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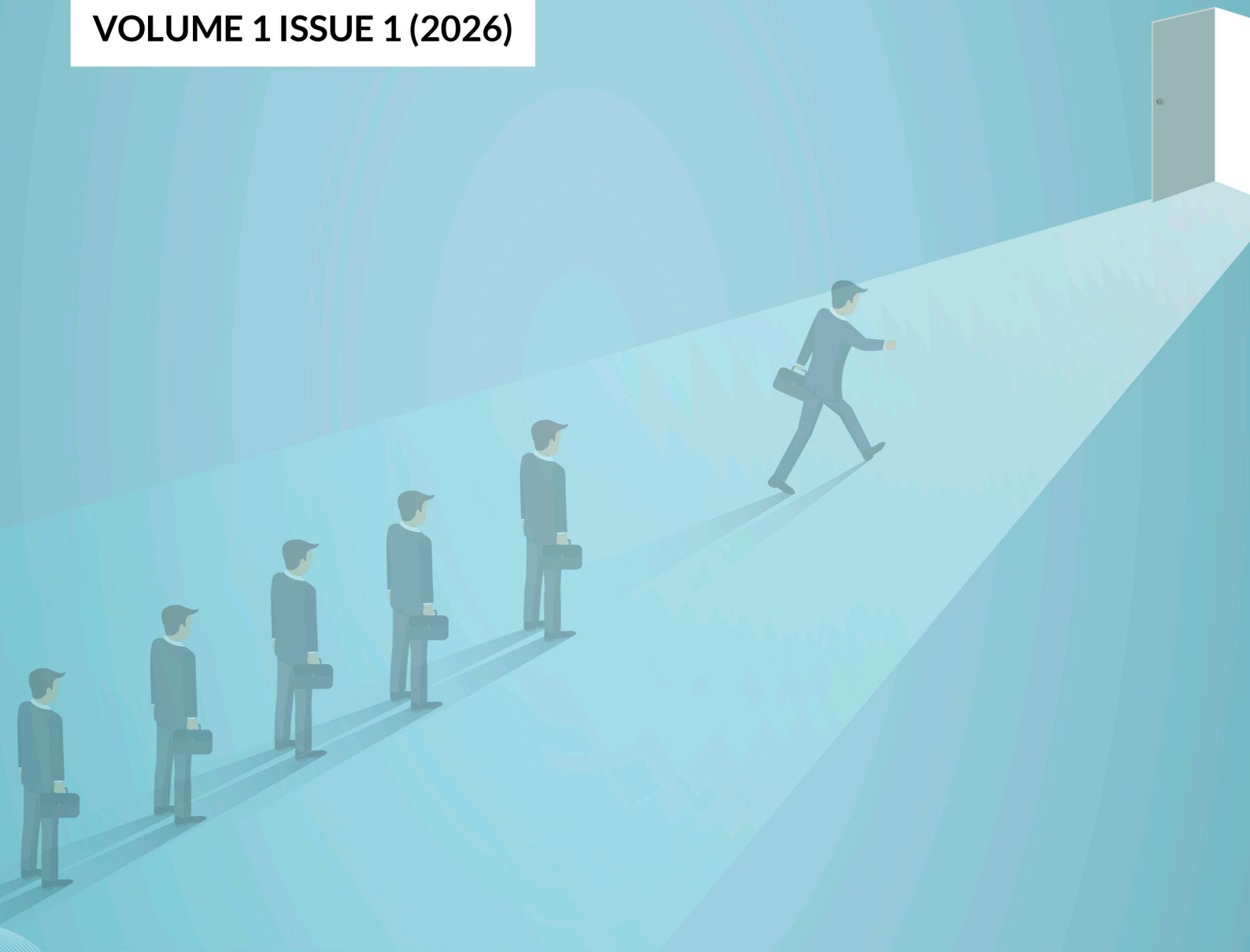

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Leadership Styles and Managerial Skills of Dental Clinic Leaders in Ilocos Norte

