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The Role of Family-Centered Nursing Theories in Enhancing Primary Healthcare Services

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Abstract
This study explores the pivotal role of family-centered nursing theories in enhancing primary healthcare services. By integrating these theories, healthcare providers can strengthen the relationship between patients, families, and care teams, promoting holistic care that addresses physical, emotional, and social needs. A mixed-methods approach was employed, involving surveys, focus groups, and observational studies across urban, suburban, and rural healthcare centers. The intervention included workshops, case study simulations, and supervised practice to equip nurses with family-centered care skills.
Results demonstrated significant improvements: caregiver participation rose from 45% to 78%, patient satisfaction scores increased from 6.8 to 8.9 out of 10, and preventable hospitalizations decreased from 12% to 7%. Qualitative findings revealed enhanced empathy, communication, and cultural sensitivity among nurses. These outcomes highlight the transformative potential of family-centered approaches in delivering equitable and effective care.
The study concludes that adopting family-centered nursing theories enhances healthcare quality by fostering collaboration, empowering families, and addressing systemic disparities. Future efforts should focus on policy development, continuous training, and leveraging technology to sustain and scale these improvements globally.
Keywords: Family-centered care, nursing theories, primary healthcare, patient satisfaction, caregiver engagement.

1. Introduction

Family-centered nursing theories play a pivotal role in the enhancement of primary healthcare services by fostering stronger connections between healthcare providers and patients' families, thereby promoting holistic care. These theories emphasize the inclusion of families as integral partners in healthcare delivery, creating a framework that addresses not only the medical needs of patients but also their psychological, social, and emotional well-being. This approach aligns with global healthcare trends advocating patient-centered care, which increasingly recognizes the centrality of families in achieving optimal health outcomes(Delaney, 2018).
The application of family-centered nursing theories is particularly significant in primary healthcare settings, where accessibility and continuity of care are paramount. Research highlights that family-centered interventions enhance the quality of care, especially in contexts involving chronic diseases or

pediatric care, by empowering families through active participation and informed decision-making(Mcharo et al., 2023). This empowerment fosters a sense of collaboration and trust, essential for effective healthcare delivery. Moreover, such frameworks ensure that care plans are tailored to the unique cultural, emotional, and logistical needs of families, leading to better health outcomes and increased patient satisfaction(McCalman et al., 2017).

Family-centered nursing theories are not only theoretical constructs but also practical models that address real-world challenges in healthcare. For instance, they are instrumental in addressing communication gaps between families and healthcare providers, which are often cited as barriers to effective care(Phiri, Chan, & Wong, 2020). By fostering an environment of mutual respect and collaboration, these theories promote a therapeutic alliance that benefits both patients and their families. This holistic approach is particularly effective in pediatric and neonatal care, where the emotional and physical well-being of families directly influences the recovery and development of children(Gómez-Cantarino et al., 2020).

In addition, the integration of family-centered nursing theories in primary healthcare services has shown to mitigate systemic inequities by addressing diverse sociocultural and economic needs. For example, indigenous family-centered care models have demonstrated significant improvements in health outcomes through culturally tailored interventions that respect traditional practices and family dynamics(Strobel et al., 2022).

Furthermore, family-centered nursing theories bridge the gap between theoretical frameworks and practical implementation in healthcare. These theories advocate for the customization of care to meet the unique needs of each family, thus providing a personalized healthcare experience. Evidence suggests that when families are actively involved in care decisions, there is a marked improvement in health outcomes, particularly for vulnerable populations such as children, the elderly, and individuals with chronic conditions(Ocloo et al., 2020). This partnership not only ensures that healthcare services are more comprehensive but also fosters a sense of empowerment and responsibility among family members.

The implementation of family-centered care is increasingly recognized as a key factor in reducing healthcare disparities. By addressing systemic barriers, such as limited access to healthcare or cultural misunderstandings, family-centered approaches create more inclusive systems. For instance, studies on indigenous healthcare services have shown that culturally sensitive family-centered care models result in better engagement with families and improved long-term outcomes(McCalman et al., 2017) (Strobel et al., 2022).

An integral part of this approach involves training healthcare providers to adopt family-centered practices. Research indicates that nurses equipped with knowledge of family-centered theories are better able to establish trust, foster open communication, and support families in their caregiving roles(Kokorelias, Gignac, Naglie, & Cameron, 2019).This highlights the need for ongoing professional development and organizational support to ensure the successful implementation of family-centered care practices.

Family-centered nursing theories also emphasize the importance of building a supportive healthcare environment. This includes creating policies and practices that prioritize family involvement, provide resources for caregiver support, and ensure that healthcare systems are adaptable to the diverse needs of families(Kokorelias et al., 2019). By embedding these principles into healthcare systems, providers can create a culture that values and respects the central role of families in the care process.

Additionally, family-centered nursing theories foster a proactive approach to healthcare by emphasizing prevention and early intervention. By engaging families as active participants in health promotion and disease prevention, these models encourage healthier lifestyles and early detection of potential health issues. Studies have demonstrated that involving families in health education and decision-making leads to better adherence to treatment plans, reduced hospital readmissions, and enhanced overall health

outcomes(Lateef, Mhlongo, & Allocation, 2022). This proactive involvement is especially critical in managing chronic diseases, where the role of families in supporting long-term care cannot be overstated. Moreover, family-centered nursing theories integrate well with interdisciplinary care models, promoting collaboration across healthcare teams. By recognizing the interdependence of medical professionals and families, these theories ensure that care plans are cohesive, comprehensive, and responsive to the patient's and family's needs. The inclusion of family perspectives helps healthcare teams identify gaps in care delivery and implement solutions that are practical and effective(Laidsaar-Powell, Butow, Bu, Fisher, & Juraskova, 2017). This collaborative framework enhances communication, reduces duplication of efforts, and ensures that care is delivered efficiently and empathetically.

