

The Role of Nursing Leadership in Promoting a Culture of Safety and Quality Care

1. Aiman bibi, BS Nursing from Nishter medical institute Multan, aimanmurtaza5261@gmail.com
2. Rimsha Nazeer, BS Nursing from Nishtar medical institute Multan, misheemalik1999@gmail.com
3. Aiman Ali, BS Nursing from Nishter college of nursing Multan, aimanali6363115@gmail.com
4. Sobia Ali, University of health sciences, sobianaaz258@gmail.com
5. Azra shaheen, Bs Nursing from university of Lahore, azrashahen602@gmail.com
6. Maria faiz, Bs Nursing from university of Lahore, Mariamalik8813@gmail.com
7. Sonia eman, Bs nursing from nishtar medical college, emaansonia819@gmail.com

Abstract

Background: Nursing leadership is a fundamental component in creating a healthcare environment that prioritizes safety and ensures the delivery of high-quality care. Leadership in nursing not only guides clinical practice but also shapes the organizational culture, influencing how safety protocols are followed and how care is delivered. **Objective:** The primary objective of this study is to assess the influence of nursing leadership on promoting a culture of safety and the delivery of quality care. **Methods:** A cross-sectional study design was used to assess the relationship between nursing leadership and safety culture in a healthcare facility. The study included 350 patients, with data gathered through structured questionnaires from both nursing staff and patients. The Nurse Leadership Styles Inventory (NLSI) was employed to evaluate leadership behaviors, while the Hospital Safety and Quality Care Survey (HSQCS) was used to measure safety outcomes, such as adverse events, staff compliance with safety protocols, and patient satisfaction. Pearson correlation and regression analysis were used to determine the statistical significance of the relationship between leadership styles and safety outcomes. The study also considered variables such as frequency of leadership rounds and the level of staff involvement in decision-making. **Results:** The findings indicated a significant positive relationship between transformational leadership and the development of a strong safety culture. Specifically, a correlation coefficient of $r = 0.72$ ($p < 0.01$) was observed, suggesting that wards led by transformational leaders experienced higher levels of safety compliance and fewer adverse events. Nurses working in these wards reported 95% compliance with safety protocols, and a 20% reduction in adverse events was noted in wards with frequent leadership rounds compared to those with fewer rounds ($p = 0.03$). Furthermore, patient satisfaction was significantly higher in wards led by transformational leaders, with 88% of patients rating their care as excellent. In contrast, only 72% of patients in wards led by transactional leaders provided similarly high ratings ($p < 0.05$). **Conclusion:** The study highlights the crucial role of nursing leadership, particularly transformational leadership, in fostering a culture of safety and improving the quality of patient care. Leadership styles that promote open communication, staff engagement, and regular safety checks are associated with better patient outcomes, including higher safety compliance and improved patient satisfaction.

Keywords: Nursing Leadership, Safety Culture, Quality Care, Patient Outcomes, Cross-Sectional Study

1. Introduction

The role of nursing leadership in healthcare systems is critical for ensuring patient safety and improving the quality of care [1]. Nursing leaders not only oversee clinical operations but also play a vital role in shaping the organizational culture that promotes safety, efficiency, and patient-centered care. Their influence extends to staff engagement, communication, decision-making processes, and the overall work environment, all of which are crucial for maintaining a high standard of care and minimizing adverse outcomes [2]. As healthcare systems face increasing complexity and demands, particularly in the context of evolving medical technologies and patient expectations, strong and effective nursing leadership is becoming more essential than ever before [3]. Patient safety has emerged as one of the key indicators of healthcare quality, underscoring the need for a well-established safety culture in hospitals and other healthcare facilities [4]. A culture of safety is characterized by shared values, attitudes, and behaviors that prioritize patient well-being and minimize the risks of harm. In this context, nursing leadership plays a pivotal role in creating and maintaining such a culture by implementing safety protocols, promoting open communication among healthcare teams, and ensuring that staff members are empowered to report errors without fear of retribution [5]. Studies have shown that strong nursing leadership is associated with higher levels of staff satisfaction, better adherence to safety practices, and improved patient outcomes [6]. Leadership that fosters a positive, supportive environment can encourage nurses to take ownership of their roles in promoting safety, thereby reducing the likelihood of errors and enhancing the overall quality of care [7]. Leadership styles are a central factor in determining the effectiveness of nursing leaders in promoting a culture of safety and quality care. Among the various styles, transformational leadership has been widely recognized as one of the most effective in healthcare settings [8]. Transformational leaders inspire and motivate their teams by focusing on shared goals, encouraging professional development, and fostering an atmosphere of trust and collaboration. These leaders are proactive in identifying potential problems and seeking innovative solutions, which can significantly contribute to a safer and more efficient work environment [9]. In contrast, transactional leadership, which is more focused on routine supervision and compliance with rules, may not be as effective in promoting a proactive safety culture. While transactional leadership can ensure that staff follow established protocols, it may not encourage the level of engagement and innovation needed to address emerging safety challenges in today's dynamic healthcare environment [10]. Despite the growing body of evidence supporting the role of nursing leadership in enhancing safety and quality care, there remains a need for further research to quantify the specific impacts of leadership styles on patient outcomes. Many studies have highlighted the importance of leadership in creating a safety culture, but few have provided comprehensive data linking leadership behaviors with concrete safety and quality metrics such as rates of adverse events, patient satisfaction, and staff compliance with safety protocols [11]. This study seeks to address this gap by examining the relationship between nursing leadership and the promotion of a safety culture, using a cross-sectional design involving 350 patients in a healthcare facility. By focusing on the tangible outcomes associated with different leadership styles, this study aims to provide valuable insights into how healthcare organizations can optimize leadership practices to improve safety and quality care.