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ABSTRACT

This study examined the leadership styles and managerial skills of dental clinic leaders in Ilocos Norte using the five domain leadership framework, which encompasses Clinical Leadership, Professional Leadership, Health Systems Leadership, Health Policy Leadership, and Clinical and Dental Health Systems Leadership. A quantitative descriptive correlational research design was employed to generate both descriptive and relational insights. The study involved 25 licensed dental practitioners occupying leadership or managerial roles in dental clinics, selected through purposive sampling. Data were collected using a validated structured questionnaire administered through an online platform. Statistical treatments included frequency, percentage, mean, and standard deviation, as well as inferential analyses such as Pearson correlation, t-test, and one-way analysis of variance at a 0.05 level of significance. Findings revealed that respondents demonstrated high levels of competence in clinical and professional leadership, reflecting strong adherence to standards of patient care, ethical practice, and professional engagement. In contrast, competencies related to health systems and health policy leadership were observed at a moderate level, indicating comparatively limited involvement in governance, policy processes, and systems level decision making. Significant relationships were identified between years in practice and clinical leadership, as well as between leadership position and clinical and dental health systems leadership, suggesting that both experience and formal responsibility contribute to leadership development.The study concludes that while dental clinic leaders possess well established clinical and professional leadership capacities, there remains a need to strengthen competencies related to systems and policy engagement. The findings highlight the importance of integrating leadership and managerial development into both formal education and continuing professional programs to support the sustainability and advancement of dental practice.

INTRODUCTION

Leadership in dentistry has evolved beyond administrative oversight to encompass clinical excellence, ethical professionalism, and systemic collaboration (Antoniadou, 2022). Effective dental leadership integrates clinical competence with management and policy engagement to ensure quality care and efficient operations (Brocklehurst *et al.*, 2013; Field, Cowpe, & Walmsley, 2017). Modern dental practitioners are now expected to demonstrate both leadership and managerial skills that align clinical judgment with organizational governance.

In the Philippine setting, leadership capacity in dentistry is vital to achieving equitable oral health outcomes and sustainable clinic operations. The Department of Health (DOH) and the Philippine Dental Association (PDA) recognize that leadership plays a key role in promoting community oral health and professional accountability (Morison & McMullan, 2013). However, few dental programs provide structured leadership training, leading to a mismatch between clinical expertise and managerial proficiency.

In Ilocos Norte, dental clinics operate across private and community settings, demanding context-sensitive leadership that balances patient-centered care with operational management. Regional practitioners face constraints in workforce, resources, and infrastructure, all of which challenge their ability to practice comprehensive leadership. Assessing their competencies within Antoniadou's (2022) five-domain model thus provides a foundation for capacity building and policy alignment in local dental practice.

Objectives

The study aims to

- Describe the demographic and professional profile of dental clinic leaders in Ilocos Norte in terms of age, gender, years in practice, educational attainment, clinic type, position, and number of staff supervised
- Assess their competencies across the five leadership domains: Clinical, Professional, Health Systems, Health Policy, and Clinical and Dental Health Systems Leadership
- Determine whether significant relationships exist between respondents' profile variables and their leadership competencies
- Identify which leadership domains are most and least practiced among dental clinic leaders.

LITERATURE REVIEW

Leadership in Dentistry

Leadership has become an essential competency in contemporary dental practice, extending beyond clinical expertise to encompass organizational management, professional collaboration, strategic decision-making, and quality improvement. The changing healthcare

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environment requires dental practitioners to assume leadership roles that integrate patient-centered care with the effective management of human, financial, and organizational resources. Thus, dentists are increasingly expected not only to provide competent clinical services but also to lead multidisciplinary teams, implement quality improvement initiatives, and contribute to healthcare policy and systems development (Antoniadou, 2022).

