

عنوان البحث

**Evaluating the Impact of Risk Management Practices on Patient Safety
Culture in a Tertiary Hospital, Riyadh, Saudi Arabia**

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Introduction

Healthcare institutions operate in highly complex environments where patient safety is a fundamental concern. The delivery of healthcare services is inherently risky due to human factors, technological complexity, and systemic processes. Effective risk management practices are essential in identifying, assessing, and mitigating risks which could lead to adverse events, patient harm, or organizational loss.

In recent years, global healthcare organizations have increasingly recognized the importance of building a patient safety culture (PSC)-a shared set of values, beliefs, and norms that prioritize safety at all levels of the organization. A positive safety culture fosters open communication, non-punitive error reporting, teamwork, and leadership commitment to safety.

Despite the existence of formal risk management systems, incidents of medical errors and safety lapses continue to occur in many healthcare institutions. This raises the question of whether risk management practices are effectively influencing the safety culture among healthcare workers. Understanding this relationship is vital for improving overall healthcare quality and reducing preventable harm.

This study seeks to evaluate the impact of risk management practices on patient safety culture in King Abdulaziz Medical City, Riyadh, Saudi Arabia, using the validated Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire developed by the Agency for Healthcare Research and Quality (AHRQ).

Study problem

While many hospitals have adopted structured risk management frameworks, their effectiveness in shaping and strengthening patient safety culture remains uncertain. In some healthcare settings, risk management functions are viewed as administrative compliance rather than integral to daily clinical practice.

The persistence of adverse events, underreporting of errors, and gaps in communication suggest that existing risk management measures may not be adequately embedded in the organizational culture. Therefore, there is a need to empirically assess how the implementation of risk management practices affects the perceptions and behaviors that define patient safety culture among healthcare workers.

Importance of the study

The importance of this study lies in its potential to bridge the gap between formal risk management practices and the patient safety culture within healthcare institutions. In an era where patient safety is a core component of healthcare quality, understanding how structured risk management systems translate into real-world safety behaviors and attitudes is crucial.

This research contributes to the growing body of knowledge by empirically examining the extent to which risk management initiatives—such as incident reporting, risk assessment, and mitigation strategies—enhance or influence the development of a positive safety culture. By establishing this linkage, the study can help healthcare administrators and policymakers identify whether current risk management practices are effective, or if they require reorientation to better support patient safety outcomes.

Moreover, the findings will provide valuable insights for healthcare leaders to design integrated safety frameworks that go beyond compliance and foster continuous learning, transparency, and teamwork. Strengthening the relationship between risk management and patient safety culture can lead to a reduction in preventable errors, improved staff engagement, and ultimately, better patient outcomes.

From an academic perspective, this study will enrich the literature on healthcare risk management and safety culture in the context of emerging healthcare systems, particularly in developing nations where systematic safety approaches are still evolving. The practical

implications of this research can guide hospitals in adopting evidence-based management practices that align organizational processes with the shared goal of patient safety excellence.

Study objectives

The objectives of the study are as follows:

- To assess the level of risk management practice implementation in hospital.
- To evaluate the prevailing patient safety culture among healthcare workers.
- To analyze the relationship between risk management practices and patient safety culture.

Study questions

The following are the research questions of the study:

- What is the level of risk management practice implementation in the hospital?
- How do healthcare workers perceive the patient safety culture?
- Does risk management practice significantly influence patient safety culture?

Study hypotheses:

There is a significant impact of risk management practices on patient safety culture in a hospital

Literature Review

Previous studies have established that effective risk management contributes to better patient outcomes by identifying potential hazards and implementing preventive measures (Flin et al., 2017; Singer et al., 2020). The Hospital Survey on Patient Safety Culture (HSOPSC) has been widely used to measure the perceptions of safety culture across various dimensions, including teamwork, communication openness, management support, and non-punitive response to errors (AHRQ, 2018).