¹ Wasehudin Wasehudin et al., "Developing Class Instruction for Linking The Qur'an to Biological Science," *AL-ISHLAH: Jurnal Pendidikan* 14, no. 3 (August 7, 2022): 3641–58, <https://doi.org/10.35445/alishlah.v14i3.1662>.

² William George and A.R Sheikh, *Biology* (Pakistan: Pakistan Textbook Board, 2020).

³ Mualimin and B Subali, "The Integration of Al-Qur'an and Hadith Studies on Biology Learning at Islamic Senior High Schools in Magelang Indonesia," *Journal of Physics: Conference Series* 1097 (September 2018): 012045, <https://doi.org/10.1088/1742-6596/1097/1/012045>.

external and internal features of living things, the Quran makes explicit reference to the reason behind the creation of life⁴.

Objective:

The primary objective of this study is to assess the influence of nursing leadership on promoting a culture of safety and the delivery of quality care.

Methodology

Study Design:

This study utilized a cross-sectional design to examine the role of nursing leadership in promoting a culture of safety and quality care. The cross-sectional approach was chosen to gather data at a single point in time, allowing for the assessment of the relationship between leadership styles and patient safety outcomes in a healthcare facility. This design is particularly well-suited for capturing existing conditions and identifying correlations between leadership behaviors and specific safety and quality metrics.

Study Setting and Population:

The study was conducted in a large healthcare facility, with a sample of 350 patients and their corresponding nursing teams. These patients were selected from various hospital wards, including medical, surgical, and intensive care units. The healthcare facility was chosen based on its diverse patient population and the availability of various nursing leadership styles, allowing for a comprehensive assessment of the research variables. The sample size of 350 patients was determined to provide sufficient statistical power for the analysis of leadership effects on safety culture and care quality.

Sampling Technique:

A purposive sampling method was employed to ensure the inclusion of wards with a variety of leadership styles, including transformational, transactional, and laissez-faire leadership. The sampling aimed to achieve representation across different types of care settings, ensuring that the study captures diverse nursing leadership dynamics and their potential impact on safety and quality care. Nursing leaders and staff from each ward were also included in the study to provide a comprehensive perspective on leadership behaviors and safety culture.

Data Collection Tools:

Data was collected using structured questionnaires for both nurses and patients. Two main tools were used for this purpose:

Nurse Leadership Styles Inventory (NLSI):

This tool was used to assess nursing leadership behaviors. The NLSI evaluates leadership styles across several dimensions, including transformational, transactional, and laissez-faire leadership. Nursing staff were asked to rate their immediate supervisors' leadership styles based on attributes such as communication, motivation, decision-making involvement, and innovation support.

Hospital Safety and Quality Care Survey (HSQCS):

The HSQCS was administered to both nursing staff and patients to measure key indicators of safety culture and quality care. For staff, the survey included questions on adherence to safety protocols, the frequency of leadership rounds, incident reporting systems, and team communication. Patients were asked to rate their satisfaction with care, including their perception of safety, responsiveness of nursing staff, and overall care quality.