Leadership in dentistry may be understood as the capacity to influence individuals and organizations toward the achievement of quality oral healthcare outcomes while maintaining ethical and professional standards. Morison and McMullan (2013) emphasized that leadership competencies have become integral to dental professionalism because practitioners are increasingly required to manage clinical services, supervise healthcare personnel, and respond effectively to organizational challenges. As healthcare organizations become more complex, dental professionals must balance clinical responsibilities with managerial and administrative functions to ensure efficient, safe, and sustainable service delivery.

Similarly, Ellwood (2022) argued that leadership should no longer be regarded as an optional attribute but as a fundamental professional competency for dentists. Effective leadership can promote collaboration, strengthen communication among healthcare professionals, encourage innovation, and improve organizational performance. This perspective recognizes that successful dental practitioners must function not only as competent clinicians but also as organizational leaders capable of influencing patient care, professional practice, and institutional effectiveness.

The transition from clinician to leader requires competencies that extend beyond technical knowledge and clinical skills. Hanks *et al.* (2020), in their systematic review, identified strategic thinking, emotional intelligence, communication, ethical decision-making, and change management as important dimensions of leadership in dental practice. These competencies enable dental practitioners to respond to the increasing complexity of healthcare systems while maintaining safe, equitable, and high-quality oral healthcare services. Consequently, leadership competence represents an important component of contemporary dental professionalism and organizational effectiveness.

Leadership Styles in Healthcare and Dental Practice

Leadership style refers to the characteristic approach through which leaders influence organizational members and guide them toward the achievement of shared goals. Among the leadership approaches examined extensively in healthcare organizations, transformational and transactional leadership have received considerable scholarly attention. In their meta-analysis, Judge and Piccolo (2004) found that transformational leadership was positively associated with employee satisfaction, organizational commitment, leadership effectiveness, and performance. Transformational leaders motivate followers by articulating a shared vision, encouraging innovation, supporting professional development, and fostering commitment to organizational goals.

In dental practice, transformational leadership can facilitate collaboration among dental professionals, strengthen team communication, and promote patient-centered care. Antoniadou (2022) emphasized that transformational leadership is particularly relevant in responding to changes within healthcare environments because it encourages continuous learning, innovation, and professional development. Dental leaders who inspire their teams to pursue improvement and adapt to emerging challenges may contribute to enhanced clinical outcomes and organizational sustainability.

In contrast, transactional leadership emphasizes structured performance expectations, supervision, compliance, and the use of rewards or corrective measures to achieve organizational objectives. Such leadership behaviors remain important in dental practice, particularly in areas requiring adherence to professional standards, infection prevention and control, patient safety protocols, and operational procedures. However, an excessive reliance on transactional approaches may constrain creativity and adaptability, particularly in rapidly changing healthcare environments (Judge & Piccolo, 2004). Effective dental leadership may therefore require an appropriate combination of transformational and transactional behaviors depending on organizational needs and circumstances.

Other leadership approaches, including servant and collaborative leadership, have also gained attention in healthcare settings. Collaborative leadership emphasizes stakeholder engagement, shared decision-making, communication, and ethical governance. Modha (2021) highlighted the importance of collaboration in strengthening relationships among healthcare professionals and other stakeholders. Within dental settings, collaborative leadership can facilitate partnerships among dentists, dental staff, patients, professional organizations, and community stakeholders. Such an approach is particularly relevant to multidisciplinary healthcare environments in which communication, coordination, and shared responsibility are essential to service quality and organizational performance.

Overall, the literature suggests that no single leadership style is universally applicable to dental practice. Rather, effective dental leaders may need to demonstrate flexibility in their leadership behaviors and employ different approaches according to clinical, organizational, and professional demands.

Managerial Skills of Dental Clinic Leaders

Managerial skills constitute an important component of effective leadership because they enable leaders to plan, organize, coordinate, supervise, and evaluate organizational activities. In dental clinics, managerial competence may influence operational efficiency, staff productivity, patient experience, financial sustainability, and quality assurance. Although clinical competence

remains fundamental to dental practice, managerial capability determines, to a significant extent, how effectively dental organizations utilize resources and achieve their strategic and service-delivery objectives.

