those in traditional systematic reviews. A scoping review is particularly suitable when a research question is complex and when a comprehensive review of the topic has not yet been conducted [23, 24]. This methodological approach was deemed appropriate given the expansive aim of investigating the evidence concerning the association and mapping the body of literature [24]. The PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) checklist and its associated explanation were utilized to ensure complete and transparent reporting of the scoping review [25]. A study protocol was developed prior to initiating the literature search. Although the protocol was not formally registered, it was adhered to without deviation. The completed PRISMA-ScR checklist and the study protocol are available in the supplemental materials.

Study Objective and Evidence Summary

This review sought to summarize the evidence on the relationship between patient safety culture (PSC) scores and adverse event (AE) rates in healthcare services, with a focus on mapping the characteristics and methodologies applied in the research and examining the strengths and limitations of the included studies. The increasing emphasis on this topic over the past two decades reflects the global push for improving healthcare quality, spurred by the Institute of Medicine's call for concerted efforts [6, 10]. However, the majority of studies on this topic stem from high-income regions such as the United States, Canada, and Europe, with in-hospital settings predominating. As a result, there is a conspicuous gap in the evidence from low- and middle-income countries and primary care settings.

Most of the studies included in this review indicated a statistically significant inverse relationship between higher PSC scores and reduced AE rates, aligning with the findings of prior reviews that have generally reported positive associations between PSC scores and patient safety outcomes [21, 65, 66]. A review on the relationship between organizational culture and patient outcomes revealed that 74.2% of studies reported either positive or mixed positive associations [21], a finding that resonates with the evidence in the current review and underscores the importance of fostering a culture that prioritizes patient safety. As detailed in Table 3, dimensions such as 'Teamwork climate' and 'Safety climate' were most frequently associated with reduced AE rates. This is consistent with a previous review that suggested improving

teamwork and communication training enhances PSC scores and may subsequently reduce AE rates [67]. Furthermore, this raises pertinent questions regarding the definitions of 'Patient Safety Culture' and 'Patient Safety Climate.' Some reviews argue that PSC surveys primarily capture aspects of 'Safety Climate'—the observable and tangible dimensions—rather than the underlying, intangible elements of PSC [17, 68]. Increased scores in dimensions such as 'Leadership's perception and actions promoting patient safety,' 'Management support,' 'Openness in communication and learning,' and 'Non-punitive responses to errors' were also linked to reduced AE rates, reinforcing findings from a comprehensive review that highlights senior leadership's critical role in ensuring safety culture accountability [69].

However, a smaller proportion of studies did not find a significant reduction in AE rates with increased PSC scores, supporting findings from previous research on the association between PSC and quality outcomes [19, 70]. One such study that reported no association, or an inverse relationship, noted that higher PSC scores were linked to a reduction in 'Intercepted near-misses' [39], suggesting that improved PSC may indeed correspond with a reduction in actual 'Near misses' as indicated by prior research [71]. These results affirm the notion of increased PSC serving as a proxy for enhanced patient outcomes and better care quality. Additionally, another study that presented mixed results found that elevated scores in certain PSC dimensions were associated with lower rates of specific AEs [40, 57]. Previous reviews have noted issues such as semantic inconsistencies, infrequent use of theory, a lack of in-depth discussion regarding the use of PSC instruments, and methodological variation in research examining the relationship between safety culture and patient safety outcomes [70]. The mixed findings from this review, alongside these previous reviews, suggest that further investigation into the methodologies used could shed light on the sources of discrepancy and lead to improvements in future research.