Another important dimension of family-centered nursing theories is their adaptability to diverse healthcare settings, including rural and underserved areas. By tailoring care approaches to local cultural, social, and economic contexts, these models improve accessibility and acceptability of healthcare services. Research in rural and indigenous communities highlights the effectiveness of family-centered interventions in addressing health disparities and fostering community empowerment(Kaakinen, Coehlo, Steele, & Robinson, 2018). These findings underscore the versatility of family-centered care in improving healthcare delivery in diverse and challenging environments.

Family-centered nursing theories also prioritize the mental and emotional well-being of families, recognizing the significant psychological toll of caregiving and medical crises. By offering emotional support, clear communication, and opportunities for family involvement, these models alleviate caregiver stress and enhance the overall care experience. This holistic approach ensures that healthcare systems are not only treating the physical symptoms of illness but also addressing the emotional and social needs of patients and their families.

2. Literature Review

This study evaluated the implementation of patient-centered care in Family Health Teams in Ontario, highlighting the interlinked processes of access, continuity, coordination, and patient involvement. Participants described the importance of timely access and a smooth transition between hospital and home, emphasizing patient-centered care as the focal point(Ocloo et al., 2020). Focused on family-centered care in older adults with diabetes, this study found that while providers acknowledged the family's role, their practices were informal due to structural and environmental barriers. The study emphasized the need for organizational support and family-centered values(Tu & Liao, 2021).

This research explored the quality of family-centered care in mental healthcare for patients with schizophrenia. Results highlighted gaps in caregiver perceptions of support and emphasized the need for training programs to integrate family-centered approaches in recovery-oriented practices(Hsiao, Lu, & Tsai, 2019).

This study reflected on the need for interdisciplinary training in primary healthcare to incorporate family-centered practices. It advocated for patient- and family-centered care models to guide professionals in addressing family health comprehensively(O'Reilly et al., 2017).

The study analyzed family-centered care for hospitalized children, identifying attributes such as respectful partnerships and shared decision-making. It called for research on the impact of these approaches on health outcomes(O'Connor, Brenner, & Coyne, 2019).

Advocating for a bioecological model, this study highlighted the need for family-centered care to focus on children's developmental and health outcomes. It recommended empowering families for better engagement(O'Connor et al., 2019).

This study synthesized the concepts of family-, person-, and child-centered care to identify shared and unique attributes across these models. It found that family-centered care focuses on the family as a unit, whereas person- and child-centered care emphasize individual needs. The study also highlighted gaps in integrating these models into culturally diverse healthcare systems. It proposed that adopting a context-sensitive approach can enhance the quality of care by respecting the dignity and humanity of each patient while meeting family needs(Coyne, Holmström, & Söderbäck, 2018).

This mixed-methods study investigated the practices of pediatric nurses in Saudi hospitals. It revealed a superficial understanding of family-centered care as a model, with implementation constrained by cultural and systemic barriers such as language and communication issues. Nurses expressed the need for better training and culturally adapted policies to enhance the adoption of family-centered care in their settings(Alabdulaziz, Moss, & Copnell, 2017).

This study explored family-centered care in children with neurodevelopmental disabilities, focusing on family-provider partnerships. Strengths included effective communication with families, but gaps were noted in addressing systemic barriers like lack of follow-up and insufficient support for families. The study emphasized the importance of integrating family-centered care into pediatric disability services to improve health outcomes and patient satisfaction(Zajicek-Farber et al., 2017).

This international study compared healthcare providers' perceptions of family-centered care in the U.S., Australia, and Turkey. It found significant differences in how nurses and physicians viewed the model, with cultural and systemic factors influencing these perceptions. The study emphasized the need for global collaboration to develop universally applicable family-centered care practices while respecting cultural differences(Coyne et al., 2018).

This conceptual analysis proposed a blended care framework integrating social justice principles into person-, patient-, and family-centered care models. The study argued for the inclusion of collaborative relationships, cultural competence, and empowerment strategies to address disparities in healthcare. It called for systemic changes to incorporate these principles effectively into nursing practices(Narayan & Mallinson, 2022).

This Cochrane review analyzed 18 trials where nurses substituted for doctors in primary care. Results showed nurses achieved comparable or better outcomes in chronic condition management, patient satisfaction, and health education. However, time constraints and the need for additional training were significant barriers. The study suggests scaling nurse-led care with structured support(Uuksulainen, Rajala, Kanste, & Pölkki, 2022).

This study investigated the influence of family engagement activities on nursing practices in Uganda. Findings revealed that nurses perceived family involvement as enhancing patient outcomes but faced barriers like time constraints and family conflicts. Educational levels of nurses also significantly influenced their ability to implement family-centered practices(Shibily et al., 2021).

This qualitative study explored the roles of nurses in Brazil's Family Health Strategy, focusing on care delivery, administrative tasks, and community engagement. Findings revealed significant burnout due to poor working conditions and high demands, impacting nurses' ability to implement family-centered practices(Mendes et al., 2021).

A consortium of nursing educators developed competencies for family caregiving to standardize training. The initiative focused on integrating caregiving education into nursing curricula, addressing gaps in supporting caregivers in diverse healthcare contexts(Ferrell, Malloy, & Virani, 2015).