Antoniadou (2022) conceptualized leadership in dentistry across several interconnected areas, including clinical leadership, professional leadership, health systems leadership, health policy leadership, and clinical and dental health systems leadership. These domains reflect the multidimensional responsibilities of contemporary dental practitioners. Clinical leadership emphasizes evidence-based decision-making, patient safety, clinical quality, and continuous improvement. Professional leadership encompasses ethical practice, professional accountability, lifelong learning, and collaboration. Health systems leadership involves organizational management, strategic planning, resource allocation, and healthcare administration. Health policy leadership includes engagement with regulatory requirements, public health initiatives, advocacy, and policy development. Clinical and dental health systems leadership integrates clinical expertise with organizational governance and quality improvement.

The integration of management and leadership competencies into dental education is likewise supported by competency frameworks for dental graduates. Field *et al.* (2017), through the Graduating European Dentist framework, identified leadership, communication, professionalism, and management as important competencies for dental graduates. This framework reflects the expectation that dentists should possess organizational and leadership capabilities alongside clinical proficiency to meet the demands of contemporary healthcare systems.

Managerial competencies are particularly important for dental clinic leaders because they directly affect the functioning of the workplace. Effective planning, delegation, communication, resource management, conflict resolution, and decision-making can contribute to a productive organizational environment and improved service delivery. McColl (2022) further emphasized the relationship between leadership and managerial competence and organizational culture, employee engagement, and patient experiences. Thus, managerial skills should be viewed as complementary to clinical expertise rather than as separate from professional dental practice.

Leadership Development in Dental Education and Professional Practice

Leadership competencies are increasingly regarded as developmental capabilities that can be strengthened through education, experiential learning, mentoring, and continuing professional development. Contemporary perspectives on leadership recognize that effective leadership is not exclusively an innate characteristic but can be cultivated through structured learning opportunities and professional experiences. Antoniadou (2022) argued that leadership development should begin during undergraduate dental education and continue throughout professional practice to prepare dentists for expanding clinical, managerial, and organizational responsibilities.

Despite the growing importance of leadership, leadership preparation remains insufficient in some dental education programs. Morison and McMullan (2013) noted that dental curricula have traditionally emphasized clinical knowledge and technical competence, with comparatively less attention given to management, organizational leadership, strategic planning, and healthcare policy. Consequently, newly licensed dentists may enter professional practice with substantial clinical preparation but limited experience in managing personnel, resources, organizational processes, and institutional responsibilities.

Experiential learning provides an important mechanism for developing leadership competencies. Clinical and organizational experiences enable dental practitioners to strengthen decision-making, communication, conflict management, delegation, teamwork, and professional judgment. As dentists assume increasing responsibilities within clinics and healthcare organizations, these experiences provide opportunities to develop the competencies required to manage personnel, allocate resources, implement quality improvement initiatives, and respond to organizational challenges.

Continuing professional development also provides opportunities for dentists to strengthen leadership and managerial capabilities throughout their careers. Ellwood (2022) emphasized the value of structured leadership development in helping dental professionals respond to healthcare reforms, technological advancement, changing professional expectations, and increasingly complex organizational environments. Sustained leadership development may therefore contribute to organizational resilience, professional growth, and improved healthcare delivery.

The Five-Domain Leadership Framework

The present study is anchored in the five-domain leadership framework proposed by Antoniadou (2022), which conceptualizes leadership in dentistry as a multidimensional construct encompassing Clinical Leadership, Professional Leadership, Health Systems Leadership, Health Policy Leadership, and Clinical and Dental Health Systems Leadership. This framework provides a broader perspective of dental leadership by recognizing that contemporary dentists operate across clinical, professional, organizational, and policy environments.

Clinical Leadership focuses on evidence-based practice, patient safety, ethical clinical decision-making, quality improvement, and the effective delivery of dental services. It reflects the capacity of dental practitioners to influence clinical practice and promote safe and effective patient care.

