

## Critical review of the interdisciplinary approach of the book «Comprehensive Dentistry: contemporary challenges in oral care»

*Revisión crítica del enfoque interdisciplinario del libro «Odontología integral: desafíos contemporáneos del cuidado bucodental»*

Ximena S. Guillén\*  

*Universidad San Gregorio de Portoviejo, Manabí, Ecuador.*

\*Autor correspondiente

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The book «Comprehensive Dentistry: contemporary challenges in oral care» is a collective work compiled by Santos and Galarza (2024) and published by Editorial San Gregorio. It is presented as a contribution to understanding the multiple aspects that shape contemporary dental practice. According to the editorial description, the work brings together the experience and knowledge of leading professionals and academics, reflecting the richness and diversity of modern Dentistry while offering a clear vision of the complexities inherent to the profession.

The book spans preventive Dentistry to advanced restorative techniques and oral surgery. Additionally, it examines the ethical and humanistic aspects of the practice, highlighting the significance of empathy and effective communication in the dentist-patient relationship. This breadth of topics responds to the objective of providing a comprehensive perspective of current Dentistry, addressing both clinical and social contemporary challenges. With a length of 126 pages divided into eight thematic chapters, the book's structure allows for segmented reading by areas of interest. Each chapter is written by different specialist authors and supported by abundant recent bibliographic references, which denotes a strong academic foundation.

It is worth noting that, according to the editorial note, the chapters reflect the results of research projects developed in the Dentistry program at the San Gregorio de Portoviejo University. This indicates that the content not only compiles up-to-date knowledge but also stems from local research, providing an academic and contextualized perspective.

In the general introduction, the editors express the aspiration that the text will serve as an indispensable resource for students and professionals, offering a clear and up-to-date understanding of the challenges and opportunities facing Dentistry in the 21st century. In short, this book is designed to update knowledge and foster a holistic view of oral health, integrating various fields of Dentistry through the lens of contemporary practice.

The first chapter addresses the dental challenges in pediatric patients with Down syndrome. Their distinctive oral manifestations (such as voluminous lips, high-arched palate, and microdontia), common occlusal problems, and high prevalence of periodontal disease are described. The need for pediatric dental care tailored to mental and intellectual development, with behavioral management and family support, is emphasized. Regular checkups and strict oral hygiene are recommended. The chapter concludes by highlighting the urgent need for further research and an empathetic and individualized approach.

The second chapter focuses on dental care for children with physical and cognitive disabilities. It defines disability and identifies barriers that affect oral health. It proposes adaptations to hygiene techniques and auxiliary devices (such as modified or electric toothbrushes). It highlights the role of caregivers, the importance of regular checkups, and an adequate diet. The chapter proposes an inclusive, creative, and personalized Dentistry that contributes to health equity.

The third chapter addresses geriatric Dentistry, highlighting common pathologies such as caries, periodontitis, leukoplakias, edentulousness, and prosthetic problems. It explains their clinical, nutritional, and psychological implications. It proposes the development of a clinical guideline to improve oral care for older adults, based on an integrative literature review. The importance of prevention, prosthetic rehabilitation, and a multidisciplinary approach is emphasized.

Chapter 4 examines the relationship between human papillomavirus (HPV) and oropharyngeal cancer, with a focus on its prevention through dental care. It cites current evidence linking oral HPV infection with an increased risk of cancer mortality. It discusses the role of the dentist in preventive education, vaccination promotion, and the early detection of lesions. It fosters a broader perspective on dental public health.

Chapter 5 presents a case study on the rehabilitation of endodontically treated teeth using fiberglass posts. It highlights the advantages of post replacements over metal posts (including compatibility, aesthetics, and strength) and describes the clinical procedure step by step. It emphasizes the importance of post-fit, the selection of appropriate cements, and the formation of a monolithic composite. The chapter provides practical recommendations for students and restorative clinicians.

The sixth chapter focuses on conservative pulp therapies in immature permanent teeth with vital pulp. It uses the Patterson classification to guide clinical decisions based on the degree of root development. Techniques such as pulp capping and pulpotomy are reviewed, utilizing materials including MTA and biodentin. Advanced diagnostic methods (oximetry, laser Doppler) are also explained. This is a key chapter for evidence-based pediatric endodontics.

The seventh chapter examines the premature loss of primary teeth and strategies for preserving or recovering dental space, which is crucial for preventing malocclusions. Space maintainers and restorers (fixed, removable, and functional) are described, including innovations that utilize 3D printing. The chapter connects pediatric restorative dentistry with interceptive orthodontics, reinforcing the preventive role of the pediatric dentist.

The book concludes with an eighth chapter, which examines ameloblastomas, benign but aggressive odontogenic tumors. Its clinical and radiographic characteristics, as well as therapeutic modalities, ranging from curettage to en bloc resections, are reviewed. The importance of accurate classification, early detection, and a multidisciplinary approach is highlighted. The chapter links Dentistry with oncologic surgery, reinforcing the book's comprehensive vision.