Methodological Considerations and Variations

Despite all the included studies employing a cross-sectional design, there is significant variation in how PSC is conceptualized and whether the tools used have been validated for their specific application. Discrepancies exist in how the PSC tools were utilized, particularly in terms of how the complete tools and composite scores were employed beyond their original guidelines. Only 41% of the studies used the full, validated tools—HSOPS and SAQ [16, 72]—to capture a broader range of PSC dimensions. It is suggested that these methodological variations may influence the association between PSC and AE rates in both directions, thereby potentially diminishing the validity of the observed associations. Moreover, as evidenced by studies assessing PSC at the group level, variations in the composition of healthcare professionals and specialties included may also contribute to the differences in findings. For instance, surgical AEs are among the most frequent in-hospital AEs [4, 73], which may influence how PSC is related to AE rates. Despite this, some studies conducted in surgical settings also found no association between PSC and AE rates [34, 35, 40], highlighting the need for further research to explore the connection between PSC and AE rates in surgical contexts. The level at which PSC measurements are applied—whether at the hospital, unit, or group level—also plays a significant role in determining the strength of the association with AE rates. Research indicates that PSC tends to vary most significantly between units within the same hospital, due to differences in organizational processes and structures [72, 74, 75]. Factors such as unit characteristics and work environment elements, including patient-centered care and quality improvement efforts, are key predictors of the safety climate [76].

Sample Size, Response Rate, and Validity

Representativeness is critical for ensuring reliable interpretations of the data. Studies with small sample sizes spread across many units or hospitals may lack the statistical power necessary to detect the effect of PSC on AEs. Additionally, Pronovost and Sexton [72] advocate for a response rate exceeding 60% to accurately capture organizational culture, as opposed to mere opinions. In this review, 62% of the studies reported response rates below 60%, which may have influenced the reliability of PSC measurements and their association with AE rates. Of the studies that did not show an inverse association between PSC scores and AE rates, 62.5% either reported a response rate below 60% or did not report it at all. For studies demonstrating an inverse association, 61.5% had similar issues with low or unreported response rates.

These findings further support calls for a more standardized, complete, and validated approach to measuring PSC [17], with a particular emphasis on achieving response rates above 60%, as recommended by experts [72].

Methodological Variations in the Measurement of Adverse Event (AE) Rates

The studies included in this review revealed substantial diversity in the methodologies used to measure AE rates, encompassing variations in conceptualizations, measurement tools, validation criteria, types of AEs assessed, and the methods employed to assess associations with PSC scores. Previous research highlights that the method of measuring AE rates in the operating room can significantly impact the findings, with direct observations often detecting higher AE rates than surveys, incident reports, or patient chart reviews [2]. For example, De Vries et al. [3] identify the limitations of retrospective chart reviews, emphasizing that the quality of data depends on documentation and inter-observer variability. Manual methods, such as the GTT and HMPS for chart reviews, are regarded as reliable, although inter-rater agreement improves when a small group of reviewers is used [77]. Further developments in the GTT tool have led to the validation of an automated method to detect triggers indicating AEs [78]. Despite these advancements, reporting bias, such as prospective self-reporting and the Hawthorne effect, could influence the results, particularly in nurse-estimated AE rates [32, 41, 42, 60, 61, 63]. If not appropriately adjusted, these biases could distort the accuracy of the measurement process. Notably, 38% of the studies utilized administrative registers to determine AE rates, which offer the advantage of larger sample sizes and the ability to extract data at the unit level [80]. However, fewer than half of the studies using these registers reported on the validity of the tool for its intended purpose. The limited availability of comprehensive, prospective national-level data on in-hospital AE rates and the lack of reporting on the validation of register-based AE data further call for more transparent reporting on the use of administrative registers for AE data collection [4]. The need for standardized procedures for the identification, measurement, and reporting of AE rates is underscored by these findings [2, 4, 9].