Professional Leadership encompasses professional accountability, ethical conduct, lifelong learning, communication, collaboration, and commitment to

professional standards. This domain emphasizes the responsibility of dental professionals to maintain competence and contribute positively to the development of the profession.

Health Systems Leadership addresses organizational management, strategic planning, resource utilization, financial stewardship, healthcare administration, and systems thinking. For dental clinic leaders, these competencies are particularly relevant to the efficient management of personnel, facilities, finances, and clinical operations.

Health Policy Leadership involves engagement with healthcare regulations, professional policies, public health initiatives, advocacy, and policy development. Dental practitioners functioning in leadership positions must understand the broader healthcare environment and recognize how policies and regulatory requirements influence dental service delivery.

Finally, Clinical and Dental Health Systems Leadership integrates clinical expertise with organizational governance, quality improvement, and systems-level decision-making. This domain recognizes that effective dental leadership requires the integration of clinical knowledge with the ability to manage and improve the systems through which dental services are delivered.

The multidimensional structure of the framework provides a comprehensive basis for examining leadership competencies among dental clinic leaders. Rather than treating leadership as a single behavioral characteristic, the framework allows the researcher to examine distinct but interrelated dimensions of leadership practice. It can therefore provide a basis for identifying leadership strengths, competency gaps, and areas for professional development among dental clinic leaders.

The framework is particularly relevant to the present study because dental clinic leaders operate within organizational environments that require simultaneous attention to patient care, professional standards, personnel management, regulatory requirements, and organizational sustainability. Examining leadership across these five domains may provide a more comprehensive understanding of the competencies required of dental practitioners who assume leadership responsibilities in community and private dental practice.

Synthesis of the Literature and Research Gap

The reviewed literature establishes that leadership is an integral component of contemporary dental practice and extends substantially beyond clinical competence. Existing scholarship emphasizes the importance of leadership in professional accountability, organizational management, teamwork, patient-centered care, quality improvement, and healthcare systems development. Transformational leadership has been associated with positive organizational and employee outcomes, while transactional leadership remains relevant to structured performance, compliance, and operational control. Collaborative and other relational approaches further emphasize the importance of communication, shared decision-making, and stakeholder engagement in healthcare settings.

The literature also demonstrates that managerial competencies are closely connected to effective dental leadership. Skills in planning, delegation, communication, resource management, decision-making, and organizational coordination are necessary for dental clinic leaders to maintain efficient operations and quality service delivery. Competency frameworks in dental education likewise recognize leadership and management as essential components of contemporary dental professionalism. However, the literature suggests that formal leadership preparation remains comparatively limited in some dental education programs, creating a potential gap between clinical preparation and the managerial demands encountered in professional practice.

Although previous studies have examined leadership development in dental education, healthcare organizations, and broader professional settings, comparatively limited empirical evidence is available regarding the leadership competencies of practicing dental clinic leaders, particularly in community and private dental practice settings. More specifically, there appears to be limited research examining dental leadership through a multidimensional framework that simultaneously considers clinical, professional, health systems, health policy, and integrated clinical-health systems leadership.

This gap is particularly relevant in the Philippine context, where dental practitioners may perform both clinical and managerial functions within diverse practice environments. Despite the increasing organizational responsibilities of dental professionals, empirical evidence concerning the leadership competencies of dental clinic leaders at the local level remains limited. The scarcity of context-specific evidence may constrain the development of leadership training and continuing professional development programs that are responsive to the actual needs of dental practitioners.

Accordingly, the present study seeks to assess the leadership styles and managerial skills of dental clinic leaders in Ilocos Norte, with leadership competencies examined through the five-domain framework of Antoniadou (2022). By investigating leadership from clinical, professional, health systems, health policy, and integrated clinical-health systems perspectives, the study aims to provide context-specific empirical evidence regarding the leadership and managerial capabilities of dental clinic leaders. The findings may contribute to the development of targeted leadership development initiatives, continuing professional education programs, organizational policies, and future research on leadership and management in Philippine dental practice.