From an academic perspective, «Comprehensive Dentistry: contemporary challenges in oral care» proves to be a valuable and timely resource. The diversity of topics covered—ranging from dental care for special populations (children with disabilities, individuals with Down syndrome, and older adults) to advanced clinical topics (innovative pulp therapies, aesthetic rehabilitation, and tumor lesions)—reflects a multidimensional view of contemporary Dentistry. This broad scope of issues is not random, but responds to real needs identified in practice and research. As the editorial note indicates, the chapters are the result of research projects conducted

at the San Gregorio de Portoviejo University, ensuring that the content is scientifically rigorous and locally relevant.

For dental students, the book offers a comprehensive overview of the profession, allowing them to gain insight into diverse fields of specialization and understand how the principles learned in academia apply to specific cases and real-life problems. For example, a student will find in a single text discussion on how to manage a child with special needs in the office, how to plan pulp treatment for a young tooth, or how to proceed when bone lesions are found in the jaw—all accompanied by updated bibliographic references that encourage further exploration of each topic. This interdisciplinary and up-to-date approach makes the book a comprehensive teaching aid for courses in pediatric dentistry, geriatric dentistry, endodontics, oral rehabilitation, and public health, among others. For practicing professionals, the book's usefulness lies in its ability to provide updates on specific areas that may not be part of their daily practice, but about which it is essential to be informed.

Modern dental practice requires constant updating, and the book provides literature reviews up to 2023-2024 in various fields: for example, the chapter on HPV and cancer summarizes recent epidemiological findings that could influence prevention campaigns and patient education; the chapter on space maintainers presents technological innovations (3D printing) that can be incorporated into practice to improve outcomes; the case report on fiberglass posts reiterates optimal adhesive protocols that reinforce good clinical practices. All of this has direct application in the clinic, whether for implementing new techniques or strengthening evidence-based decision-making. The book can also serve as a quick reference.

Each chapter concludes with practical recommendations or specific conclusions that professionals can refer to when faced with similar cases (for example, determining which pulp material to use in a given situation according to the Patterson classification, or considering key factors when treating a patient with a physical disability). Another aspect worth highlighting is the relevance of the sources used. Throughout the book, numerous studies from the last five to ten years are cited, indicating that the information is current as of 2024, in line with the latest scientific knowledge. This updated approach is essential in a discipline as dynamic as Dentistry, where new techniques, materials, and evidence on best practices are constantly emerging. For example, the inclusion of research on laser Doppler flowmetry for pulp vitality or risk factors for HPV infection

demonstrates the relevance of the content. In this sense, the book more than fulfills its compilers' stated objective of providing a clear and up-to-date understanding of the challenges of Dentistry in the 21st century.

Regarding academic relevance, the book not only conveys knowledge but also demonstrates the importance of dental research in improving practice. Each chapter is based on studies or systematic reviews, providing examples of how research is translated into clinical guidance. This can motivate both students and professionals to engage in research projects or, at the very least, to consume high-quality scientific literature to support their clinical decisions. Furthermore, the fact that multiple authors (teachers and researchers) collaborate on the compilation offers the reader different specialized perspectives in a single volume, enriching the learning experience. From a practical perspective, the book is written in a clear academic style, with a consistent structure: an introduction to the topic, development with subheadings (in some cases, including tables or diagrams, such as Patterson's in Chapter 6), conclusions, and references.

This organization facilitates selective reading; a reader with a specific interest can go directly to the relevant chapter and find a well-structured summary of the topic, with actionable conclusions and a bibliography for in-depth consultation. Therefore, this compendium is handy for general dentists seeking efficient training. Likewise, for university professors, it can serve as a support text or recommended reference for various subjects, given that it covers content that is cross-cutting to comprehensive dental education. «Comprehensive Dentistry: contemporary challenges in oral care» demonstrates high academic relevance by addressing current problems in the profession with recent scientific support. It provides conceptual and practical tools for both the training of new dentists and the continuing education of professionals. Its comprehensive and multidisciplinary nature makes it a valuable bibliographic reference in Spanish for understanding the challenges facing Dentistry today.

## CONCLUSION

«Comprehensive Dentistry: contemporary challenges in oral care» offers a comprehensive and up-to-date overview of modern Dentistry, addressing the main areas of the discipline—such as prevention, public health, geriatrics, special pediatrics, orthodontics, and oral surgery—in eight distinct chapters, highlighting the contemporary challenges that require professionals to stay

informed and adaptable. Its clear structure, with introductions, case studies, and recommendations, facilitates understanding and practical application. The work stands out for its coherence in emphasizing comprehensive care and prevention across diverse contexts, from children with special needs to older people, reinforcing the idea of patient-centered, evidence-based Dentistry that is connected to overall well-being. By compiling cutting-edge knowledge in an accessible format with clear exposition, it becomes a valuable tool for students and professionals, combining clinical excellence, innovation, and comprehensive training to address current challenges in oral health successfully.

### CONFLICTS OF INTEREST

The author declares that she has no conflicts of interest.

### REFERENCES

Santos, T. B., & Galarza, L. E. (Comps.). (2024). *Odontología Integral: desafíos contemporáneos en el cuidado bucodental*. Portoviejo, Ecuador: Editorial San Gregorio.

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