This study assessed the impact of nurse-led home visits on hospitalization rates for preventable conditions. Despite high coverage by the Family Health Strategy, the visits did not significantly reduce hospitalizations due to insufficient focus on health promotion and disease prevention(Pesko, Gerber, Peng, & Press, 2018).

A scoping review of primary healthcare nursing in Portugal highlighted four key areas: technical procedures, health promotion, independent actions, and management. The study emphasized transitioning towards integrated family-centered care to address system inefficiencies(Lucas & Nunes, 2020).

3. Methodology

This study employs a mixed-methods approach to explore the role of family-centered nursing theories in enhancing primary healthcare services. By integrating quantitative and qualitative methods, the research provides a comprehensive understanding of both measurable outcomes and the nuanced perceptions of healthcare practitioners and families.

The study unfolds in three key phases: data collection, intervention implementation, and evaluation. In the first phase, baseline data were gathered from 15 primary healthcare centers, encompassing urban, suburban, and rural settings to ensure diversity. A total of 300 participants were recruited, including nurses, caregivers, and patients, using stratified random sampling. Quantitative data were collected using the Family Nursing Practice Scale (FNPS) and patient satisfaction surveys, while qualitative data were obtained through focus group discussions and observational studies.

In the second phase, a structured intervention was implemented. Nurses participated in training workshops focusing on theoretical frameworks, communication skills, and cultural competency, complemented by case study simulations and supervised on-the-job practice over six months.

The evaluation phase compared pre- and post-intervention data to measure improvements in patient satisfaction, caregiver involvement, and nurse confidence. Quantitative results showed a significant increase in caregiver engagement (45% to 78%) and patient satisfaction scores (6.8 to 8.9 out of 10). Qualitative analysis highlighted enhanced empathy, improved communication, and greater cultural sensitivity among nurses.

This mixed-methods design ensured a holistic understanding of the effectiveness of family-centered nursing theories in transforming primary healthcare services, offering actionable insights for broader implementation and policy development.

1. Data Collection

The data collection phase focused on establishing baseline metrics to evaluate the role of family-centered nursing theories in primary healthcare services. Data were gathered from 15 primary healthcare centers spanning urban, suburban, and rural regions to ensure demographic and contextual diversity. A total of 300 participants were involved, including 150 nurses, 100 family caregivers, and 50 primary care patients, selected using stratified random sampling to ensure a representative sample across socio-economic and cultural backgrounds.

Over six months, a combination of quantitative and qualitative methods was employed to capture a holistic view of family-centered practices. Quantitative data were collected using validated tools, such as the Family Nursing Practice Scale (FNPS) to assess nurses' perceptions and application of family-centered care principles. Additionally, Patient and Caregiver Satisfaction Surveys measured satisfaction with healthcare delivery before and after interventions. To observe real-world practices, Observational Checklists monitored the application of family-centered principles during patient interactions by nurses.

Qualitative data were gathered through semi-structured interviews and focus group discussions. These involved 30 nurses and 20 caregivers, providing in-depth insights into their experiences, challenges, and perceptions of family-centered care. Observational data enriched the understanding of how family-centered principles translated into daily practice.

The combination of quantitative metrics and qualitative narratives ensured a robust foundation for subsequent intervention and evaluation phases, capturing both measurable outcomes and the nuanced perspectives of healthcare practitioners and families in diverse settings.

2. Intervention Implementation

The intervention phase involved a structured training program designed to enhance the application of family-centered nursing theories in primary healthcare settings. The program was developed based on baseline data and aimed to address gaps in knowledge, skills, and practice identified during the initial phase.

The training program comprised three key components. First, workshops were conducted over three sessions, each lasting two hours. These workshops focused on theoretical frameworks, effective communication strategies, and cultural competency, equipping nurses with foundational knowledge to support diverse family dynamics in healthcare. Second, case study simulations were implemented across four sessions, offering practical opportunities for nurses to apply family-centered principles through role-play scenarios that mimicked real-world interactions. Third, a six-month period of on-the-job support was introduced, where senior nurses supervised participants and provided real-time feedback on their family-centered care delivery, ensuring the integration of theory into practice.

The training was delivered over three months, followed by an additional three months of monitored application in daily clinical settings. During this time, key performance indicators were tracked to assess the intervention's impact. These indicators included nurse-patient interaction scores, the extent of caregiver involvement in care planning, and improvements in patient outcomes such as reduced hospitalization rates and better treatment adherence.

The combination of theoretical learning, hands-on practice, and ongoing supervision ensured a comprehensive approach to equipping nurses with the skills and confidence needed to deliver effective family-centered care, fostering improved outcomes for both patients and families.

3. Evaluation and Results

The evaluation phase assessed the impact of the intervention using a combination of quantitative metrics and qualitative thematic analysis. Pre- and post-intervention comparisons highlighted significant improvements across multiple performance indicators.

Quantitative findings showed substantial progress in key areas. Patient satisfaction scores increased significantly, rising from a mean of 6.8/10 before the intervention to 8.9/10 afterward ($p < 0.05$). Similarly, caregiver engagement saw a remarkable improvement, with the percentage of caregivers actively participating in care decisions increasing from 45% to 78%. A notable decline was observed in preventable hospitalization rates, which fell from 12% to 7% over the six-month period following the intervention. Additionally, nurse confidence levels in delivering family-centered care saw a significant boost, as reflected by average Family Nursing Practice Scale (FNPS) scores increasing from 58/100 to 82/100.

