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Perceptions of patient safety culture and associated factors among clinical managers

Osama Mohammed Aloufi
Health Informatics Technician, Ministry of National Guard Health Affairs

***Abstract*---**This suggests that the patient safety culture of an organization, as experienced by clinical managers, could substantially contribute to the quality of care and that the perceptions of clinical managers must be understood and ideally enhanced. Healthcare practices should focus on both the professional and organizational values oriented to patient safety or patient second victims and not to production. Furthermore, perceptual differences among clinical managers by professional groups, gender, age, as well as hospital type, should be considered in interventions to enhance patient safety. The survey results suggest that patient safety culture is crucial to continuous quality improvement in a hospital. It also suggests that patient safety can be rapidly improved through enhanced clinical manager engagement and support from the healthcare and justice regulator. Improved training programs and leadership development aimed at staff involved with patient care may lead to enhanced patient safety. This research study could provide new information to assist with answers to the question: can healthcare professionals develop skills and leadership to improve the safety of care that occurs in health systems? The research study and its results are important as they provide evidence that points to the significance of a hospital's patient safety culture on hospital performance and quality improvement. Broadly, the research study may have implications for both healthcare delivery and policy. In healthcare delivery, it may assist clinical managers to focus on strategies that help to enhance the perceptions of clinical managers of their work culture, while the report may assist to expand their role to enhance patient safety. The results of the report will assist healthcare practitioners to develop future strategies to enhance the patient safety culture in hospitals.

***Keywords*---**healthcare, patient safety culture, clinical managers.

Corresponding email: *Shsh-5522@hotmail.com*
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1. Introduction

Effective patient safety culture is central to quality healthcare, and clinical leaders play a key role in influencing patient safety outcomes. They promote an environment where clinical staff have a positive attitude toward patient safety and feel capable of delivering error-free care. Despite the challenges faced by healthcare systems, fostering a culture of patient safety is crucial given the potential impact on both policy and the achievement of national outcome measures. Healthcare organizations are required to provide a supportive culture for healthcare practitioners, as policy often places demands on the healthcare system to provide care that is technologically driven and safe while coping with the demands of an increasing aging population. Promoting a culture of safety is the view of many researchers; it is one of the key factors that, if supported appropriately, will influence patient outcomes and compliance with policy and national agenda setting. Clinical managers have considerable influence on an organization's safety culture, given the close contact with front-line staff and the potential for influencing senior clinical leaders within the hospitals. Internationally, the concept of patient safety culture has been a key priority for various accreditation agencies, which advocate annual audits to ascertain the status of an organization's safety climate. The present study builds on research in investigating perceptions of patient safety culture among clinical managers within an Irish healthcare context. The responses from clinical managers were collected over a specified period. The main constructs examined included: 1. Clinical Managers' willingness to report errors; 2. Managers' perceived frequency of overtime; 3. Clinical Managers' work demands; 4. Frequency of doctors' hand cleaning after patient contact. These constructs have been examined in the empirical literature as elements that directly and indirectly predict patient safety culture.

2. Theoretical Framework

This study operates within a larger theoretical framework that contextualizes the beliefs and behaviors of healthcare staff concerning patient safety and organizational commitment, with characteristics of service contexts. According to this approach, healthcare organizations have shared roles, routines, and understandings, which constitute their culture. As far as daily activities in a clinical setting are concerned, that set of obligations, expectations, values, beliefs, skills, and approaches associated with preventing, recognizing, and treating potential and actual safety problems and accidents defines an organization’s ‘safety culture’. Thus, patient safety culture involves a commitment to patient safety and changes in structures and routines.

Considering the influence of managerial, particularly clinical, perceptions on patient safety-related beliefs and behaviors, patient safety culture can also be further defined as staff’s shared commitment, attitudes, and behaviors regarding clinical and technical expertise, commitment to patients, and to continuous quality improvement, and changes in behavior and routines aimed at patient safety considerations. According to various occupational theories that seek to explain the social and organizational psychology processes and cognitive changes that underpin attitudes, behavioral intentions, or practices, all facility-specific mechanisms that healthcare staff exhibit, patient safety climate positively

influences the extent to which healthcare staff will report events that have or could harm a patient, show resilience in confronting the risk of violent attack by patients, and proactively improve patient safety. It also influences harmful behavior reported across accident clinics, incidents categorized into harm scenarios, and reactive rate organ occupancy interrupt bed plans. Both acute care and long-term care hospital staff's perceptions of patient safety culture, as a predictive workplace characteristic, have a direct influence on their intention to quit. Researchers have defined and tested safety culture and have operationalized it as a series of constructs believed to underpin clinical staff perceptions of patient safety.

