

# Leadership Training in Dental Education: Cultivating Future Educators and Leaders

Syeda Madiha Batool Jaffari<sup>1</sup>, Toleen Mazloum<sup>\*2</sup>, Salman Karbhari<sup>3</sup>, Betti Shahin<sup>4</sup>

<sup>1</sup>No current affiliation. Email: drmadiharizvi@gmail.com

<sup>2</sup>Dental Student, College of Dentistry, University of Illinois Chicago, USA. Email: dr.toleen.mazloum@gmail.com

<sup>3</sup>No current affiliation

<sup>4</sup>Clinical Assistant Professor, Restorative Department, College of Dentistry, University of Illinois Chicago, USA. Email: bshahi4@uic.edu

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**\*Corresponding Author:** Toleen Mazloum, College of Dentistry, University of Illinois Chicago, IL, USA.

## Abstract

**Background:** Leadership skills are increasingly recognized as critical for dental professionals to effectively navigate the complexities of clinical, academic, and administrative responsibilities. However, leadership training remains underemphasized in many dental curricula. As the demand for interdisciplinary collaboration, effective team management, and innovative teaching grows, integrating leadership education into dental programs is imperative.

**Objective:** This review explores various strategies for

integrating leadership training into dental curricula, assesses its impact on dental professionals, and examines the challenges encountered in the process.

**Methods:** A systematic review of literature was conducted using PubMed, Scopus, Web of Science, and Google Scholar databases. Studies were selected based on their emphasis on leadership training in dental curricula, reported outcomes, and methodological rigor. Data were analyzed to identify program strategies, participant outcomes, and barriers to implementation.

**Results:** Programs utilized various strategies, including workshops, online courses, mentorship initiatives, and

integrated curricula such as the ADA Institute for Diversity and UNC's ACT curriculum. Participants reported improved skills in conflict resolution, emotional intelligence, and strategic decision-making, along with increased involvement in community initiatives and professional advocacy efforts. However, challenges included limited curricular time, the absence of standardized frameworks, inadequate faculty training, and financial constraints.

**Conclusion:** Leadership training is essential for equipping future dental professionals to meet the demands of modern healthcare. Addressing implementation challenges through strategic planning, resource allocation, and global collaboration can significantly improve the impact and accessibility of leadership development programs in dental education.

**Keywords:** Dental education, dental curricula, leadership training, dental professionals, program strategies, outcomes, challenges.

## Introduction

The dental profession requires more than just technical expertise; it demands a combination of clinical proficiency, critical thinking, and leadership skills to address the multifaceted challenges in modern healthcare. [1] As the importance of oral health care continues to grow, today's dentists are well-positioned to drive change, manage health-enhancing projects, communicate health-related issues, and shape the future of dental care. However, it is important to recognize that leadership skills are not inherently acquired through clinical practice alone. [2] This has led to increased pressure on educational institutions to integrate leadership training into the dental curriculum.

Leadership roles in dentistry encompass areas such as clinical practice management, teamwork, patient care and rights, education, and research. Dentists are often called upon to lead teams, make critical decisions, and influence

healthcare policies. [3] Unfortunately, many dental graduates have not received leadership training, which may leave them lacking in self-confidence or experience in these key leadership roles. [4] To address this gap, it is essential for dental school accreditation standards to ensure that leadership competency training is provided alongside clinical and academic education. [5] Accordingly, this paper explores various strategies for implementing leadership training into dental curricula, assesses its impact on dental professionals, and addresses the challenges associated with its implementation.

## Methodology

### I. Inclusion Criteria

1. Articles examining leadership training specifically within dental curricula.
2. Studies reporting measurable outcomes of leadership training programs (e.g., student skills development, professional readiness, or feedback).
3. Peer-reviewed articles, systematic reviews, meta-analyses, and qualitative studies.
4. Reports addressing leadership competencies required for dental educators or professionals.

### II. Exclusion Criteria

1. Studies focused solely on other healthcare professions without specific reference to dentistry.
2. Articles published in languages other than English.
3. Opinion pieces, editorials, or studies lacking empirical data.
4. Leadership training initiatives outside the context of formal dental education.

### III. Study Selection Process

The initial search identified 324 articles, which were screened for duplicates, reducing the total to 267 unique studies. Independent reviewers evaluated the titles and abstracts for relevance, narrowing the selection to 93 articles for full-text review. After a thorough assessment based on inclusion and exclusion criteria, 12 studies were deemed highly relevant. (Table 1)

### IV. Data Extraction and Analysis

A systematic search was performed across multiple electronic databases, including PubMed, Scopus, Web of Science, and Google Scholar, to identify studies focused on leadership training in dental education. Keywords such as "Leadership training in dental education", "Dental curriculum and leadership skills", and "Leadership development in dentistry" were used with Boolean operators to refine results. This comprehensive strategy aimed to encompass all relevant studies on the implementation and outcomes of leadership training in dental curricula. Key data points were extracted, including publication year, geographic location, research methodology, and training approaches such as workshops, mentorship programs, and experiential learning. Outcomes related to skill enhancement, participant feedback, and professional preparedness were also analyzed. The selected studies were assessed for quality using the Critical Appraisal Skills Programme (CASP) checklist, evaluating the clarity of objectives, methodological rigor, data validity, and alignment with the review's objectives. By focusing on well-designed studies, this review ensured that its findings were based on reliable and credible evidence, enhancing the validity of the conclusions drawn.