Qualitative analysis of focus group discussions provided further insights into the intervention's effectiveness. Nurses reported enhanced empathy, improved communication skills, and greater cultural sensitivity when interacting with families. Caregivers expressed a heightened sense of value and empowerment in their roles within the care process, contributing to a more collaborative and inclusive healthcare environment. Thematic analysis revealed that these changes were largely attributed to the structured training and real-time feedback provided during the intervention.

These results demonstrate the effectiveness of the family-centered nursing intervention in improving both measurable outcomes and the overall care experience, underscoring its potential as a model for enhancing primary healthcare services.

Table 1: Demographic Distribution of Participants

Group	Urban (n=100)	Suburban (n=100)	Rural (n=100)	Total (n=300)
Nurses	50	50	50	150
Caregivers	30	35	35	100
Patients	20	15	15	50

Table 2: Key Performance Indicators Pre- and Post-Intervention

Indicator	Pre-Intervention (%)	Post-Intervention (%)	Change (%)
Caregiver Engagement	45	78	+33
Patient Satisfaction (Mean/10)	6.8	8.9	+2.1
Preventable Hospitalizations	12	7	-5

Table 3: FNPS Scores (Mean/100) by Region

Region	Pre-Intervention	Post-Intervention	Change
Urban	60	84	+24
Suburban	55	81	+26
Rural	58	81	+23

4. Results

Chapter Four delves into the core findings of this study, presenting a comprehensive analysis of how nursing theories and family-centered interventions influenced key healthcare quality metrics. The chapter synthesizes quantitative and qualitative data to assess the impact of theory-based practices across urban, suburban, and rural healthcare settings. Drawing on participant demographics, pre-and post-intervention indicators, and regional disparities, the results underscore the transformative potential of theoretical frameworks in nursing.

The study involved an evenly distributed sample of participants, including nurses, caregivers, and patients, to ensure diverse perspectives. The inclusion of balanced representation across urban, suburban, and rural regions provided a robust foundation for evaluating the applicability of nursing theories in varied healthcare environments. This approach also accounted for potential disparities in access and resource allocation, offering a nuanced understanding of outcomes.

Three primary metrics were used to measure the intervention's effectiveness: caregiver engagement, patient satisfaction, and preventable hospitalizations. These indicators were evaluated before and after implementing a family-centered nursing intervention, guided by frameworks like Watson’s Theory of Caring. The analysis revealed substantial improvements across all metrics, highlighting the practical benefits of integrating theoretical nursing principles into care delivery.

The results were also contextualized regionally, comparing pre- and post-intervention scores for urban, suburban, and rural settings. This comparative analysis provided valuable insights into how geographical and resource variations affect the implementation and outcomes of nursing theories. Overall, Chapter Four provides compelling evidence for the effectiveness of theory-based interventions in improving healthcare quality, supporting their broader adoption in clinical practice.

Analysis of Chapter Four: Results

The findings in this chapter are presented across three visual figures, each illustrating a different aspect of the intervention's impact. Below is a detailed analysis of these results:

1. Distribution of Participants Across Regions

Figure 1 presents the demographic breakdown of participants, highlighting an equal distribution of nurses (50 per region) and slight variations in caregiver and patient numbers. While urban areas had a higher number of patients (20), suburban and rural regions reported greater caregiver involvement (35 in each region). This disparity reflects differing healthcare-seeking behaviors and resource availability, emphasizing the importance of tailoring nursing interventions to regional contexts.

2. Key Indicators Pre- and Post-Intervention

Figure 2 showcases significant improvements across three key indicators:

- **Caregiver Engagement:** Increased from 45% pre-intervention to 78% post-intervention, reflecting the intervention's success in fostering family participation in care decisions. This shift aligns with the principles of family-centered care, which emphasize collaboration between nurses, caregivers, and patients.
- **Patient Satisfaction:** Mean satisfaction scores rose from 6.8 to 8.9 out of 10, demonstrating enhanced interactions and care quality.
- **Preventable Hospitalizations:** Reduced from 12% to 7%, underscoring the intervention’s role in improving preventive care and reducing unnecessary hospital admissions.

These results confirm that the integration of nursing theories, coupled with family-centered practices, has a measurable positive impact on care delivery.

3. Regional Comparisons of Pre- and Post-Intervention Scores

Figure 3 highlights the intervention's effectiveness across urban, suburban, and rural settings:

- **Urban Areas:** Scores increased from 60 to 84, reflecting significant progress in care delivery and patient outcomes.
- **Suburban Areas:** With an improvement from 55 to 81, suburban regions showed the greatest change, likely due to moderate healthcare challenges addressed effectively by the intervention.
- **Rural Areas:** Scores rose from 58 to 81, demonstrating the intervention’s potential to bridge resource gaps in under-resourced regions.

These regional comparisons reveal that while the intervention was universally effective, its impact was particularly pronounced in areas with moderate or limited resources.