MATERIALS AND METHODS

Research design

A quantitative descriptive–correlational design was used to assess leadership and managerial competencies and to explore the relationships between demographic variables and leadership domains. This design was selected to

describe prevailing leadership behaviors and examine their associations with professional characteristics.

Participants and sampling

The study involved 25 licensed dental practitioners currently leading dental clinics in Ilocos Norte as of 2025. Inclusion criteria were: (a) valid dental license, (b) leadership or managerial role in a clinic, and (c) active practice in Ilocos Norte.

A purposive sampling technique was employed to select participants who met these specific qualifications. This method ensured that the respondents possessed the relevant experience and authority to provide informed assessments of leadership and managerial practices within dental settings.

Research instrument

Data were collected using a structured questionnaire adapted from Antoniadou's (2022) Leadership and Managerial Skills in Dentistry instrument. It comprised six sections: demographic profile and five leadership domains—Clinical, Professional, Health Systems, Health Policy, and Clinical and Dental Health Systems Leadership. Each item was rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Cronbach's alpha values exceeded 0.80, confirming high internal reliability.

Procedure and ethical considerations

Prior to data collection, ethical approval was granted by the Mariano Marcos State University – University Research Ethics Review Board (MMSU-URERB). Permission was sought from the Philippine Dental Association – Ilocos Norte Chapter to administer the survey. Participants were informed of the study's objectives, confidentiality measures, and voluntary nature. Data collection was conducted through Google Forms and paper surveys during October–November 2025. Responses were treated confidentially and stored in password-protected files accessible only to the researcher.

Data analysis

Responses were encoded and analyzed using IBM SPSS Statistics 27. Descriptive statistics (frequency, percentage, mean, and standard deviation) summarized respondents' demographic data and leadership domain ratings. Pearson's correlation, t-test, and one-way ANOVA were used to explore relationships between profile variables and leadership competencies, with a 0.05 alpha level for significance.

RESULTS AND DISCUSSION

Respondent profile

Most of the 25 respondents were female (68%), aged 31–45, and owners or managers of private dental clinics. A majority had between 6 and 15 years of professional experience and supervised one to three staff members. Almost all held a Doctor of Dental Medicine degree, reflecting the professional qualifications typical of clinic leadership roles.

Leadership Domain Performance

Leadership competencies were highest in Clinical Leadership ($\bar{x}$ = 4.45) and Professional Leadership ($\bar{x}$ = 4.39), demonstrating strong commitment to patient safety, ethical standards, and mentoring. Health Systems Leadership obtained a mean of 4.10, while Health Policy Leadership scored lower ($\bar{x}$ = 3.84), suggesting limited engagement with policy compliance and advocacy. Clinical and Dental Health Systems Leadership registered a mean of 4.22, indicating adequate integration of clinical decision-making and management responsibilities.

Relationship between profile and leadership domains

The relationship between respondents' demographic and professional characteristics and their leadership competencies was examined using Pearson's r correlation coefficient. Table 1 summarizes the computed correlation

Table 1: Correlation Matrix Between Respondents' Profile Variables and Leadership Domains (n = 25)

