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Integration of CAD/CAM Technology and Intraoral Scanners in Current Dental Practice

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Statement of the Problem: The rapid digitalization of dental practice has led to significant transformations in diagnostic accuracy, prosthetic workflow, and patient comfort. However, the integration of CAD/CAM systems and intraoral scanners varies across countries and institutions. This study aims to evaluate the applicability and efficiency of digital technologies in daily dental practice in the Republic of Moldova compared to Italy. **Methodology & Theoretical Orientation:** Clinical observations were carried out in university and private dental clinics, analyzing workflow efficiency when using intraoral scanners (Trios 3Shape, Medit i700, Planmeca Emerald S) and CAD/CAM systems. Parameters such as procedure duration, collaboration with dental laboratories, and staff adaptation to digital tools were examined. **Findings:** Intraoral scanners considerably reduced the impression-taking time to an average of 5–7 minutes per arch, while CAD/CAM systems enabled same-day prosthetic restorations, improving workflow efficiency and patient satisfaction. Italian clinics demonstrated higher levels of digital integration, supported by specialized dental technicians and computer-aided

planning. Moldovan clinics showed growing interest and strong potential for technological adoption. **Conclusion & Significance:** Integrating digital dentistry tools enhances precision, reduces chair-time, and optimizes collaboration between clinicians and laboratories. Comparative analysis between Italy and Moldova underscores the need for broader digital adoption and curriculum updates in dental education. This research provides practical insights for efficient digital implementation and supports the modernization of dental healthcare systems in emerging countries.

Biography

Jana Felendiuc is a fifth-year dental student at the Nicolae Testemițanu State University of Medicine and Pharmacy in Chișinău, Republic of Moldova. She has participated in Erasmus mobility programs in Italy, gaining valuable experience in digital dentistry, with a focus on CAD/CAM technologies and intraoral scanning systems. Her academic interests include clinical efficiency optimization and improving prosthetic precision through digital workflows. Jana has collaborated on comparative studies between Moldovan and Italian dental clinics and aims to contribute to advancing modern dental education and clinical practice through technological innovation.