#### Integrating leadership training into dental curricula

The integration of leadership training into dental curricula has become a focal point in recent years, recognizing its

importance in preparing students for the complex roles they will face in their careers. Leadership training can take various forms, including workshops, seminars, mentorship programs, case analyses, and virtual and hands-on leadership experiences. [6] These initiatives often address critical topics such as conflict resolution, strategic planning, and team collaboration, providing students with valuable opportunities to learn from experienced professionals and gain insights into navigating complex career paths. Moreover, case studies and practical experiences enable students to hone decision-making and ethical reasoning skills. [7] For example, the UNC Adams School of Dentistry has incorporated leadership courses into its curriculum through a partnership with Bell Leadership, focusing on self-reflection, interpersonal skills, and conflict resolution to prepare students for professional roles requiring effective communication and decision-making. Similarly, the ADA Institute for Diversity has expanded its leadership training program to include dental students, offering multi-session courses designed to develop community-based projects. This initiative, emphasizing diversity and inclusion, aimed to cultivate future leaders from underrepresented groups, promoting broader representation in dental leadership roles. (Table 2)

#### Outcomes of leadership training on dental professionals

Integrating leadership training into dental curricula has demonstrated promising outcomes. It equips students to excel in a dynamic healthcare environment shaped by rapid technological advancements, evolves patient expectations, and increases interdisciplinary collaboration. [8] Beyond enhancing clinical expertise, leadership training fosters personal and professional development by strengthening resilience, adaptability, and communication skills. It also prepares future dentists to serve as educators and mentors, ensuring the continuous advancement of the field. As the role of dentistry expands, professionals are no longer confined to clinical practice but also take on responsibilities as business managers, health advocates, and integral members of

multidisciplinary teams. [9, 10, 11, 12] Recognizing these evolving demands, organizations such as ADEA and other global entities emphasize leadership development as a vital component of dental education, aiming to produce ethical professionals capable of advocating for underserved populations and driving improvements in healthcare delivery. [13]

Strengthening leadership competencies not only benefits individuals but also contributes to systemic progress, empowering graduates to influence policy, enhance healthcare accessibility, and integrate oral health into primary care frameworks. [14] Moreover, leadership-trained graduates spearhead initiatives that improve patient care, advance research, and elevate professional education, fostering a new generation of clinical leaders who will shape the future of dentistry. [15]

The impact of leadership training is evident in recent studies, with programs like Glidewell's Guiding Leaders instilling confidence and fostering professional growth. At the same time, ADA initiatives have empowered students from underrepresented backgrounds to develop meaningful community projects, illustrating the intersection of leadership and social responsibility. [16, 17] (Table 3) The broader dental profession also benefits from these initiatives, as leadership-trained graduates are better equipped to manage practices efficiently, mentor colleagues, and influence policy—critical factors in addressing key challenges related to health equity, research, and education. [18]

### **Challenges of implementing leadership training into dental curricula**

Despite its importance, the integration of leadership training as a mandatory component of the dental curriculum remains a topic of ongoing discussion. [19] Several factors may hinder progress, including limited curricular time, financial constraints, and insufficient faculty training in delivering leadership education (Table

4). Many dental programs prioritize clinical and technical skills over leadership skills, creating resistance to integrating new content. Furthermore, the absence of standardized frameworks for leadership training contributes to inconsistent program quality and outcomes, making it difficult to evaluate success or benchmark initiatives. [20, 21]

Addressing the challenges of integrating leadership training into dental curricula requires a steadfast commitment from dental schools to make leadership development a central element of professional education. Establishing partnerships with professional associations and accrediting bodies is crucial for defining standards of excellence, sharing resources, and ensuring that leadership training is universally accessible to students.

Innovative strategies, such as embedding leadership concepts into existing courses and leveraging online platforms like ADEA LEADE, have effectively reduced the need for additional curricular time while delivering impactful leadership education. Collaborations with organizations like the Bell Leadership Institute further enrich these programs by providing valuable resources and specialized expertise, ultimately enhancing the quality and outcomes of leadership training initiatives. [22, 23, 24, 25]

### **Limitations**

While the findings of this review are significant, certain limitations must be acknowledged. A significant portion of the studies focuses on programs in the United States, with limited representation of international initiatives, underscoring the need for further research into global perspectives on leadership training in dentistry. Moreover, the heavy reliance on qualitative outcomes and self-reported data in many studies may affect the objectivity and generalizability of the results.

