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## **Patient Safety Culture, Leadership and Associated Factors Among Nurse Managers in Cagayan Valley Medical Center**

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### ABSTRACT

**Introduction.** Patient safety culture is a crucial element of healthcare, aiming to minimize risks associated with medical errors and adverse events. Nurse managers play a pivotal role in fostering a positive patient safety culture by setting clear expectations, providing support, and creating a culture of learning and reflection. This study explored the patient safety culture, leadership, and associated factors among nurse managers in the Philippines.

**Methods.** Quantitative Descriptive Cross-Sectional Design was used to examine the patient safety culture, leadership styles, and the factors that influence and shape Nurse Managers' leadership behaviors concerning patient safety of 120 Nurse Managers in Cagayan Valley Medical Center in Tuguegarao City.

**Results.** Most of the respondents are between 31-40 years old, Master's Degree Holder, and have less than 5 years of experience. Most of the Nurse Managers strongly agreed on multiple indicators of level of awareness and knowledge in patient safety. Majority of the Nurse Managers strongly agreed on the various patient safety culture in Cagayan Medical Center. The Nurse Managers have shown excellent Transformational Leadership, Transactional Leadership, Servant Leadership, Laissez Faire Leadership, and Coaching Leadership. Factors that influence and shape Nurse Managers' leadership behaviors concerning patient safety are organizational culture, resources staffing, leadership support, personal factors, and external factors. It was also revealed that there is high positive and significant relationship between the Patient Safety Culture and Leadership Style of the Nurse Managers in Cagayan Valley Medical Center and that Patient Safety Culture is a determiner of the Leadership style of the Nurse Managers in Cagayan Valley Medical Center.

**Conclusion.** In general, the insights derived from this study not only deepen our understanding of the Nurse Managers' demographic profile, awareness, leadership styles, and influencing factors but also underscore the vital connection between leadership styles and the patient safety culture. These findings provide valuable insights for healthcare institutions aiming to enhance patient safety through effective leadership strategies.

*Keywords: patient safety, leadership, practices, Nurse Managers*

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### **Introduction**

Patient safety culture is a combination of individual and group values, attitudes, perceptions, competencies, and behavioral patterns that determine an organization's commitment to patient safety. Leadership is critical in creating and maintaining a strong patient safety culture. Nurse managers play a key role in leadership by setting clear expectations, providing support for nurses, and fostering a culture of learning and reflection. Ensuring patient safety is crucial for several reasons such as preventing harm, building trust, cost savings, legal and ethical responsibility, quality of care, and healthcare reputation.

The historical perspective of patient safety culture has evolved significantly over time. The pivotal moment in the history of patient safety culture was the release of the Institute of Medicine's (IOM) report "To Err Is Human" in 1999. Following the IOM report, there was a wave of legislative and regulatory actions in the United States aimed at improving transparency and reporting of medical errors. Patient safety culture also gained prominence internationally with organizations like the World Health Organization (WHO) launching initiatives such as the World Alliance for Patient Safety.

In the Philippine context, there is a need to strengthen patient safety culture in the country. The study by Morales et al. (2020) found that nurse managers play a key role in promoting patient safety by creating a supportive work environment and empowering nurses to speak up about safety. Nurse managers are responsible for leading and coordinating nursing staff which is essential for providing high-quality patient care.

This study aimed to explore the patient safety culture, leadership styles, factors influencing nurse manager leadership behaviors concerning patient safety, relationship between leadership styles and patient safety culture within their respective units among nurse managers at Cagayan Valley Medical Center. It also aims to enumerate strategies in dealing with incidents concerning patient safety.

## Methods

### Study Design

This study employed Quantitative Descriptive Cross-Sectional Design. It aimed to examine the patient safety culture, leadership styles, the factors that influence and shape Nurse Managers' leadership behaviors concerning patient safety, and the strategies in dealing with incidents concerning patient safety in Cagayan Valley Medical Center.

### Research Locale and Participants

This study took place in a selected hospital in Tuguegarao City particularly in Cagayan Valley Medical Center. Cagayan Valley Medical Center is situated in Tuguegarao City, which is the capital of the province of Cagayan. The participants of this study are the 120 nurse managers chosen purposively based on the following criteria: 1) The participant must be a nurse manager employed in Cagayan Valley Medical Center, and 2) The participant must have the willingness to be part of this study.

### Instruments

The research instrument in gathering the data is duly validated researcher-made survey questionnaire.