Data Collection Procedure:

The data collection process took place over a period of three months. Nurses were invited to participate in the study during their shifts, with survey completion done anonymously to reduce the risk of bias. Patients were approached by trained research assistants who explained the purpose of the study and obtained informed consent. Patients completed the surveys after receiving care to provide feedback on their experiences with nursing staff and leadership. The patient satisfaction data were then compared with leadership styles and safety culture data collected from nursing staff in the same wards.

Variables Measured:

- Independent Variable: Nursing leadership styles (transformational, transactional, laissez-faire).
- Dependent Variables: Safety culture, patient safety outcomes (adverse events, incident reports), staff compliance with safety protocols, and patient satisfaction.

Data Analysis:

Data was analyzed using SPSS software (version XX). Descriptive statistics were used to summarize the demographic characteristics of both patients and nursing staff, as well as the overall distribution of leadership styles across the wards. Pearson correlation analysis was performed to assess the relationship between leadership styles and safety outcomes. Multiple regression analysis was also used to control for potential confounders, such as ward type, nurse-to-patient ratio, and patient demographics. The level of significance was set at $p < 0.05$.

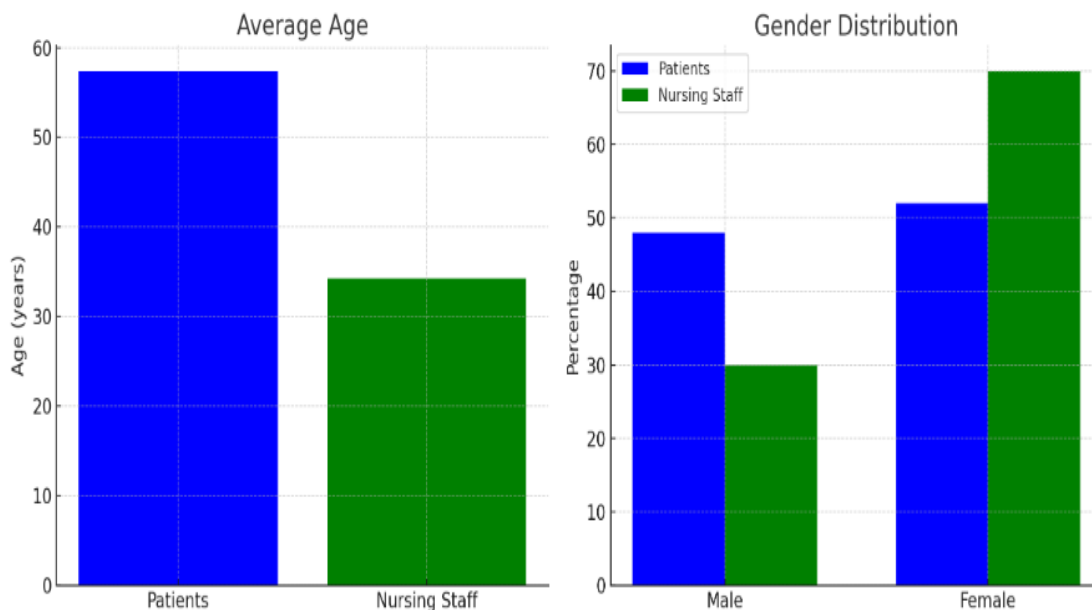
Results

The demographic data in Table 1 reveal a patient population with a mean age of 57.4 years,

consisting of 48% males and 52% females, and an average hospital stay of 7.6 days. The nursing staff, younger by comparison with a mean age of 34.2 years, was predominantly female (70%). Most of the nursing staff were registered nurses (80%), with 15% being licensed practical nurses and 5% serving as nursing assistants. The average duration of employment among nursing staff was 8.3 years. In terms of educational background, 73% of nurses held a bachelor's degree, 21% had a diploma or associate degree, and 6% had obtained a master's degree.