Profile Variables	Clinical Leadership	Professional Leadership	Health Systems Leadership	Health Policy Leadership	Clinical & Dental Health Systems Leadership
Age	r = 0.11 p = 0.58	r = 0.09 p = 0.64	r = 0.15 p = 0.47	r = 0.12 p = 0.55	r = 0.13 p = 0.51
Gender	r = 0.07 p = 0.73	r = 0.08 p = 0.69	r = 0.09 p = 0.66	r = 0.06 p = 0.76	r = 0.07 p = 0.71
Years in Practice	r = 0.43 p = 0.035*	r = 0.32 p = 0.12	r = 0.30 p = 0.14	r = 0.21 p = 0.31	r = 0.28 p = 0.17
Educational Attainment	r = 0.26 p = 0.22	r = 0.28 p = 0.18	r = 0.30 p = 0.15	r = 0.18 p = 0.38	r = 0.25 p = 0.23
Clinic Type	r = 0.09 p = 0.67	r = 0.10 p = 0.63	r = 0.13 p = 0.53	r = 0.14 p = 0.49	r = 0.12 p = 0.56
Position	r = 0.28 p = 0.17	r = 0.34 p = 0.10	r = 0.39 p = 0.046*	r = 0.25 p = 0.23	r = 0.33 p = 0.10
No. of Staff Supervised	r = 0.23 p = 0.27	r = 0.21 p = 0.33	r = 0.25 p = 0.24	r = 0.19 p = 0.36	r = 0.21 p = 0.31

*$p < 0.05$ = *significant*

values and corresponding p-levels, evaluated at a 0.05 significance threshold.

The model demonstrates that leadership efficacy among dental practitioners is largely experiential and role-driven rather than demographically determined. The moderate effect sizes ($r \approx 0.4$) denote practical but not dominant influences, which is expected in behavioral research with small, homogeneous samples ($n = 25$). The absence of multicollinearity across profile variables (all inter-correlations < 0.50) further supports the independence of predictors, validating the robustness of observed relationships despite the modest sample size.

The pattern underscores a progression model of leadership competence, where clinical expertise matures with practice exposure, and system-level management proficiency increases with formal positional responsibility. From a policy and training perspective, these outcomes highlight the need for structured leadership pipelines in dentistry—linking mentorship, continuing professional education, and managerial experience—to foster balanced growth across all leadership domains.

Ranking of leadership domains

This order indicates a strong emphasis on direct clinical and ethical practice but highlights areas for improvement in administrative and policy-related competencies.

The findings of the study indicate that dental clinic leaders in Ilocos Norte demonstrate a high level of competence in clinical and professional leadership. This pattern is consistent with existing literature which emphasizes that leadership in dentistry is closely tied to the delivery of quality patient care, ethical decision making, and professional collaboration. Leadership within the dental context is fundamentally an influence process that shapes team behavior and ensures effective clinical outcomes, thereby reinforcing the centrality of clinical leadership in

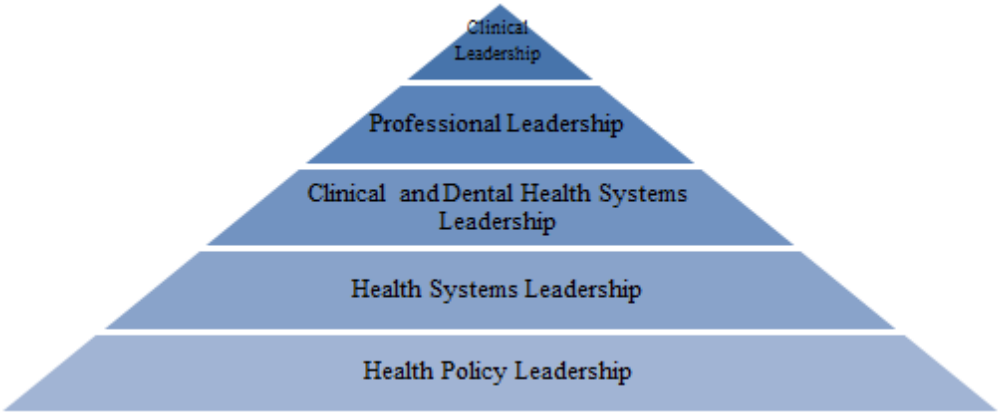

Figure 1: The ranking from most to least practiced.

practice (Antoniadou, 2022).

However, the relatively moderate performance observed in health systems and health policy leadership domains suggests a limited engagement with broader organizational and governance functions. Contemporary scholarship asserts that dental leadership extends beyond clinical responsibilities and includes active participation in healthcare systems, policy development, and organizational strategy (Gambold, 2023). The limited involvement in these domains may reflect structural gaps in leadership preparation, particularly in areas that require systems thinking and policy literacy.