Research also indicates that a strong patient safety culture is positively correlated with leadership involvement in risk management and the presence of structured safety systems (El-Jardali et al.,

2019). However, the degree to which these practices translate into daily operations varies significantly across institutions and contexts, highlighting the need for localized assessments.

Theoretical premises of the study

The theoretical foundation of this study is grounded in the systems theory and safety culture framework proposed by the Agency for Healthcare Research and Quality (AHRQ). Systems theory emphasizes that healthcare safety outcomes result from the interaction of people, processes, and organizational structures rather than isolated individual actions. In this context, effective risk management practices function as integral system components that identify, assess, and control risks to enhance overall safety performance.

The patient safety culture concept, as measured by the Hospital Survey on Patient Safety Culture (HSOPSC) developed by AHRQ, is based on the premise that shared values, beliefs, and behaviors among healthcare workers influence the quality and safety of care. The study assumes that robust risk management mechanisms—such as incident reporting, leadership commitment, and communication openness—positively shape these cultural dimensions.

Thus, the theoretical premise posits that risk management practices serve as key organizational drivers that reinforce a positive patient safety culture, ultimately contributing to safer healthcare delivery and reduced adverse events.

Research Methodology

Research Design

The study will be based on a quantitative cross-sectional survey. This design will be useful to collect the data from a large number of participants at a single point in time to identify patterns, perceptions, and relationships between variables.

Population and Sampling

Population: Doctors, nurses, and administrative staff in King Abdulaziz Medical City, Riyadh.

Sampling Technique: Stratified random sampling will be used to ensure representation from various professional groups.

Sample Size: Determined using a standard sample size formula for surveys, ensuring adequate power for correlation and regression analysis.

Study tools

The Hospital Survey on Patient Safety Culture (HSOPSC 2.0) questionnaire developed by AHRQ will be used. This tool assesses multiple dimensions of patient safety culture, including: Teamwork within unit/work area, Supervisor/manager expectations, Communication openness and Reporting Patient Safety Events.

Data Collection Procedure

Permission will be sought from the hospital administration and ethics committee. Questionnaires will be distributed physically or electronically to participants. Respondents will be assured of confidentiality and anonymity.

Data Analysis

Data will be analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics (mean, frequency, standard deviation) will summarize responses. Correlation analysis will determine the strength and direction of relationships between variables. Regression analysis will assess the impact of risk management practices on patient safety culture.

Ethical Considerations

Every participant will be asked for their informed consent. There is no obligation to participate, and they can stop participating in the study at any moment. No identifying personal data will be collected. The study will be obtaining the ethical approval from the ethics committee.

Timeline

- Proposal development and approval: 1 month
- Literature review and instrument adaptation: 1 month
- Data collection: 1 month
- Data analysis and interpretation: 1 month
- Report writing and submission: 1 month

Expected Outcomes

A clear understanding of the extent to which risk management practices are implemented in the hospital. Identification of strengths and weaknesses in the current patient safety culture. Empirical evidence of the relationship between risk management practices and patient safety culture. Recommendations for improving risk management frameworks and fostering a stronger safety culture in a tertiary hospital.

Limitations of the study

While this study aims to provide meaningful insights into the relationship between risk management practices and patient safety culture, certain limitations must be acknowledged.

Firstly, the study will be conducted in a **tertiary hospital located in Riyadh**, which may limit the **generalizability** of the findings to other healthcare institutions within the country. Organizational structures, management styles, and safety culture dynamics may vary across hospitals, regions, and healthcare systems, thereby affecting how far the findings can be generalized.

Secondly, the study will focus primarily on evaluating the **perceptions and attitudes of healthcare workers** regarding risk management and patient safety culture. It will **not analyze the direct impact of institutional risk management practices on measurable health outcomes** such as patient morbidity, mortality, or readmission rates.

Additionally, the study relies on **self-reported data** collected through questionnaires, which may be subject to response bias or social desirability bias. Despite these limitations, the research is expected to provide valuable insights into how risk management practices shape safety culture perceptions and contribute to the broader understanding of patient safety in healthcare settings.

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