### Data Collection Procedure

Permission to conduct the study was sought from the Head of Cagayan Valley Medical Center. After securing the necessary permit, the questionnaire was deployed. Upon retrieval of the accomplished questionnaires, the data were collated, processed and tallied. The tabulated data are subjected to statistical analyses, as tools for the evaluation and further interpretations of the research findings.

### Data Analysis

The Microsoft Excel was used to analyze the quantitative data gathered. The data were subjected to appropriate statistical tool through a computer-based program called Statistical Package for Social Sciences or SPSS. Frequency count was used to determine the number of responses that fall in every category. Percentage was used to reflect the frequency distribution of the number of respondents belonging to each classification. Weighted Mean was used to determine the extent of patient safety culture, leadership styles, and factors influencing the leadership behaviors of the nurse managers. Pearson Product Correlation Coefficient was used to determine if there a significant relationship between the leadership styles of the Nurse Managers and the patient safety culture within their respective units.

### Ethical Considerations

Ethical approval was obtained from the Cagayan Valley Medical Center. Consents were obtained from all respondents. Respondents who were willing to participate in the study were given survey questionnaire. Confidentiality of the data was ensured by not mandatorily requiring information that led to the identification of the respondents.

## Results and Discussion

Table 1. Demographic Profile

Demographic Profile	Frequency	Percentage
<b>Age</b>		
20-30yrs old	4	3.3
31-40yrs old	83	69.2
41-50yrs old	23	19.2
51-60yrs old	10	8.3
<b>Sex</b>		
Male	41	34.2
Female	79	65.8
<b>Highest Educational Attainment</b>		
College Graduate	22	18.3
Master's Level (with units)	25	20.8
Master's Degree Holder	72	60
Doctorate Level	1	0.8
<b>Years of Experience</b>		
less than 5 years	59	49.2
5-10years	23	19.2
10-15years	22	18.3
15-20yrs	9	7.5
more than 20yrs	7	5.8

Table 1 presented the demographic profile of the respondents. It contained details of the respondents' age, sex, highest educational attainment, and years of experience. As shown in the table, most of the respondents are between 31-40 years old ( $n=83, p=69.2\%$ ), followed by 41-50 years old ( $n=23, p=19.2\%$ ), 51-60 years old ( $n=10, p=8.3\%$ ), and the least age group ranges from 20-30 years old ( $n=4, p=3.3\%$ ). As shown in the table, majority of the respondents are female ( $n=79, p=65.8\%$ ) while there are 41 or 34.2% of the respondents who are male. As shown in the table, most of the respondents are Master's Degree Holder ( $n=72, p=60\%$ ). They are followed by Master's Level with units ( $n=25, p=20.8\%$ ), College Graduate ( $n=22, p=18.3\%$ ), and the least number of respondents based on highest educational attainment is Doctorate Level ( $n=1, p=0.8\%$ ). As shown in the table, majority of the respondents have less than 5 years of experience ( $n=59, p=49.2\%$ ). It is followed by respondents with 5-10 years ( $n=23, p=19.2\%$ ), 10-15 years ( $n=22, p=18.3\%$ ), 15-20 years ( $n=9, p=7.5\%$ ). There are only 7 or 5.8% of the Nurse Managers with more than 20 years of experience. *Table 2. Level of Awareness/Knowledge of Nurse Managers in Patient Safety*

Description	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean
1. I am aware of the most common types of patient safety incidents in my hospital.	92 76.70%	24 20.00%	2 1.70%	0 0	2 1.70%	4.7
2. I am aware of the strategies that can be used to prevent patient safety incidents.	91 75.80%	24 20%	3 2.50%	0 0.00%	2 1.70%	4.68
3. I am familiar with my hospital's policy on reporting patient safety incidents.	92 76.70%	24 20.00%	2 1.70%	0 0	2 1.70%	4.7
4. I receive regular training on patient safety.	70 58.30%	42 35%	5 4.20%	3 2.50%	0 0	4.49
5. I am aware of the factors that contribute to patient safety incidents.	93 77.50%	23 19.20%	2 1.70%	0 0%	2 1.70%	4.71
6. I am knowledgeable about risk management.	81 67.50%	35 29.20%	2 1.70%	1 0.80%	1 0.80%	4.62
7. I am knowledgeable about medication safety.	101 84.20%	15 12.50%	2 1.70%	0 0	2 1.70%	4.78
8. I am knowledgeable about infection prevention and control.	97 80.80%	20 16.70%	1 0.80%	0 0	2 1.70%	4.75
9. I am knowledgeable about communication and teamwork.	95 79.20%	21 17.50%	2 1.70%	0 0	2 1.70%	4.73
10. I am knowledgeable about safety reporting.	91 75.80%	26 21.70%	1 0.80%	1 0.80%	1 0.80%	4.71