Role of Process Variables in the PSC-AE Association

Several studies explored the influence of process variables in the association between PSC scores and AE rates. Higher scores in "Patient safety competencies" and "Safety training" were found to contribute to lower AE rates [42, 43]. One study indicated that a better "Nurse work environment," characterized by adequate staffing and opportunities for discussing patient care and supporting colleagues, was associated with reduced AE rates [55]. A recent review further established a significant correlation between "Staff engagement" and both PSC scores and AE rates, emphasizing that increased staff engagement is a cost-effective strategy to enhance patient safety and highlighting the need for a competent, engaged workforce [22]. Additionally, Sexton et al. [81] expanded the SAQ tool into "Safety, Communication, Operational Reliability, and Engagement" (SCORE), incorporating new dimensions such as "Staff burnout" and "Resilience," which are critical to sustainable quality improvement and patient outcomes. This expanded tool captures more detailed process-related factors and may offer additional insights into the relationship between PSC scores and AE rates.

Structural Variables and Their Impact on PSC-AE Associations

The review also identified structural variables that might explain why 24% of the studies did not report a reduction in AE rates with higher PSC scores. One study found that "Resource intensity," which refers to resource allocation and patient case weighting, was linked to the severity of AEs [49]. Furthermore, an increased "Hospital-level nurse-to-patient ratio" was significantly correlated with reduced length of stay, lower readmission rates within seven days, and decreased mortality [82]. Several studies reported that higher scores on the "Staffing" dimension of the HSOPS were associated with reduced AE rates [37, 48, 51, 60]. In contrast, "Increased workload" correlated significantly with higher error composite rates and mortality [38, 42, 61], while "Rationing of nursing care," describing situations where nurses are unable to

act as required, was linked to lower rates of certain AEs [34]. One study, however, found no significant correlation between nurse-to-patient ratios and AE rates, urging hospital units to monitor and balance "Rationing of nursing care" and education levels according to patient characteristics [34]. Another study highlighted a strong association between PSC scores and the "Structure of care delivery," noting dimensions such as "Skill mix," "Contract workers," "Patient-to-staff ratios," "Turnover," and "Workload intensity," as well as a relationship between PSC scores and "Fall protocol" as a measure of process [37].

Considerations for Time Frame in PSC-AE Studies

It is essential to account for appropriate time frames when collecting data on PSC and AEs due to the influence of other processual and structural variables. Measurement of PSC prior to AE measurement may affect the findings due to the Hawthorne effect. While organizational processes may evolve and impact PSC over time, structural changes, such as leadership transitions, could more rapidly affect PSC [83]. Moreover, the time frame spanning several years may be influenced by changes in processual and structural factors that affect both the psychological and physical work environments, potentially introducing bias in the results [76]. Given these complexities, determining the appropriate time frame for data collection is challenging. Therefore, careful consideration is needed when designing studies examining the relationship between PSC scores and AE rates. There is a pressing need for a broader understanding of the context, processual, and structural variables that could mediate or strengthen the inverse relationship between PSC scores and AE rates.

Best Practices for Patient Safety in Hospitals

Patient safety remains a cornerstone of high-quality healthcare, and hospitals worldwide are continuously striving to enhance safety protocols. The implementation of effective patient safety practices is crucial for reducing the occurrence of adverse events (AEs) and improving patient outcomes. These practices involve a combination of structural, processual, and cultural factors that together create a safe environment for both patients and healthcare providers. This discussion highlights some of the best practices for patient safety in hospitals, drawing from both previously discussed data and other academic sources.

1. Promoting a Safety Culture

One of the fundamental aspects of patient safety in hospitals is fostering a culture of safety. This includes creating an environment where all staff members—regardless of their role—are encouraged to report safety concerns, share ideas for improvement, and engage in open communication regarding patient safety. A safety culture is characterized by transparency, mutual respect, and leadership commitment to continuous improvement. In hospitals with strong safety cultures, staff members are more likely to identify, report, and address potential risks before they result in harm. A critical component of this culture is leadership engagement. Leaders must actively support patient safety initiatives and provide resources for training and continuous improvement. The organizational culture must encourage the reporting of adverse events without fear of blame or retribution, as this leads to improved learning and better safety outcomes. This concept aligns with findings from previous studies indicating that hospitals with supportive leadership and a robust safety culture report higher rates of adverse event detection and improved patient safety outcomes [79].