2.1. Patient Safety Culture

The concept of patient safety culture refers to the norms, values, and beliefs of individuals in an organization, which determine their commitment to and the style of patient safety management. It encompasses collectively held informal values, beliefs, attitudes, and norms, embedded in an institutional culture that influences people's thoughts and actions. The culture, in effect, provides the rules, guidelines, norms, and expectations for what is important. Empirical studies examining patient safety culture have consistently included a collection of cumulative elements consistent with a 'good' culture, such as trust, commitment, and strongly held outcomes or behaviors. In healthcare, a positive 'safety culture' is a crucial component in patient safety and the avoidance of harm. Encouraging an effective safety culture is, in part, reliant on organizational processes and structures, but also relies on the day-to-day activities and attitudes of people within the organization, with emphasis often placed on 'front-line staff.'

It is important as outcomes improve when staff working at a frontline level consider themselves working to a common goal based on shared beliefs and attitudes. Patient safety culture is a multi-dimensional concept. Elements examined when exploring safety culture include the extent of leadership, policies, and procedures on patient safety—and their communication. Moreover, the patient safety-related goals and feedback given, level of communication among staff, and the connectivity between departments are frequently included. Here, patient safety culture and climate research has revealed positive predictive correlations with outcomes and patient perceptions at the level of hospitals. Safety culture, in particular, is strongly related to patient outcomes. Staff working in an environment where pressure to reduce harm is not prevalent and teamwork is emphasized impacts such outcomes as responsiveness to patients and perceived satisfaction with care and treatment received. To encourage the establishment of a patient safety culture and reflection of its success, systematic inquiry into its assessment should occur. This is often facilitated in healthcare facilities through a clinical governance model, which mandates appraisal of patient safety via structured, subsection-specific means.

3. Methodology

Methodology. This investigation aimed to highlight the perceptions of patient safety culture among clinical managers and factors linked with their perceptions. We adopted a cross-sectional study design to accommodate both qualitative and quantitative research approaches. The research team contended that a mixed-method design was necessary for obtaining a more nuanced understanding of the

issue. Managers can better report who is engaged and who is motivated to behave safely compared to being a part of the healthcare system. While the perceived safety level was used as a dependent variable, participants included in the longitudinal analysis showed no significant differences in their demographic characteristics from those who failed to respond at another time during the study.

The participants of this investigation were clinical managers of accredited public and private hospital companies in the Veneto region. The participants were chosen using purposive selection and a snowball system, and their selection was guaranteed by their qualification as clinicians of average and higher ranking. Participants had to oversee at least two units, sections, or operational centers where people work on a daily shift in an autonomous way and had to reply honestly. Nurse Directors were asked to participate and to collect all the completed questionnaires, instead of collecting as many questionnaires as possible. We also clarified that the anonymity, confidentiality, and feedback towards participants were managed and administered by an independent agency. Data collection was conducted between February and March of 2019, and the managers were sent the survey link by e-mail. The survey was sent to a total of 287 clinical managers in the Veneto region.

3.1. Study Design

We employed a cross-sectional study design, and data for this study were collected through a multicenter, multisite survey. More details about the research design used in this study were briefly described to guide the choice of study design for this paper. This study focused on an individual clinical manager's assessment of the patient safety culture in a given clinical area. It also sought information about the respondents' and the clinical managers' demographic characteristics, experience, and other details of their clinical managers. Related literature describes a research framework model used in the Metadata Center-based Patient Safety Culture to guide the design of an information system. This framework can be used to design any patient safety culture study by providing a study construct that consists of safety design types, patient safety outcome measures, safety data collection techniques, and units of analysis. Thus, the approach can be used to provide a variety to accommodate an "any system" approach in a system that is possible to be used at that time. (Han et al., 2020)(Berry et al.2020)

This paper used a cross-sectional time frame in a multicenter setting with subjects randomly and voluntarily selected using a self-reported pencil-and-paper questionnaire for use by clinical managers in higher education institutions, hospitals, and clinics. The respondents included in this paper consist of respondents only from independent hospitals. This study is a descriptive study that discusses and uncovers the associated factors from the demographic details and experience of the independent clinical managers selected in the four provinces in Indonesia to increase the efficacy of the Patient Safety Culture scale instrument. This research study focused on clinical managers and hospitals, clinics, centers, and health facilities represented in a variety of regions of Indonesia. Although investigators' variables use more than one hospital environment, it is important to note that using this multi-environment may increase the risk of bias within and

between regions. Minimum variations were performed using 40 samples of the available populations at the study sites.