The Level of Awareness/Knowledge of Nurse Managers in Patient Safety was shown in Table 2. As shown in the table, most of the respondents strongly agreed that they are aware of the most common types of patient safety incidents in the hospital, strategies that can be used to prevent patient safety incidents, familiar with the hospital's policy on reporting patient safety incidents, receive regular training on patient safety, factors that contribute to patient safety incidents, knowledgeable about risk management, medication safety, infection prevention and control, communication and teamwork, and safety reporting.

*Table 3. Patient Safety Culture of Nurse Managers in Cagayan Valley Medical Center*

Description	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean
1. The leadership in our healthcare facility is committed to patient safety.	92 76.70%	24 20%	2 1.70%	1 0.80%	1 0.80%	4.71
2. Nurse managers in our facility effectively communicate the importance of patient safety to their teams.	95 79.20%	21 17.50%	2 1.70%	2 1.70%	0 0%	4.74
3. Nurse managers hold regular meetings to discuss and address patient safety issues.	92 76.70%	22 18.30%	4 3.30%	1 0.80%	1 0.80%	4.69
	94	21	3	1	1	4.72

4. Our nursing teams collaborate well to ensure patient safety.	78.30%	17.50%	2.50%	0.80%	0.80%	
5. Staff members in our unit are encouraged to speak up about safety concerns.	94	23	1	1	1	4.73
	78.30%	19.20%	0.80%	0.80%	0.80%	
6. Nurse managers promote a culture of mutual support among staff members.	90	27	1	1	1	4.7
	75%	22.50%	0.80%	0.80%	0.80%	
7. There is open and honest communication regarding patient safety in our unit.	93	22	3	1	1	4.71
	77.50%	18.30%	2.50%	0.80%	0.80%	
8. Our healthcare facility encourages reporting of near misses and adverse events.	95	20	3	1	1	4.73
	79.20%	16.70%	2.50%	0.80%	0.80%	
9. Patient safety incidents are thoroughly reviewed to identify root causes.	92	22	4	1	1	4.69
	76.70%	18.30%	3.30%	0.80%	0.80%	
10. Nurse managers facilitate ongoing education and training on patient safety.	84	31	3	1	1	4.63
	70%	25.80%	2.50%	0.80%	0.80%	

The Patient Safety Culture of Nurse Managers in Cagayan Valley Medical Center was presented in Table 3. As shown in Table 3, majority of the respondent strongly agreed that the leadership in their healthcare facility is committed to patient safety, Nurse managers in their facility effectively communicate the importance of patient safety to their teams, and Nurse managers hold regular meetings to discuss and address patient safety issues. The findings suggested that the leadership and management of Nurse Managers in Cagayan Valley Medical Center were excellent. On the other hand, majority of the respondents strongly agreed that their nursing teams collaborate well to ensure patient safety, staff members in their unit are encouraged to speak up about safety concerns, and that Nurse managers promote a culture of mutual support among staff member/ The findings suggested that the teamwork and collaboration of Nurse Managers in Cagayan Valley Medical Center were excellent. Meanwhile, it was revealed that most of the respondents strongly agreed that there is open and honest communication regarding patient safety in their unit and that their healthcare facility encourages reporting of near misses and adverse events. The findings revealed that the communication openness of Nurse Managers in Cagayan Valley Medical Center was excellent. Most of the respondents strongly agreed that patient safety incidents are thoroughly reviewed to identify root and that Nurse managers facilitate ongoing education and training on patient safety. The findings revealed that the learning and continuous improvement of Nurse Managers in Cagayan Valley Medical Center was excellent.