The significant association between years in practice and clinical leadership underscores the role of experiential learning in shaping leadership competence. As supported in the literature, leadership in healthcare evolves through continuous professional exposure, where accumulated experience enhances decision making capacity, confidence, and clinical judgment (Antoniadou, 2022). Similarly, the observed relationship between leadership position and competencies in clinical and dental health systems leadership highlights the influence of formal roles in developing managerial capabilities. Leadership effectiveness, therefore, is not solely inherent but is cultivated through both experience and organizational responsibility.

The findings carry several important implications across educational and professional domains. In terms of curriculum development, there is a compelling basis for integrating leadership and management education within dental programs. Evidence suggests that leadership competencies can be systematically developed through formal education and training, and that incorporating such content into dental curricula can better prepare practitioners for multifaceted professional roles (Antoniadou, 2022). This aligns with global trends in dental education, where leadership and management are increasingly recognized as core competencies.

Moreover, the results highlight the need to strengthen the engagement of dental practitioners in health governance and policy processes. Effective leadership in healthcare requires collaboration with regulatory bodies and active participation in shaping policies that influence service delivery. The literature emphasizes that leadership across all levels of the profession is essential in addressing systemic challenges and improving oral health outcomes (Pal, 2023). Enhancing policy awareness and involvement among dental practitioners may contribute to more

responsive and integrated healthcare systems.

Further, in the context of educational administration and continuing professional development, the findings support the implementation of targeted leadership training programs that extend beyond clinical competencies. Structured professional development initiatives focusing on management, strategic planning, and systems leadership are necessary to address the identified gaps. Leadership development is increasingly viewed as essential for sustaining healthcare quality and organizational effectiveness in dental practice (Ellwood, 2022).

In addition, the level of clinical administration, the results underscore the importance of strengthening managerial practices within dental clinics. Effective leadership contributes to improved organizational performance, team engagement, and patient satisfaction. Research indicates that leadership is directly linked to team dynamics and service quality, both of which are critical in healthcare delivery (McColl, 2022). Strengthening competencies in resource management, staff supervision, and operational planning is therefore essential.

Overall, the study highlights the need for a more comprehensive and balanced approach to leadership development in dentistry. While clinical expertise remains a fundamental component, there is a clear necessity to expand leadership capacities in systems management, policy engagement, and organizational governance. Such an approach is essential for ensuring the sustainability, effectiveness, and responsiveness of dental healthcare services.

CONCLUSION

The study concludes that dental clinic leaders in Ilocos Norte demonstrate strong clinical and professional leadership, particularly in patient care, ethical practice, and professional responsibility. However, comparatively lower performance in health systems and policy leadership indicates areas requiring further development. Leadership effectiveness is also associated with professional experience and managerial position, whereas gender and clinic type show minimal influence.

The study provides empirical evidence on dental leadership in the Philippine context and supports the applicability of Antoniadou's (2022) five-domain leadership framework in assessing leadership competencies in dental practice. The findings highlight the need to strengthen systems management and policy engagement alongside clinical expertise.

Accordingly, continuing professional development programs should integrate leadership and management competencies, particularly strategic planning, team supervision, financial management, and policy literacy. Professional organizations and regulatory bodies may also strengthen mentorship, leadership training, and periodic competency assessment to support the development of clinically competent, organizationally capable, and policy-responsive dental leaders.

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Declarations

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2. **Disclosure of competing interests**. The authors declare no financial or non-financial interests that could have influenced the conduct or outcomes of this study. They confirm that they have not been involved in any complaint, allegation or conviction related to sexual harassment, sexual exploitation or abuse.
3. **Use of generative AI**. During manuscript preparation, the authors used ChatGPT (OpenAI) to refine language, improve readability and synthesize complex findings. All content was subsequently reviewed and edited by the authors, who take full responsibility for the interpretations and conclusions presented.

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