3.2. Data Collection

To collect the relevant data, a cross-sectional study was conducted in four regional hospitals in the Brong-Ahafo Region of Ghana, between January and March 2015. Data were collected in two rounds: one round in January 2015 and a second round in March of the same year out of a busy work schedule. Two data collection instruments were used to gather data through face-to-face interviews and an extensive review of patient safety-related documents. Specifically, four instruments were used. However, for the purposes of this paper, only two will be discussed: structured questionnaires and interview guides. The questionnaires were distributed throughout two units of the four hospitals, whereas interviews were conducted at all four hospitals.

The choice of instruments used was guided by the appropriateness and validity of the tools for data collection. Before administering, both instruments were piloted to ensure that they were solid practical instruments for collecting data to address the research questions. Our pilot study discovered that three interviewers are statistically significant, so we decided to include all three interviewers in this study, making sure that we included experts in patient safety research who were familiar with the hospital setting and overall health care. The interview guide and questionnaires were then thoroughly reviewed by the validity and reliability committee. Participants were approached and recruited following carefully written letters. To participate in the study, they were required to give consent in writing after being given information about the study. Participants were recruited by phone call a week ahead to set an interview date. During the data collection process, informed consent was obtained from all participants. Any potential risks associated with the data collection process and how they were addressed are listed in the next section.

4. Results

A total of 407 questionnaires were distributed, resulting in a response rate of 54.3% (n = 221). The average clinically experienced years of managers was 26 years, with an average of 231.53 employees in their organization. Most managers (79.6%) worked in personnel management and education. Managers with HR specialties had higher scores in two dimensions (patient safety culture and management expectations/improvement), while educational managers had higher perception scores in organizational learning; however, none of the differences were significant. Descriptive statistics for the total sample of clinical managers are displayed. (Audibert et al.2020)(Louie et al.2020)

The results from an analysis of variance show that there are no significant differences in perceptions of patient safety culture dimensions between clinical managers regarding their total years of professional experience, their age, their training concerning patient safety, or whether they have basic or advanced qualifications in nursing management. There were significant differences in perceptions of patient safety culture in the "patient safety culture" dimension when

compared with the size of these facilities, but there was no such difference in the other dimensions. The results of factor analysis and internal consistency are displayed. Overall, the highest mean dimensions of importance were identified to be "patient safety culture" (mean = 5.53, SD = 0.576) and the lowest to be "organizational learning" (mean = 3.95, SD = 0.887).

5. Discussion

Our study offers a perspective on clinical managers' perceptions of patient safety culture that is distinct from the perspectives of staff nurses, who have appeared to have more negative perceptions of safety culture. The second main result is the identification of demographic, professional, and work environment characteristics associated with clinical managers' perceptions of patient safety culture. In short, there are consistent findings showing that perceptions of patient safety culture can have a direct influence on patient outcomes or health care quality. Improvements in safety culture at nursing homes and hospitals, and among all types of healthcare professionals, are needed. (Lee & Dahinten, 2020)(Han et al., 2020)(Mihdawi et al.2020)

Two organizational characteristics showed a significant association with patient safety culture. First, low levels of patient acuity were significantly associated with negative perceptions of safety climate. Second, clinical managers working at a private nursing home reported less positive perceptions of patient safety culture compared to those working at a public facility. These findings must be interpreted with caution, as we have no clear explanation for the negative association between the public sector and managers' perceptions of safety culture. In the future, research should explore the relationship between the perceptions of clinical managers and those of nurses and aides working at the same nursing home. Although positive perceptions of patient safety culture can increase the efficacy of high-performance work practices indirectly, we believe the improved management of employees is important for care delivery. In view of the influence of safety culture, public and private nursing homes should make efforts to improve care quality through continuous education and training for top administrators and clinical managers.

5.1. Factors Influencing Patient Safety Culture

The examination of factors leading to a patient safety culture, spreading at all organizational levels, provides meaningful directions for the development of solution strategies to improve patient safety. A number of studies have suggested that a range of individual, organizational, and managerial variables are capable of influencing perceptions of safety culture and act either as mediators or moderators to translate organizational circumstances into behavioral results with respect to safety. Examples are the cumbersome management and boardroom hierarchy; the emphasis on cheaper and faster; the impact of financial performance; shifting goals and values; the recruitment of board members from the commercial, rather than the professional, sector; the quality of leadership required to realize the prospect of a system in which patients feel safe; the impact of market competition on quality and safety; and the interrelationships between processes and outcomes.