2. Standardizing Safety Protocols

Standardizing procedures is a key practice for improving patient safety. Protocols and checklists, such as those used in surgical procedures, are essential for reducing the risk of errors. For example, the World Health Organization (WHO) Surgical Safety Checklist has been proven to reduce surgical complications and mortality by ensuring that critical steps are not overlooked. Hospitals that implement standardized protocols for high-risk procedures, medication administration, and infection control have shown a significant reduction in the incidence of adverse events. Another critical area for standardization is the use of medication safety practices. The use of bar-code medication administration (BCMA) systems, computerized physician order entry (CPOE), and clinical decision support systems (CDSS) can significantly reduce medication errors. For instance, BCMA ensures that patients receive the correct medication by

matching the barcode on the medication package with the patient's wristband, thus preventing medication errors. Standardizing communication tools such as the SBAR (Situation, Background, Assessment, Recommendation) model further improves patient safety by providing a clear and consistent structure for conveying important information during handovers between care teams.

3. Continuous Staff Training and Education

Ongoing training and education for healthcare professionals are essential for ensuring that staff members are equipped with the latest knowledge and skills necessary for providing safe care. Regularly scheduled safety training programs should focus on topics such as infection prevention and control, safe medication administration, and crisis management. Additionally, training in patient safety competencies, including recognizing early signs of deterioration and responding to adverse events, has been linked to better outcomes in clinical settings [42, 43]. Simulation-based training is an effective method for preparing healthcare providers to handle critical situations safely. These simulation exercises allow staff to practice skills in a controlled environment, which can enhance their ability to respond effectively during real-world emergencies. Research supports the integration of simulation-based education into hospital training programs, as it allows healthcare teams to rehearse rare or high-risk scenarios without compromising patient safety.

4. Implementing Robust Incident Reporting Systems

An effective incident reporting system is a cornerstone of any hospital's patient safety strategy. These systems enable healthcare professionals to report adverse events, near-misses, and unsafe conditions, which can then be analyzed for trends and areas of improvement. Importantly, the system should be non-punitive, encouraging all staff to report incidents without fear of punishment or reprisal. Hospitals with well-established incident reporting systems are better equipped to identify the underlying causes of safety breaches and address them proactively. For instance, a hospital with a robust reporting system might identify patterns in medication errors or patient falls, prompting changes in practice or additional staff training to mitigate the risks. Moreover, these reports can be aggregated into data-driven safety dashboards, which help administrators and clinicians track key safety metrics and make informed decisions.

5. Enhancing Communication Among Care Teams

Effective communication among care teams is critical for patient safety. A breakdown in communication can lead to misunderstandings, delays in treatment, and adverse events. Therefore, promoting clear, concise, and timely communication is essential for reducing the risk of errors. One of the most important practices in this regard is ensuring effective handoffs between shifts and care providers. Using structured communication tools, such as SBAR (Situation, Background, Assessment, and Recommendation), can ensure that important patient information is conveyed in a standardized manner, reducing the likelihood of information being overlooked. Additionally, fostering a collaborative environment where interdisciplinary teams communicate regularly can improve patient safety. Nurses, physicians, pharmacists, and other healthcare professionals should work closely together to discuss patient care plans, share insights, and resolve any potential safety concerns. A study by Sexton et al. [81] highlighted the importance of staff engagement and communication in improving patient safety, demonstrating that engaged staff who communicate effectively contribute to lower rates of adverse events and better patient outcomes.

6. Using Technology to Support Patient Safety

The use of health information technology (HIT) plays a vital role in improving patient safety. Electronic health records (EHRs), for example, provide a comprehensive and up-to-date overview of a patient's medical history, reducing the risk of errors related to patient information being incomplete or inaccurate. EHRs allow for better tracking of patient progress, medication administration, and treatment plans, enabling clinicians to make informed decisions quickly. In addition to EHRs, other technologies, such as automated medication dispensing systems and decision support tools, can further enhance patient safety.