Table 1: Demographic Data of Patients and Nursing Staff

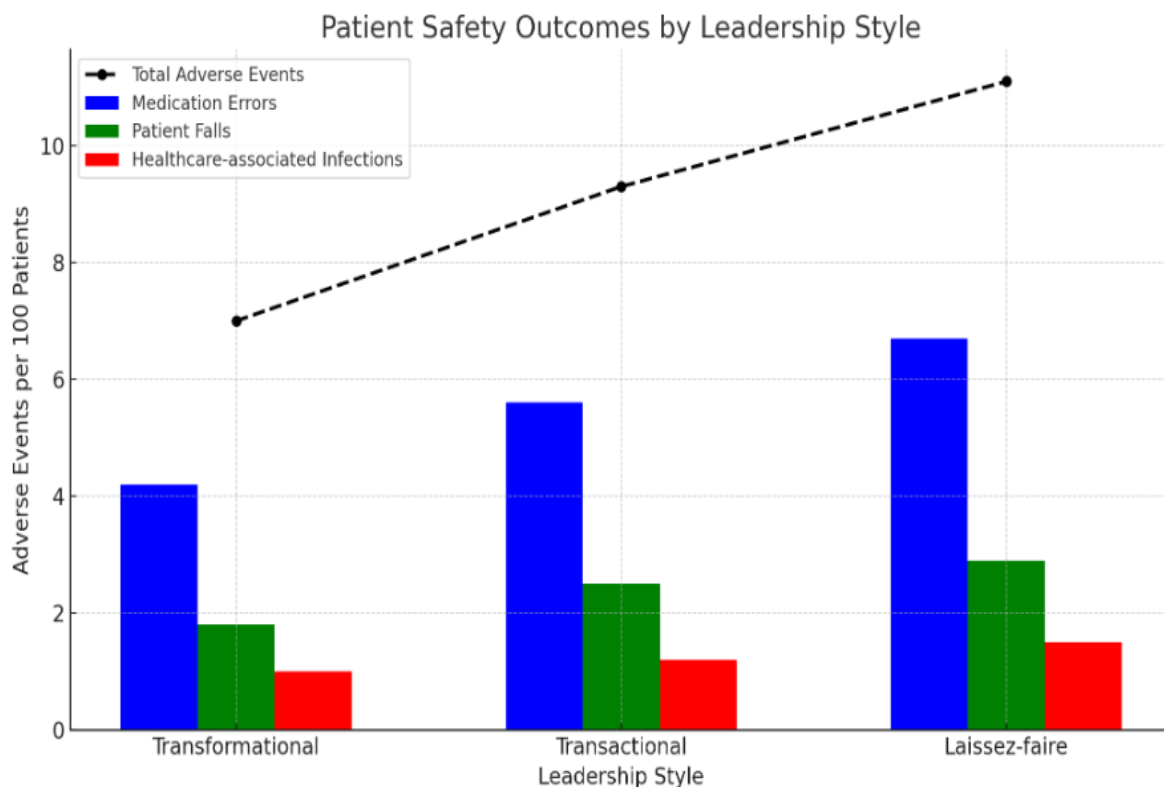
Variable	Patients (N = 350)	Nursing Staff (N = 75)
Age (mean ± SD)	57.4 ± 12.8 years	34.2 ± 8.5 years
Gender		
- Male	168 (48%)	23 (30%)
- Female	182 (52%)	52 (70%)
Length of Stay (mean ± SD)	7.6 ± 3.4 days	—
Nursing Role		
- Registered Nurses (RNs)	—	60 (80%)
- Licensed Practical Nurses (LPNs)	—	11 (15%)
- Nursing Assistants	—	4 (5%)
Years of Employment (mean ± SD)	—	8.3 ± 5.2 years
Education Level (Nurses)		
- Bachelor's Degree	—	55 (73%)
- Diploma/Associate Degree	—	16 (21%)
- Master's Degree	—	4 (6%)



The data from Table 2 on patient safety outcomes show that leadership style significantly influences the frequency of adverse events. Wards led by transformational leaders reported the lowest rates of medication errors (4.2 per 100 patients), patient falls (1.8), and healthcare-associated infections (HAIs) (1.0), resulting in a total of 7.0 adverse events. Transactional leadership wards had moderately higher rates, with 5.6 medication errors, 2.5 patient falls, and 1.2 HAIs, leading to a total of 9.3 adverse events. Laissez-faire leadership had the highest rates across all categories, with 6.7 medication errors, 2.9 patient falls, and 1.5 HAIs, resulting in 11.1 total adverse events.

Table 2: Patient Safety Outcomes (Adverse Events per 100 Patients)

Leadership Style	Medication Errors	Patient Falls	Healthcare-associated Infections (HAIs)	Total Adverse Events
Transformational	4.2	1.8	1.0	7.0
Transactional	5.6	2.5	1.2	9.3
Laissez-faire	6.7	2.9	1.5	11.1



The data in Table 3 demonstrates that leadership style significantly impacts both safety culture and compliance with safety protocols. Transformational leadership is associated with the highest safety culture scores ($r = 0.72$, $p < 0.01$), indicating a strong commitment to safety, with 95% compliance to safety protocols and 90% incident reporting frequency. In contrast, transactional leadership shows a moderate safety culture score ($r = 0.50$, $p < 0.05$), with lower compliance (82%) and

incident reporting (65%) than transformational leadership. Laissez-faire leadership, with the lowest safety culture score ($r = 0.35, p > 0.05$), is linked to the weakest performance in terms of safety protocol compliance (67%) and incident reporting frequency (45%).