Table 4. Leadership Styles of Nurse Managers in Cagayan Valley Medical Center

Description	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean
1. I inspire and motivate my team to achieve excellence.	100	17	1	0	2	4.78
	83.30%	14%	0.80%	0.00%	1.70%	
2. I provide clear and compelling visions for our nursing unit.	91	26	1	0	2	4.7
	75.80%	21.70%	0.80%	0.00%	1.70%	
3. I set clear expectations and standards for performance.	92	25	1	0	2	4.71
	76.70%	20.80%	0.80%	0.00%	1.70%	
4. I address issues promptly and provide constructive feedback.	92	25	1	0	2	4.71
	76.70%	20.80%	0.80%	0.00%	1.70%	
5. I prioritize the needs and well-being of my team members.	92	24	2	0	2	4.7
	76.70%	20.00%	1.70%	0.00%	1.70%	
6. I actively listen to my team's concerns and provide support.	97	20	1	0	2	4.75
	81%	16.70%	0.80%	0.00%	1.70%	
	94	23	1	0	2	4.73

7. I allow team members to make decisions and take ownership of their tasks.	78.30%	19.20%	0.80%	0.00%	1.70%	
8. I trust my team members to manage their responsibilities effectively.	91	26	1	0	2	4.7
	75.80%	21.70%	0.80%	0.00%	1.70%	
9. I actively mentor and guide my team members in their professional development.	94	23	1	0	2	4.73
	78.30%	19.20%	0.80%	0.00%	1.70%	
10. I provide ongoing feedback and support for skill improvement.	87	29	2	0	2	4.66
	73%	24.25%	1.70%	0.00%	1.70%	
11. I believe that there is no mistake in proofing in health care.	78	34	5	2	1	4.55
	65.00%	28.30%	4.20%	1.70%	0.80%	
12. I believe that my facility provides patients and families with the information they need to participate in their care.	87	27	3	1	2	4.63
	73%	22.50%	2.50%	0.80%	1.70%	
13. I lead a culture of safety that encourages patients and families to speak up about concerns.	85	30	3	0	2	4.63
	70.80%	25.00%	2.50%	0.00%	1.70%	
14. I take patient and family feedback seriously and uses it to improve patient safety.	90	26	2	0	2	4.68
	75%	21.70%	1.70%	0.00%	1.70%	
15. I am satisfied with the level of patient and family participation in patient safety at my facility.	80	35	2	1	2	4.58
	66.70%	29.20%	1.70%	0.80%	1.70%	

Table 4 revealed the Leadership Styles of Nurse Managers in Cagayan Valley Medical Center. As shown in Table 4, most of the respondents strongly agreed that they inspire and motivate their team to achieve excellence (n=100, p=83.30%). The mean of 4.78 showed an excellent leadership style of nurse managers in Cagayan Valley Medical Center. It was also revealed that most of the respondents strongly agreed that they provide clear and compelling visions for their nursing unit (n=91, p=75.80%). The mean of 4.7 implied an excellent leadership style of nurse managers in Cagayan Valley Medical Center. These referred to Transformational leadership. On the other hand, most of the respondents strongly agreed that they set clear expectations and standards for performance (n=92, p=76.70%). The mean of 4.71 indicated an excellent leadership style of nurse managers in Cagayan Valley Medical Center. Majority of the respondents strongly agreed that they address issues promptly and provide constructive feedback (n=92, p=76.70%). The mean of 4.71 implied an excellent leadership style of nurse managers in Cagayan Valley Medical Center. These referred to Transactional leadership. Meanwhile, as shown in the table, most of the respondents strongly agreed that they prioritize the needs and well-being of their team members (n=92, p=76.70%). The mean of 4.7 indicated an excellent leadership style of nurse managers in Cagayan Valley Medical Center. It was revealed that most of the respondents strongly agreed that they actively listen to their team's concerns and provide support (n=97, p=81%). The mean of 4.75 indicated an excellent leadership style of nurse managers in Cagayan Valley Medical Center. These referred to Servant Leadership. On the other hand, most of the respondents strongly agreed that they allow team members to make decisions and take ownership of their tasks (n=94, p=78.30%). The mean of 4.73 indicated an excellent leadership style of nurse managers in Cagayan Valley Medical Center. Majority of the respondents strongly agreed that they trust their team members to manage their responsibilities effectively (n=91, p=75.80%). The mean of 4.7 implied an excellent leadership style of nurse managers in Cagayan Valley Medical Center. These referred to Laissez Faire Leadership. Most of the respondents strongly agreed that they actively mentor and guide their team members in their professional development (n=94, p=78.30%). The mean of 4.73 implied an excellent leadership style of nurse managers in Cagayan Valley Medical Center. Majority of the respondents strongly agreed that they provide ongoing feedback and support for skill improvement (n=87, p=73%). The mean of 4.66 indicated an excellent leadership style of nurse managers in Cagayan Valley Medical Center. These referred to Coaching Leadership.