### Conclusion

Leadership training in dental education is a critical investment in the profession's future. By addressing implementation challenges and adopting innovative strategies, dental schools can prepare students to excel as clinicians, educators, and leaders. The insights from

recent studies provide a strong foundation for expanding and refining leadership development programs, ensuring they remain relevant and impactful in an increasingly complex and dynamic healthcare environment.

Study Title	Authors	Year	Description
Integrating leadership into a practice management curriculum for dental students [13]	Kalenderian, et al.	2010	Studies the impact of incorporating leadership development into the practice management course of dental students.  <a href="#">Pubmed</a>
Leadership training for oral health professionals: a call to action [11]	Taichman, et al.	2012	Addresses the need for leadership qualities in oral healthcare providers and quotes programs that provide training opportunities for dental students to be future leaders.  <a href="#">Pubmed</a>
The Importance of Leadership Development in Dental Education: A Student Perspective [26]	Pinsky, et al.	2013	Highlights the significance of leadership development from a dental student's viewpoint.  <a href="#">Aegis Dental Network</a>
Leadership Practices and Perceptions in Oral Healthcare: A Scoping Review [27]	Timofe, et al.	2017	Documents leadership practices in dentistry, focusing on barriers and types of leadership training offered in dental education.  <a href="#">Walsh Medical Media</a>
Education and Training for Dental Leadership – A Case Study [28]	Bedi, et al.	2019	Examines a specific case study on dental leadership education and training.  <a href="#">University of Wisconsin Libraries</a>
The Importance of Leadership Skills in Dental Education [29]	Authors Not Specified	2019	Emphasizes the need for leadership skills in dental education.  <a href="#">GradesFixer</a>

Leadership Communication Training: An Essential Part of Dental Education [30]	Sahni, et al.	2022	Evaluates the integration of communication skills courses in dental education, highlighting the importance of leadership communication training.  <a href="#">ResearchGate</a>
Professional Leadership Training Programs for Dental Faculty [31]	Park, et al.	2022	Explores the influence of leadership training programs on career development among dental faculty.  <a href="#">Scite</a>
Leadership and Work Community – Views of Graduating Dental Students [32]	Tuononen, et al.	2023	Investigates graduating dental students' perspectives on leadership and work community.  <a href="#">Emerald</a>
Developing Leadership Among Dental Residents: An Exploratory Study [33]	Radwan, et al	2023	Explores leadership development among dental residents.  <a href="#">ResearchGate</a>
Building Leaders in Dentistry [34]	Bell Leadership Institute	2024	Discusses early implementation of leadership curricula in dental education and its benefits.  <a href="#">Bell Leadership Institute</a>
Leadership Education within the Dental Hygiene Curriculum [35]	Brent	2024	Discusses the integration of leadership education in dental hygiene curricula.  <a href="#">ERIC</a>

**Table 1: Recent Studies on Leadership Training in Dental Education**

Institution/Program	Implementation Strategies	Key Features	Reference
UNC Adams School of Dentistry [28]	Leadership courses integrated into dental curriculum	Focus on self-reflection, interpersonal skills, and conflict resolution	Bell Leadership
ADA Institute for Diversity [36]	Expanded to include dental students; multi-session leadership program	Projects addressing community challenges; targeted at underrepresented groups	ADA News
Glidewell Guiding Leaders Program [37]	Specialized leadership program for women dentists	Empowerment through workshops, mentorship, and professional skill-building	Dentistry Today

**Table 2: Integrating leadership training into dental curricula**

Program/Study	Reported Outcomes	Impact	Reference
ADA Institute for Diversity [38]	Participants developed projects to enhance access to care and mentorship	Improved community service and leadership skills	ADA News
Glidewell Guiding Leaders [37]	Increased confidence and professional growth among women dentists	Empowerment and enhanced leadership capabilities	Dentistry Today
Bell Leadership Collaboration [28]	Early integration of leadership courses into dental education at UNC	Prepared students for interpersonal and strategic decision-making roles	Bell Leadership

**Table 3: Outcomes of Leadership Training Programs**

Challenges Identified	Recommendations	Reference
Limited curricular time [38]	Incorporate leadership training early in dental education	ADA News
Lack of standardized approaches [37]	Develop and implement structured leadership development frame works	Dentistry Today
Variability in institutional priorities [28]	Foster a leadership-focused culture through partnerships with leadership development organizations	Bell Leadership

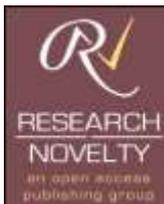
**Table 4: Challenges and Recommendations for Leadership Training**

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