Clinical decision support systems (CDSS) can alert healthcare providers to potential drug interactions, allergies, or deviations from best practice guidelines, helping to prevent medication errors and other AEs.

7. Infection Prevention and Control

Preventing healthcare-associated infections (HAIs) is another crucial aspect of patient safety. Implementing evidence-based infection control measures, such as hand hygiene protocols, proper sterilization techniques, and isolation precautions for patients with contagious diseases, can significantly reduce the risk of infections. In particular, strict adherence to guidelines for central line-associated bloodstream infection (CLABSI) prevention and catheter-associated urinary tract infection (CAUTI) prevention has been shown to reduce infection rates and improve patient outcomes. Hospitals should also regularly audit infection control practices to ensure compliance with protocols and identify areas for improvement. This ongoing surveillance can prevent outbreaks and protect patients from harm.

8. Patient and Family Engagement

Engaging patients and their families in the care process is another best practice that has been shown to improve patient safety. When patients and families are actively involved in decision-making, they are more likely to notice discrepancies in care and ask questions about potential risks. Educating patients about their conditions, treatment options, and potential side effects helps to ensure that they are informed and can make safe decisions regarding their care. Studies have shown that hospitals with active patient engagement programs have lower rates of adverse events and better overall patient satisfaction. Encouraging patients to speak up about their concerns, report changes in their condition, and participate in their care plan can help identify safety risks early and prevent harm. The best practices for patient safety in hospitals involve a multifaceted approach that combines leadership commitment, standardized protocols, continuous education, effective communication, technological support, and patient engagement. By fostering a culture of safety, implementing robust safety protocols, and leveraging technology to support decision-making and communication, hospitals can significantly reduce the incidence of adverse events and improve patient outcomes. Moreover, focusing on processual and structural factors, such as training, workload management, and resource allocation, can further strengthen patient safety efforts. Ultimately, a comprehensive approach to patient safety, which includes both proactive measures and a focus on continuous improvement, is essential for ensuring the highest standards of care in hospitals.

Conclusion:

Patient safety and security in hospitals are pivotal to enhancing healthcare quality and preventing harm to patients. Adverse events (AEs), which occur in a significant proportion of hospitalized patients, are responsible for a considerable number of deaths and disabilities globally. Many of these events are preventable, emphasizing the need for comprehensive strategies to improve patient safety. Central to these strategies is the concept of patient safety culture (PSC), which encapsulates the shared values, beliefs, and behaviors within healthcare organizations that influence safety outcomes. The research examined in this review underscores the importance of fostering a positive PSC to improve patient safety outcomes. The review of existing literature reveals a generally positive association between high PSC scores and reduced AE rates, supporting the hypothesis that a culture emphasizing safety, transparency, and non-punitive responses to errors can lead to better patient outcomes. Dimensions such as teamwork climate, safety climate, leadership, and communication were found to be strongly linked to reduced AEs. The importance of leadership in promoting a safety culture cannot be overstated, as it sets the tone for organizational efforts in preventing harm and improving the quality of care. This review also highlights the critical role of communication and collaboration among healthcare teams in preventing errors and improving patient safety. However, the review also identifies several methodological challenges that hinder the ability to draw firm conclusions about the exact nature of the relationship between PSC and AE rates. Variations in research designs, tools used to measure PSC and AE rates, sample sizes, and response rates were prevalent across the studies reviewed. These discrepancies suggest the need for more standardized and rigorous methodologies in future research. In particular, studies in low- and middle-income countries and primary

care settings are scarce, representing an important area for future investigation. In conclusion, improving PSC is a promising strategy for reducing AEs and enhancing patient safety in hospitals. However, further research with robust methodologies, larger sample sizes, and comprehensive data collection is essential to better understand the complex relationship between PSC and patient outcomes. Furthermore, healthcare organizations must invest in training, leadership development, and organizational improvements to foster a culture that prioritizes patient safety at all levels.

