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Green Technology and Talent Management: Environmental Sustainability in Dentistry

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Abstract

Dentistry is no exception to the global paradigm shift towards environmental sustainability. Green technologies in dentistry encompass a range of innovations of pioneering eco-friendly materials, waste management and energy conservation, to minimize adverse environmental effects. Research and development efforts are increasingly focused on creating biodegradable and bioactive materials to enhance oral health. Cloves are a renewable resource sustainably sourced from various regions globally, and contain several bioactive compounds such as eugenol, flavonoids, tannins, and alkaloids, which possess antimicrobial, anti-inflammatory, and analgesic properties. Based on my research, clove flower extract may prevent infection and reduce the risk of *Streptococcus mitis* colonization, which could contribute to the development of alveolar osteitis as one of the most common complications of tooth extraction. This research aims to determine the difference in the inhibition of clove flower extract (*Eugenia aromaticum*) 80% with Alveogyl as medication for alveolar osteitis towards the growth of *Streptococcus mitis*, using agar well diffusion method. The results highlight that 80% clove flower extract was proven to inhibit the growth of *Streptococcus mitis* and had a stronger inhibitory power than Alveogyl. Digital radiography eliminates the need for film-processing chemicals and reduces radiation exposure to patients. Intraoral scanners create digital impressions of patients' teeth, eliminating the need for traditional impression materials like alginate or silicone. CAD/CAM technology enables the fabrication of dental restorations, such as crowns and bridges, using digital imaging and milling machines. This reduces material waste and energy consumption compared to traditional fabrication methods. The intersection of green technology and talent management in dentistry plays a crucial role in promoting sustainable healthcare practices and optimizing human resources in the dental industry. Training programs for dental professionals focused on green dentistry. Technological innovations such as Tele-dentistry can be leveraged to improve access to dental care in remote areas while reducing the need for physical infrastructure. Dentists can provide consultations and follow-ups remotely, minimizing travel and infrastructure costs. To conclude, dental professionals can lead the way to a more sustainable future by reviewing and modifying unnecessary processes, adopting innovative technology and using environmentally friendly materials.

Keywords: *eco-friendly materials, green technology, sustainability, talent management*