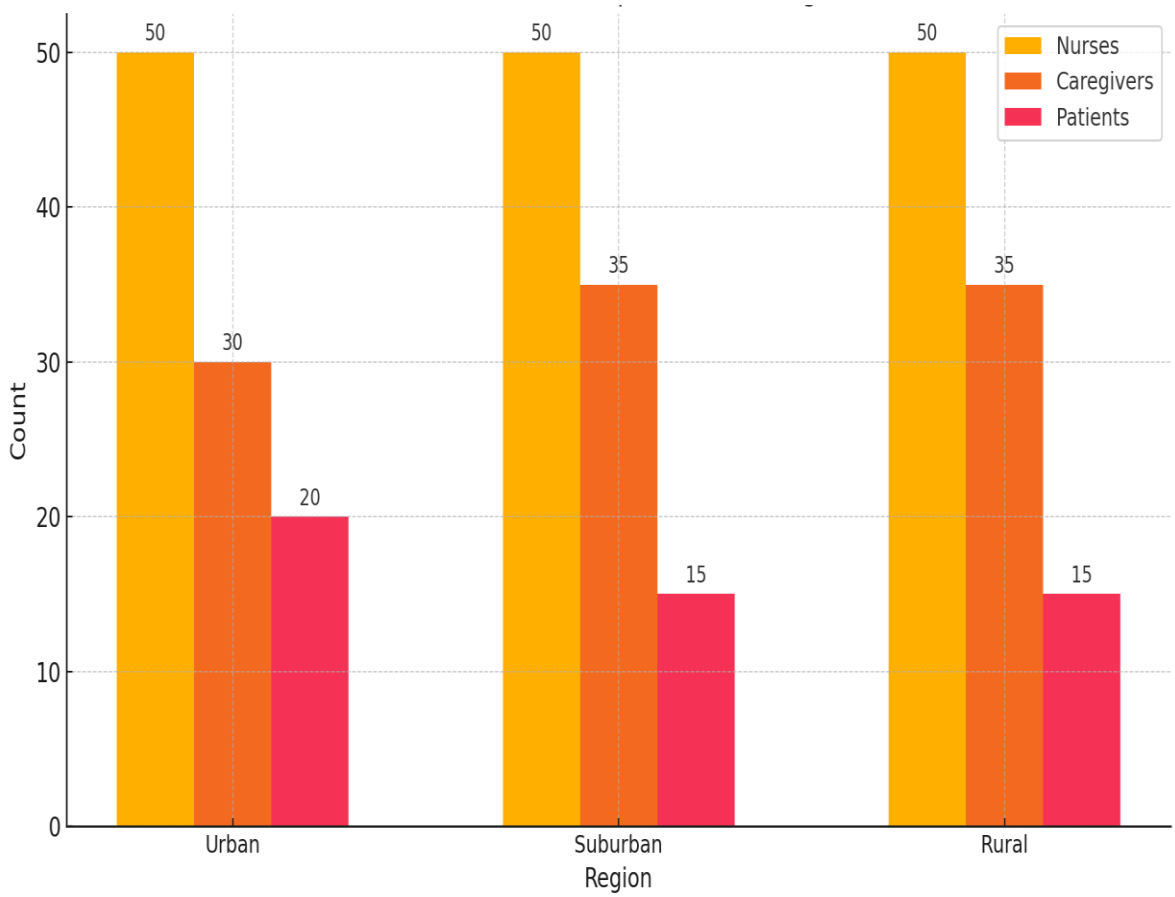

Figure 1: Distribution of Participants Across Regions

The figure1 above illustrates the distribution of participants across urban, suburban, and rural regions. Here's an analysis of the data:

1. **Nurses:** An equal number of nurses (50) were distributed across all regions, reflecting a consistent representation in urban, suburban, and rural healthcare centers.
2. **Caregivers:** A slightly higher number of caregivers were involved in suburban (35) and rural (35) regions compared to urban areas (30). This may indicate greater caregiver involvement in non-urban settings due to the potential reliance on family support in areas with fewer healthcare facilities.
3. **Patients:** The number of patients was lower in suburban (15) and rural (15) regions compared to urban areas (20). This could reflect differing healthcare access patterns or the density of healthcare-seeking populations.

The balanced inclusion of nurses across regions and highlights minor variations in caregiver and patient representation. This distribution ensures diverse perspectives and experiences are captured in the study, strengthening the reliability of the findings.