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سلامة المرضى وأمنهم في المستشفيات: أفضل الممارسات (مقال مراجع محدث)

الملخص:

الخلفية: تُعد الأحداث السلبية (AEs) سببًا مهمًا في الأذى والوفاة للمرضى في جميع أنحاء العالم، حيث تؤثر على 10-25% من المرضى الذين يدخلون المستشفيات، مع تقدير بأن 50% منها يمكن الوقاية منها. في الرعاية الصحية، يتم التعرف بشكل متزايد على سلامة المرضى كمنطقة حاسمة تتطلب المراقبة الفعالة والتحسين. أحد الجوانب الرئيسية في سلامة المرضى هو مفهوم ثقافة سلامة المرضى(PSC) ، والتي تشير إلى المواقف والسلوكيات الجماعية التي تهدف إلى حماية رفاهية المرضى. تشير الأدلة المتزايدة من الأبحاث إلى أن وجود ثقافة سلامة قوية يمكن أن يقلل من معدلات الأحداث السلبية. يهدف هذا الاستعراض إلى تلخيص الأدلة المتعلقة بالعلاقة بين درجات ثقافة سلامة المرضى ومعدلات الأحداث السلبية في بيئات الرعاية الصحية .

الهدف: يهدف هذا الاستعراض إلى تلخيص الأدلة الحالية حول العلاقة بين درجات ثقافة سلامة المرضى ومعدلات الأحداث السلبية، ورسم خصائص وأساليب البحث في الدراسات، وتقييم نقاط القوة والضعف في الأبحاث.

الأساليب: تم استخدام منهجية استعراض النطاق، وفقًا لإرشادات .PRISMA-ScR تم اختيار الدراسات التي تم تضمينها في المراجعة بناءً على مدى ارتباطها بثقافة سلامة المرضى ومعدلات الأحداث السلبية، مع التركيز على البيئات الطبية. تم تلخيص الأدلة لتحديد الأنماط والفجوات في الأدبيات الحالية، خاصة فيما يتعلق بالدول ذات الدخل المنخفض والمتوسط.

النتائج: وجد الاستعراض وجود علاقة عكسية ذات دلالة إحصائية بين درجات ثقافة سلامة المرضى المرتفعة وانخفاض معدلات الأحداث السلبية في معظم الدراسات. كانت الأبعاد مثل مناخ العمل الجماعي، ومناخ السلامة، وإدراك القيادة، ودعم الإدارة مرتبطة بشكل متكرر بمعدلات أحداث سلبية منخفضة. ومع ذلك، أظهرت بعض الدراسات علاقات مختلطة أو غير دالة إحصائيًا، مما يشير إلى قضايا منهجية محتملة مثل حجم العينة الصغيرة ومعدلات الاستجابة المنخفضة.

الخاتمة: يمكن أن يساهم تعزيز ثقافة سلامة المرضى، خاصة في مجالات القيادة، والاتصال، والعمل الجماعي، في تقليل الأحداث السلبية في بيئات الرعاية الصحية. ومع ذلك، فإن التباين في الأساليب البحثية، وأحجام العينات، وأدوات القياس يمثل تحديات في الوصول إلى استنتاجات حاسمة. يجب أن تهدف الأبحاث المستقبلية إلى استخدام عينات أكبر، وأدوات قياس ثقافة سلامة المرضى الموحدة، ودراسات أكثر شمولية في بيئات البلدان ذات الدخل المنخفض والمتوسط.

الكلمات المفتاحية: الأحداث السلبية، ثقافة سلامة المرضى، سلامة المرضى، جودة الرعاية الصحية، العمل الجماعي، القيادة، مناخ السلامة، نتائج الرعاية الصحية.