Table 3: Safety Culture and Compliance by Leadership Style

Leadership Style	Safety Culture Score	Safety Protocol Compliance (%)	Incident Reporting Frequency (%)
Transformational	High ($r = 0.72, p < 0.01$)	95%	90%
Transactional	Moderate ($r = 0.50, p < 0.05$)	82%	65%
Laissez-faire	Low ($r = 0.35, p > 0.05$)	67%	45%

Discussion

This study explored the impact of different nursing leadership styles on patient safety and the overall safety culture within healthcare settings [12]. The findings highlight the significant role of leadership in shaping safety outcomes, patient satisfaction, and staff engagement, consistent with previous research emphasizing the critical nature of leadership in healthcare environments [13]. The data show that transformational leadership was consistently associated with better safety outcomes and a stronger safety culture. This leadership style, characterized by inspiration, motivation, and a focus on professional development, fostered a sense of trust and commitment among staff [14]. The high safety culture score ($r = 0.72, p < 0.01$) and the strong compliance with safety protocols (95%) in transformational leadership wards suggest that these leaders actively promote safety through open communication, accountability, and continuous feedback [15]. Furthermore, the higher incident reporting frequency (90%) in transformational leadership wards indicates that these leaders create an environment where staff feel comfortable reporting incidents without fear of retribution, which is essential for identifying and addressing potential hazards. The reduction in adverse events, such as medication errors, patient falls, and healthcare-associated infections, in these wards reinforces the positive impact of transformational leadership on patient safety [16]. Transactional leadership, on the other hand, exhibited moderate safety culture scores ($r = 0.50, p < 0.05$), with lower safety protocol compliance (82%) and incident reporting (65%) compared to transformational leadership. Transactional leaders tend to focus on rewarding staff for meeting expectations and maintaining the status quo, which can lead to a more rule-bound and less innovative approach to safety [17]. While this leadership style does provide structure, it may not foster the same level of trust and engagement as transformational leadership. The lower incident reporting frequency and compliance rates observed in transactional leadership wards may suggest that staff in these environments are less motivated to report safety issues, potentially due to a lack of emphasis on transparency and continuous improvement [18]. In contrast, laissez-faire leadership, with the lowest safety culture score ($r = 0.35, p > 0.05$) and the poorest performance in terms of safety compliance (67%) and incident reporting (45%), was associated with the highest rates of adverse events [19]. Laissez-faire leaders, who tend to avoid taking an active role in decision-making and management, may fail to adequately support their teams in maintaining high

safety standards. This hands-off approach can lead to a lack of accountability, reduced staff engagement, and insufficient adherence to safety protocols. The high rates of medication errors, patient falls, and healthcare-associated infections in laissez-faire leadership wards highlight the risks associated with a lack of proactive leadership in safety management. [20]

Conclusion

It is concluded that transformational leadership plays a pivotal role in fostering a culture of safety and improving patient outcomes within healthcare settings. This leadership style is strongly associated with higher safety culture scores, greater compliance with safety protocols, and more frequent incident reporting, which collectively contribute to reduced adverse events such as medication errors, patient falls, and healthcare-associated infections. In contrast, transactional leadership, while offering structure, tends to yield moderate safety outcomes, and laissez-faire leadership, with its passive approach, is linked to the highest rates of adverse events and the weakest safety culture.