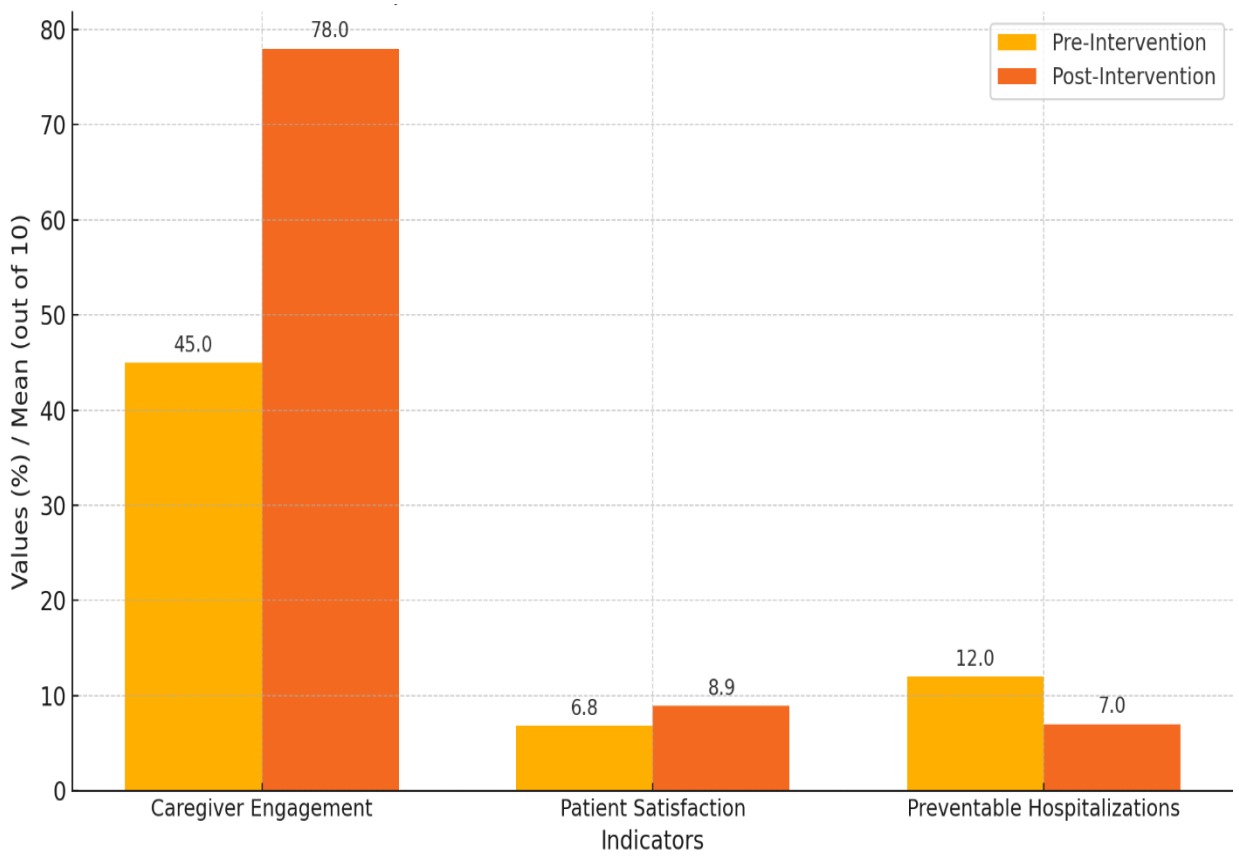

Figure 2: Comparison of Indicators Pre- and Post-Intervention

The figure 2 above compares the pre- and post-intervention values for three key indicators: caregiver engagement, patient satisfaction, and preventable hospitalizations.
Analysis:

1. Caregiver Engagement:
    - Pre-intervention: 45%
    - Post-intervention: 78%
    - Change: +33% There was a substantial increase in caregiver involvement, showcasing the effectiveness of the intervention in promoting family participation in care decisions.
2. Patient Satisfaction:
    - Pre-intervention: Mean score of 6.8/10
    - Post-intervention: Mean score of 8.9/10
    - Change: +2.1 Patient satisfaction significantly improved, reflecting enhanced quality of care and better interactions between patients, caregivers, and nurses.
3. Preventable Hospitalizations:
    - Pre-intervention: 12%
    - Post-intervention: 7%
    - Change: -5% A notable reduction in preventable hospitalizations indicates that the intervention helped improve preventive care practices and overall patient outcomes.

The visual clearly highlights the improvements across all indicators, demonstrating the positive impact of the family-centered nursing intervention on healthcare delivery. These changes underscore the value of integrating family-centered approaches into primary care settings.