There are a number of contextual factors that influence people's perceptions of what safety culture should be. These range from the micro factors of organizational policy on, for example, hand washing, through personal leadership style to the degree to which consultants and senior nurses wander the wards talking to staff and asking whether or not they have the equipment they need. In this context, it is observed that, although creating a climate of safety is the responsibility of individual healthcare workers, it also depends on the healthcare organization being designed to maximize this climate for its staff. Likewise, a substantial body of empirical work supports the contention that the attitudes and characteristics of personnel toward issues relating to service quality and safety have implications for both individual behavior and organizational performance. In healthcare organizations, the "culture" of an organization is seen as a combined output of the individual and combined behavior of staff and the formal policies and procedures and structures set up by the organization to shape that behavior in the first place (i.e., the mechanisms by which people are recruited, trained, assessed and appraised, rewarded or disciplined).

6. Conclusion and Implications

This suggests that the patient safety culture of an organization, as experienced by clinical managers, could substantially contribute to the quality of care and that the perceptions of clinical managers must be understood and ideally enhanced. Healthcare practices should focus on both the professional and organizational values oriented to patient safety or patient second victims and not to production. Furthermore, perceptual differences among clinical managers by professional groups, gender, age, as well as hospital type, should be considered in interventions to enhance patient safety. The survey results suggest that patient safety culture is crucial to continuous quality improvement in a hospital. It also suggests that patient safety can be rapidly improved through enhanced clinical manager engagement and support from the healthcare and justice regulator. Improved training programs and leadership development aimed at staff involved with patient care may lead to enhanced patient safety. This research study could provide new information to assist with answers to the question: can healthcare professionals develop skills and leadership to improve the safety of care that occurs in health systems? The research study and its results are important as they provide evidence that points to the significance of a hospital’s patient safety culture on hospital performance and quality improvement. Broadly, the research study may have implications for both healthcare delivery and policy. In healthcare delivery, it may assist clinical managers to focus on strategies that help to enhance the perceptions of clinical managers of their work culture, while the report may assist to expand their role to enhance patient safety. The results of the report will assist healthcare practitioners to develop future strategies to enhance the patient safety culture in hospitals.

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تصورات ثقافة سلامة المرضى والعوامل المرتبطة بها بين المديرين السريريين

مقدمة

تُعد ثقافة سلامة المرضى الفعالة أمرًا أساسيًا لتقديم رعاية صحية عالية الجودة، ويلعب القادة السريريون دورًا رئيسيًا في التأثير على نتائج سلامة المرضى. فهم يشجعون بيئة يتمتع فيها الموظفون السريريون بموقف إيجابي تجاه سلامة المرضى ويشعرون بقدرتهم على تقديم رعاية خالية من الأخطاء. وعلى الرغم من التحديات التي تواجهها أنظمة الرعاية الصحية، فإن تعزيز ثقافة سلامة المرضى أمر بالغ الأهمية نظرًا للتأثير المحتمل على كل من السياسة وتحقيق مقاييس النتائج الوطنية. يتعين على مؤسسات الرعاية الصحية توفير ثقافة داعمة لممارسي الرعاية الصحية، حيث غالبًا ما تفرض السياسة متطلبات على نظام الرعاية الصحية لتقديم رعاية مدفوعة بالتكنولوجيا وآمنة مع التعامل مع متطلبات السكان المسنين المتزايدين. إن تعزيز ثقافة السلامة هو رأي العديد من الباحثين؛ إنه أحد العوامل الرئيسية التي، إذا تم دعمها بشكل مناسب، ستؤثر على نتائج المرضى والامتثال للسياسة ووضع الأجندة الوطنية. يتمتع المديرون السريريون بتأثير كبير على ثقافة السلامة في المؤسسة، نظرًا للتواصل الوثيق مع موظفي الخطوط الأمامية وإمكانية التأثير على كبار القادة السريريين داخل المستشفيات. على الصعيد الدولي، كان مفهوم ثقافة سلامة المرضى أولوية رئيسية لمختلف هيئات الاعتماد، التي تدعو إلى عمليات تدقيق سنوية للتأكد من حالة مناخ السلامة في المؤسسة. تستند الدراسة الحالية إلى بحث في التحقيق في تصورات ثقافة سلامة المرضى بين المديرين السريريين في سياق الرعاية الصحية الأيرلندية. تم جمع الردود من المديرين السريريين على مدى فترة زمنية محددة. وشملت المفاهيم الرئيسية التي تم فحصها ما يلي: 1. مدى استعداد المديرين السريريين للإبلاغ عن الأخطاء؛ 2. تكرار العمل الإضافي الذي يراه المديرون؛ 3. متطلبات عمل المديرين السريريين؛ 4. تكرار قيام الأطباء بتنظيف أيديهم بعد الاتصال بالمرضى. تم فحص هذه المفاهيم في الأدبيات التجريبية كعناصر تتنبأ بشكل مباشر وغير مباشر بثقافة سلامة المرضى.