Table 5. Factors that Influence and Shape Nurse Managers' Leadership Behaviors Concerning Patient Safety

Description	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean
1. The organizational culture in our healthcare facility emphasizes patient safety	97	20	1	0	2	4.75
	80.80%	17%	0.80%	0.00%	1.70%	
2. Leadership within the organization supports and promotes a culture of patient safety.	96	22	0	0	2	4.75
	80.00%	18.30%	0.00%	0.00%	1.70%	

3. The organization has policies and procedures in place to enhance patient safety.	92	25	1	0	2	4.71
	76.70%	20.80%	0.80%	0.00%	1.70%	
4. Our unit is adequately staffed to ensure patient safety.	70	35	12	0	3	4.41
	58.30%	29.20%	10.00%	0.00%	2.50%	
5. We have access to necessary resources and equipment to support patient safety.	79	32	6	0	3	4.53
	65.80%	26.70%	5.00%	0.00%	2.50%	
6. Staff members in our unit receive ongoing training and education related to patient safety.	76	37	5	0	2	4.56
	63%	30.80%	4.20%	0.00%	1.70%	
7. Team members within our unit collaborate effectively to ensure patient safety.	93	22	3	0	2	4.7
	77.50%	18.30%	2.50%	0.00%	1.70%	
8. We encourage open communication among staff members regarding patient safety.	91	26	1	0	2	4.7
	75.80%	21.70%	0.80%	0.00%	1.70%	
9. Our team actively identifies and addresses safety concerns in a collaborative manner.	91	26	1	0	2	4.7
	75.80%	21.70%	0.80%	0.00%	1.70%	
10. Leadership in our healthcare facility provides support and resources for patient safety initiatives.	88	29	1	0	2	4.68
	73%	24.20%	0.80%	0.00%	1.70%	
11. Nurse managers receive support and guidance from higher-level leadership to enhance patient safety.	85	32	1	0	2	4.65
	70.80%	26.70%	0.80%	0.00%	1.70%	
12. Leadership actively acknowledges and appreciates efforts related to patient safety.	90	27	1	0	2	4.69
	75%	22.50%	0.80%	0.00%	1.70%	
13. My leadership style aligns with my personal values and beliefs regarding patient safety.	87	29	1	1	2	4.65
	72.50%	24.20%	0.80%	0.80%	1.70%	
14. External factors, such as regulatory requirements and accreditation standards, influence my leadership behaviors concerning patient safety.	82	34	1	1	2	4.61
	68%	28.30%	0.80%	0.80%	1.70%	
15. Public perceptions and media attention related to patient safety impact our approach to leadership.	77	34	7	1	1	4.54
	64.20%	28.30%	5.80%	0.80%	0.80%	
16. Staff members feel comfortable reporting safety incidents without fear of punishment or retaliation.	74	37	8	0	1	4.53
	61.70%	30.80%	6.70%	0.00%	0.80%	
17. Lessons learned from safety incidents are shared with staff and implemented to improve patient safety.	91	25	2	0	2	4.69
	75.80%	20.80%	1.70%	0.00%	1.70%	
18. Staff members are encouraged to report safety incidents, even if they are involved in the incident.	92	23	3	0	2	4.69
	76.70%	19.20%	2.50%	0.00%	1.70%	
19. Staff members are blamed for safety incidents at my facility.	54	26	22	8	10	3.88
	45%	21.70%	18.30%	6.70%	8.30%	
	78	37	4	0	1	4.59

20. My facility has a process in place for supporting staff members who report safety incidents.	65.00%	30.80%	3.30%	0.00%	0.80%
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The Factors that Influence and Shape Nurse Managers' Leadership Behaviors Concerning Patient Safety was shown in Table 5. In terms of factors that influence and shape Nurse Managers' leadership behaviors concerning patient safety, organizational culture is one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that the organizational culture in their healthcare facility emphasizes patient safety, leadership within the organization supports and promotes a culture of patient safety, and the organization has policies and procedures in place to enhance patient safety. The findings also implied that resources staffing is one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that their unit is adequately staffed to ensure patient safety, they have access to necessary resources and equipment to support patient safety, and staff members in their unit receive ongoing training and education related to patient safety. The findings also implied that team collaboration is one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that team members within our unit collaborate effectively to ensure patient safety, they encourage open communication among staff members regarding patient safety, and their team actively identifies and addresses safety concerns in a collaborative manner. The findings implied that leadership support is one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that leadership in their healthcare facility provides support and resources for patient safety initiatives, Nurse managers receive support and guidance from higher-level leadership to enhance patient safety, and leadership actively acknowledges and appreciates efforts related to patient safety. Personal factors are one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that their leadership style aligns with their personal values and beliefs regarding patient safety. The findings implied that external factors are one of the factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that external factors, such as regulatory requirements and accreditation standards, influence their leadership behaviors concerning patient safety, and public perceptions and media attention related to patient safety impact their approach to leadership. There other factors that influence and shape nurse managers' leadership behaviors concerning patient safety. Most of the respondents strongly agreed that staff members feel comfortable reporting safety incidents without fear of punishment or retaliation, lessons learned from safety incidents are shared with staff and implemented to improve patient safety, staff members are encouraged to report safety incidents, even if they are involved in the incident, staff members are blamed for safety incidents at my facility, and their facility has a process in place for supporting staff members who report safety incidents.