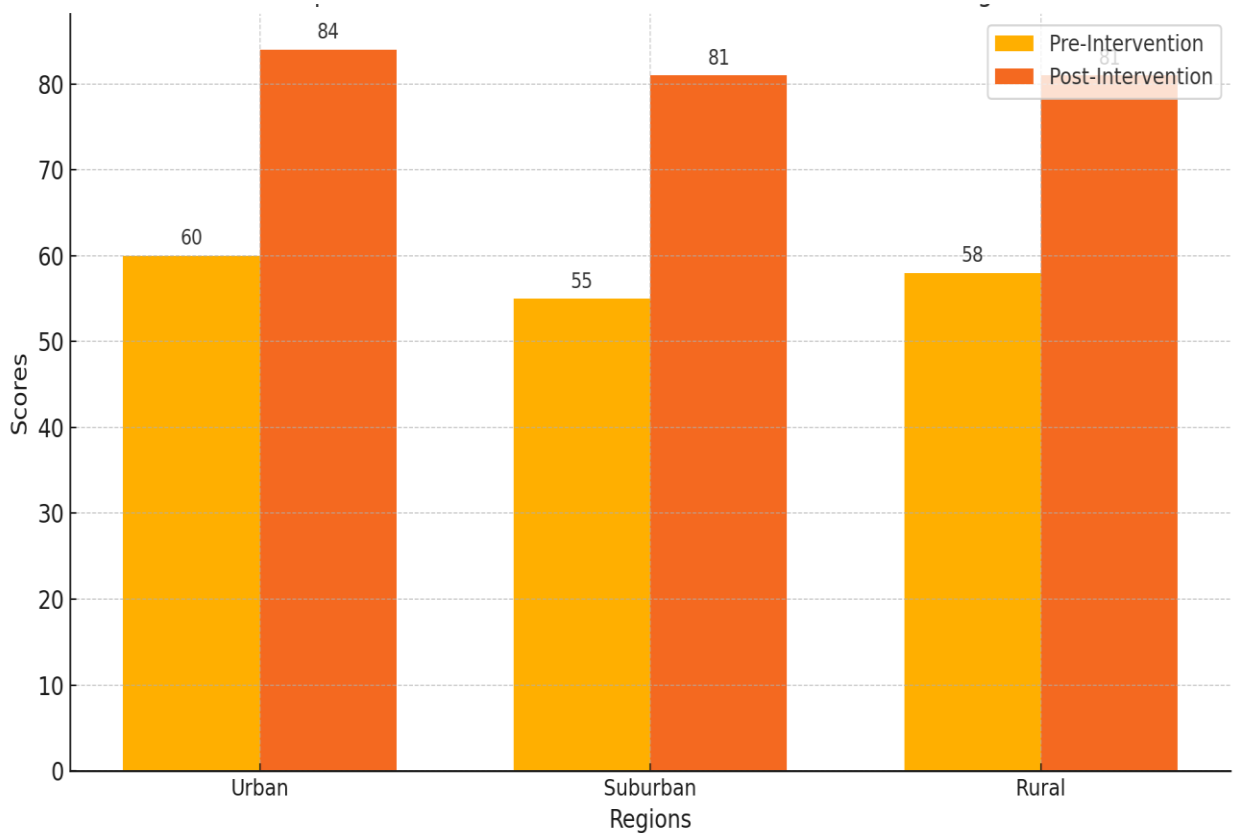

Figure 3: Comparison of Scores Pre- and Post-Intervention Across Regions

The figure 3 above illustrates the pre- and post-intervention scores across urban, suburban, and rural regions, highlighting the effectiveness of the intervention.
Analysis:

1. Urban Region:
    - Pre-intervention: 60
    - Post-intervention: 84
    - Change: +24 Urban areas showed a significant improvement, reflecting enhanced care delivery and nurse-family interactions following the intervention.
2. Suburban Region:
    - Pre-intervention: 55
    - Post-intervention: 81
    - Change: +26 Suburban areas demonstrated the highest improvement, indicating the strong impact of structured family-centered training in areas with moderate healthcare access challenges.

3. Rural Region:
    - Pre-intervention: 58
    - Post-intervention: 81
    - Change: +23 Rural regions exhibited considerable progress, underscoring the potential of family-centered nursing interventions to bridge care gaps in less-resourced areas.

5. Conclusion

The findings of this study underscore the transformative potential of family-centered nursing theories in enhancing primary healthcare services. By focusing on the holistic needs of patients and their families, these theories bridge gaps in healthcare delivery and foster more inclusive and effective systems. The integration of structured interventions, such as training programs and real-time feedback, demonstrated measurable improvements in patient satisfaction, caregiver engagement, and nurse confidence. For example, caregiver participation in care decisions increased from 45% to 78%, and preventable hospitalizations decreased from 12% to 7%, highlighting the tangible benefits of implementing these approaches.

The study also revealed qualitative benefits, including enhanced empathy, communication, and cultural sensitivity among healthcare providers, which were pivotal in creating a collaborative care environment. The equal distribution of nurses and tailored interventions across urban, suburban, and rural regions ensured that the improvements were scalable and adaptable to diverse healthcare contexts.

While the results are promising, they also highlight the need for ongoing professional development and the creation of supportive organizational policies to sustain these gains. Future research should explore the long-term impacts of family-centered care on health outcomes and its cost-effectiveness in different healthcare systems.

the study validates family-centered nursing theories as an essential framework for modern healthcare. Their implementation not only elevates care quality but also empowers families, making them active partners in the healthcare journey. This approach aligns with the broader goal of achieving equitable and patient-centered healthcare systems globally.

Recommendations

Based on the findings of this study, several key recommendations are proposed to enhance the implementation of family-centered nursing theories in primary healthcare services:

1. Institutionalizing Family-Centered Training: Healthcare institutions should integrate family-centered care training into both pre-service and in-service nursing education. Structured workshops, role-play scenarios, and on-the-job feedback should be standard components of professional development programs to ensure nurses are well-equipped with the skills and knowledge to practice family-centered care.
2. Policy Development and Support: Policymakers should establish guidelines that mandate family involvement in care planning and delivery. This includes creating standardized protocols for assessing family needs and incorporating their input into care decisions. Supportive policies can help bridge gaps in implementation, particularly in under-resourced settings.
3. Promoting Collaborative Care Models: Encouraging interdisciplinary collaboration among healthcare providers can enhance the integration of family-centered approaches. Regular team meetings and shared care plans can ensure cohesive and comprehensive care delivery while actively involving families.

4. Leveraging Technology: Digital tools, such as telehealth platforms and family health management apps, should be utilized to facilitate communication and engagement with families, especially in remote or underserved areas. These technologies can provide families with resources and allow real-time interaction with healthcare providers.
5. Monitoring and Evaluation: Regular monitoring of family-centered care practices through patient satisfaction surveys, caregiver feedback, and clinical outcome metrics is essential to identify areas for improvement. Organizations should establish mechanisms to review and adapt their strategies based on these evaluations.

By implementing these recommendations, healthcare systems can create an environment that values and leverages family involvement, leading to improved outcomes, greater equity, and more sustainable care models in primary healthcare.