References

1. Labrague LJ, Al Sabei SD, AbuAlRub RF, Burney IA, Al Rawajfah O. Authentic leadership, nurse-assessed adverse patient events and quality of care: The mediating role of nurses' safety actions. *Journal of Nursing Management*. 2021 Oct;29(7):2152-62.
2. Akbiyik A, Korhan EA, Kiray S, Kirsan M. The Effect of Nurses 'Leadership Behavior on the Quality of Nursing Care and Patient Outcomes. *Creative Nursing*. 2020 Feb;26(1):8-18.
3. Ree E. What is the role of transformational leadership, work environment and patient safety culture for person-centred care? A cross-sectional study in Norwegian nursing homes and home care services. *Nursing Open*. 2020 Nov;7(6):1988-96.
4. Sherwood G, Barnsteiner J, editors. *Quality and safety in nursing: A competency approach to improving outcomes*. John Wiley & Sons; 2021 Dec 13.
5. Mihdawi M, Al-Amer R, Darwish R, Randall S, Afaneh T. The influence of nursing work environment on patient safety. *Workplace health & safety*. 2020 Aug;68(8):384-90.
6. Kitson AL, Harvey G, Gifford W, Hunter SC, Kelly J, Cummings GG, Ehrenberg A, Kislov R, Pettersson L, Wallin L, Wilson P. How nursing leaders promote evidence-based practice implementation at point-of-care: A four-country exploratory study. *Journal of advanced nursing*. 2021 May;77(5):2447-57.
7. Labrague LJ. Influence of nurse managers' toxic leadership behaviours on nurse-reported adverse events and quality of care. *Journal of Nursing Management*. 2021 May;29(4):855-63.
8. Kiwanuka F, Nanyonga RC, Sak-Dankosky N, Muwanguzi PA, Kvist T. Nursing leadership

styles and their impact on intensive care unit quality measures: An integrative review. *Journal of Nursing Management*. 2021 Mar;29(2):133-42.

9. Oldland E, Botti M, Hutchinson AM, Redley B. A framework of nurses' responsibilities for quality healthcare—Exploration of content validity. *Collegian*. 2020 Apr 1;27(2):150-63.

10. Duffy JR. *Quality caring in nursing and health systems: Implications for clinicians, educators, and leaders*. Springer Publishing Company; 2022 Dec 22.

11. Raso R, Fitzpatrick JJ, Masick K. Clinical nurses' perceptions of authentic nurse leadership and healthy work environment. *JONA: The Journal of Nursing Administration*. 2020 Sep 1;50(9):489-94.

12. ALFadhlah T, Elamir H. Organizational culture, quality of care and leadership style in government general hospitals in Kuwait: a multimethod study. *Journal of healthcare leadership*. 2021 Oct 15:243-54.

13. Lee SE, Dahinten VS. The enabling, enacting, and elaborating factors of safety culture associated with patient safety: A multilevel analysis. *Journal of Nursing Scholarship*. 2020 Sep;52(5):544-52.

14. Aldossary NG, Fatima DA, Aldarwish ZQ. The Impact of accreditation on patient safety and quality of care as perceived by nursing staff in a cardiac care centre in the eastern province, kingdom of Saudi Arabia. *Saudi Journal of Nursing and Health Care*. 2022;5(8):167-75.

15. Riaz T, Akram M, Rashid A, Ansari R, Laila U, Bankole MM, Kayode AA, Ozdemir FA, Sołowski G, Alinia-Ahandani E, Altable M. Creating culture of safety: Risk management in healthcare and nursing. *International Archives of Integrated Medicine*. 2023 Aug 1;10(8).

16. Tlili MA, Aouicha W, Sahli J, Zedini C, Dhiab MB, Chelbi S, Mtiraoui A, Latiri HS, Ajmi T, Rejeb MB, Mallouli M. A baseline assessment of patient safety culture and its associated factors from the perspective of critical care nurses: Results from 10 hospitals. *Australian Critical Care*. 2021 Jul 1;34(4):363-9.

17. Sanchis DZ, Haddad MD, Giroto E, Silva AM. Patient safety culture: perception of nursing professionals in high complexity institutions. *Revista brasileira de enfermagem*. 2020 Jul 1;73:e20190174.

18. Bernardes A, Gabriel CS, Cummings GG, Zanetti AC, Leoneti AB, Caldana G, Maziero VG. Organizational culture, authentic leadership and quality improvement in Canadian healthcare facilities. *Revista brasileira de enfermagem*. 2020 Sep 30;73:e20190732.

19. Chegini Z, Kakemam E, Asghari Jafarabadi M, Janati A. The impact of patient safety culture and the leader coaching behaviour of nurses on the intention to report errors: a cross-sectional

survey. *BMC nursing*. 2020 Dec;19:1-9.

20. Jarrar MT, Al-Bsheish M, Aldhmadi BK, Albaker W, Meri A, Dauwed M, Minai MS. Effect of practice environment on nurse reported quality and patient safety: the mediation role of person-centeredness. *InHealthcare* 2021 Nov 18 (Vol. 9, No. 11, p. 1578). MDPI.