Table 6. Relationship between the Leadership Styles of the Nurse Managers and the Patient Safety Culture

		Patient Safety Culture	Leadership Style
Patient Safety Culture	Pearson Correlation	1	.900
	Sig. (2-tailed)		.000
	N	120	120
Leadership Style	Pearson Correlation	.900	1
	Sig. (2-tailed)	.000	
	N	120	120

The Relationship between the Leadership Styles of the Nurse Managers and the Patient Safety Culture was shown in Table 6. As shown in the table, there is high significant relationship between the Patient Safety Culture and Leadership Style of the Nurse Managers in Cagayan Valley Medical Center ( $r=0.900$ ,  $p=0.00 < \alpha=0.05$ ). The positive correlation indicated the strong association of Patient Safety Culture and Leadership Style. This implied that the Patient Safety Culture is a determiner of the Leadership style of the Nurse Managers in Cagayan Valley Medical Center.

## Limitations

The study was conducted in a single medical center in the Philippines, which may limit the generalizability of the findings to other healthcare settings or geographic regions. The study employed a cross-sectional design, which means it captured data at a single point in time. This limits the ability to establish causal relationships between variables and assess changes in patient safety culture over time. The study relied on self-reported data from nurse managers, which may be subject to bias and recall errors. The study focused solely on nurse managers as the primary drivers of patient safety culture. The study did not include data from patients or their families, who are key stakeholders in patient safety and can provide valuable insights into the effectiveness of patient safety initiatives. Longitudinal studies are needed to track changes in patient safety culture over time and assess the impact of interventions aimed at improving patient safety. Lastly, the study should consider and address the cultural context of the healthcare setting, as cultural norms and values can influence perceptions of patient safety and leadership practices.

## Conclusion

In conclusion, this study provided a comprehensive understanding of the demographic profile, awareness of patient safety, leadership styles, factors influencing leadership behaviors, and the relationship between leadership styles and patient safety culture among Nurse Managers in Cagayan Valley Medical Center.

The demographic profile highlighted a predominant presence of female respondents with Master's Degrees, mostly aged between 31-40, and having less than 5 years of experience. This diverse profile forms the backdrop against which their leadership styles and behaviors were examined.

The Nurse Managers demonstrated a commendable level of awareness and knowledge regarding patient safety, indicating a strong commitment to understanding and preventing patient safety incidents. The study showcased the excellent patient safety culture within the Cagayan Valley Medical Center, emphasizing effective leadership communication, teamwork, and a commitment to ongoing education and improvement.

Examining leadership styles, the findings illustrated that Nurse Managers in Cagayan Valley Medical Center exhibit excellent transformational, transactional, servant, laissez-faire, and coaching leadership styles. These varied leadership approaches indicate a multifaceted and adaptable leadership dynamic, contributing to a robust patient safety culture.

Factors influencing and shaping Nurse Managers' leadership behaviors were identified, including organizational culture, resources staffing, team collaboration, leadership support, personal factors, and external factors. These factors collectively contribute to the complex interplay that defines the leadership approach of Nurse Managers in ensuring patient safety.

The study's crucial revelation lies in the high positive and significant relationship between the leadership styles of Nurse Managers and the patient safety culture. This suggests that the leadership styles employed significantly contribute to shaping and reinforcing the patient safety culture within Cagayan Valley Medical Center. The leadership's commitment, communication, and collaborative efforts play a pivotal role in fostering a culture that prioritizes patient safety.

In summary, the insights derived from this research not only deepen our understanding of the Nurse Managers' demographic profile, awareness, leadership styles, and influencing factors but also underscore the vital connection between leadership styles and the patient safety culture. These findings provide valuable insights for healthcare institutions aiming to enhance patient safety through effective leadership strategies.

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