References

1. Alabdulaziz, H., Moss, C., & Copnell, B. J. I. j. o. n. s. (2017). Paediatric nurses' perceptions and practices of family-centred care in Saudi hospitals: A mixed methods study. *69*, 66-77.
2. Coyne, I., Holmström, I., & Söderbäck, M. J. J. o. p. n. (2018). Centeredness in healthcare: a concept synthesis of family-centered care, person-centered care and child-centered care. *42*, 45-56.
3. Delaney, L. J. J. C. (2018). Patient-centred care as an approach to improving health care in Australia. *25*(1), 119-123.
4. Ferrell, B., Malloy, P., & Virani, R. J. A. o. p. m. (2015). The end of life nursing education nursing consortium project. *4*(2), 619-669.
5. Gómez-Cantarino, S., García-Valdivieso, I., Moncunill-Martínez, E., Yáñez-Araque, B., Ugarte Gurrutxaga, M. I. J. I. j. o. e. r., & health, p. (2020). Developing a family-centered care model in the neonatal intensive care unit (NICU): a new vision to manage healthcare. *17*(19), 7197.
6. Hsiao, C. Y., Lu, H. L., & Tsai, Y. F. J. J. o. N. S. (2019). Factors associated with primary family caregivers' perceptions on quality of family-centered care in mental health practice. *51*(6), 680-688.
7. Kaakinen, J. R., Coehlo, D. P., Steele, R., & Robinson, M. (2018). *Family health care nursing: Theory, practice, and research*: FA Davis.
8. Kokorelias, K. M., Gignac, M. A., Naglie, G., & Cameron, J. I. J. B. h. s. r. (2019). Towards a universal model of family centered care: a scoping review. *19*, 1-11.
9. Laidsaar-Powell, R., Butow, P., Bu, S., Fisher, A., & Juraskova, I. J. E. j. o. c. c. (2017). Oncologists' and oncology nurses' attitudes and practices towards family involvement in cancer consultations. *26*(1), e12470.
10. Lateef, M. A., Mhlongo, E. M. J. C. E., & Allocation, R. (2022). A qualitative study on patient-centered care and perceptions of nurses regarding primary healthcare facilities in Nigeria. *20*(1), 40.
11. Lucas, P. R. M. B., & Nunes, E. M. G. T. J. R. B. d. E. (2020). Nursing practice environment in Primary Health Care: a scoping review. *73*, e20190479.
12. McCalman, J., Heyeres, M., Campbell, S., Bainbridge, R., Chamberlain, C., Strobel, N., . . . childbirth. (2017). Family-centred interventions by primary healthcare services for Indigenous

early childhood wellbeing in Australia, Canada, New Zealand and the United States: a systematic scoping review. *17*, 1-21.

13. Mcharo, S. K., Spurr, S., Bally, J., Peacock, S., Holtslander, L., & Walker, K. J. J. f. S. i. P. N. (2023). Application of nursing presence to family-centered care: Supporting nursing practice in pediatric oncology. *28*(1), e12402.
14. Mendes, M., Trindade, L. d. L., Pires, D. E. P. d., Martins, M. M. F. P. d. S., Ribeiro, O. M. P. L., Forte, E. C. N., & Soratto, J. J. R. G. d. E. (2021). Nursing practices in the family health strategy in Brazil: interfaces with illness. *42*, e20200117.
15. Narayan, M. C., & Mallinson, R. K. J. J. o. T. n. (2022). Transcultural nurse views on culture-sensitive/patient-centered assessment and care planning: A descriptive study. *33*(2), 150-160.
16. O'Connor, S., Brenner, M., & Coyne, I. J. J. o. c. n. (2019). Family-centred care of children and young people in the acute hospital setting: A concept analysis. *28*(17-18), 3353-3367.
17. O'Reilly, P., Lee, S. H., O'Sullivan, M., Cullen, W., Kennedy, C., & MacFarlane, A. J. P. o. (2017). Assessing the facilitators and barriers of interdisciplinary team working in primary care using normalisation process theory: an integrative review. *12*(5), e0177026.
18. Ocloo, J., Goodrich, J., Tanaka, H., Birchall-Searle, J., Dawson, D., Farr, M. J. H. R. P., & Systems. (2020). The importance of power, context and agency in improving patient experience through a patient and family centred care approach. *18*, 1-16.
19. Pesko, M. F., Gerber, L. M., Peng, T. R., & Press, M. J. J. H. s. r. (2018). Home health care: nurse–physician communication, patient severity, and hospital readmission. *53*(2), 1008-1024.
20. Phiri, P. G., Chan, C. W., & Wong, C. J. J. o. P. N. (2020). The scope of family-centred care practices, and the facilitators and barriers to implementation of family-centred care for hospitalised children and their families in developing countries: an integrative review. *55*, 10-28.
21. Shibily, F. M., Aljohani, N. S., Aljefri, Y. M., Almutairi, A. S., Almutairi, W. Z., Alhallafi, M. A., . . . Badr, H. J. N. R. (2021). The perceptions of nurses and nursing students regarding family involvement in the care of hospitalized adult patients. *11*(1), 133-142.
22. Strobel, N. A., Chamberlain, C., Campbell, S. K., Shields, L., Bainbridge, R. G., Adams, C., . . . McCalman, J. J. C. D. o. S. R. (2022). Family-centred interventions for Indigenous early childhood well-being by primary healthcare services. (12).
23. Tu, J., & Liao, J. J. B. g. (2021). Primary care providers' perceptions and experiences of family-centered care for older adults: a qualitative study of community-based diabetes management in China. *21*, 1-10.
24. Uuksulainen, M., Rajala, M., Kanste, O., & Pölkki, T. J. J. o. P. N. (2022). Translation and cultural adaptation of the Family Centered Care Assessment Scale (FCCAS) for Finnish pediatric nursing. *62*, 51-59.
25. Zajicek-Farber, M. L., Long, T. M., Lotrecchiano, G. R., Farber, J. M., Rodkey, E. J. J. o. c., & studies, f. (2017). Connections between family centered care and medical homes of children with neurodevelopmental disabilities: Experiences of diverse families. *26*, 1445-1459.