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A Questionnaire Based Survey on Knowledge and Attitude Amongst Dental Students and Practitioners Towards Cast Partial Denture Fabricated By Conventional And Digital Methods In Gujarat State

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ABSTRACT

Statement of problem:

Despite advancements in digital dentistry, the adoption of digital workflows in cast partial denture fabrication among dental students and practitioners remains uncertain. There is limited information regarding their knowledge, attitude, and acceptance of digital methods compared to conventional techniques. Hence, it is important to evaluate awareness and attitude toward conventional and digital cast partial denture fabrication to identify gaps in training and readiness for clinical application.

Purpose:

The purpose of this study was to assess the knowledge and attitude of dental students and practitioners toward cast partial dentures fabricated using conventional and digital methods, and to evaluate their awareness, perceived advantages, challenges, and readiness to adopt digital workflows in clinical prosthodontic practice.

Material method:

A descriptive cross-sectional, web-based survey was conducted amongst dental students and practitioners of Gujarat state to assess their knowledge and attitude regarding cast partial dentures using conventional and digital methods. A minimum sample size of 120 participants was determined. Data were collected using a validated, structured questionnaire consisting of 15 open-ended and multiple-choice questions, which were

circulated online through google forms. Participation was voluntary, and informed consent was taken through survey completion. The collected data were compiled and subjected to descriptive statistical analysis to evaluate the responses.

Results:

A total of 125 respondents, predominantly dental practitioners, participated in the study, out of which 49.6% often used digital technologies for CPD fabrication, 36% used them rarely and 14.4% never used i.e. 50.4% indicating limited routine clinical exposure to digital workflows. Additionally, Exocad was identified as the most commonly used software (61.7%). A majority (86.9%) of respondents agreed or strongly agreed that digital CPDs allow greater patient-specific customization. Also, 95% believed digital CPDs would possibly or soon become standard practice in dentistry. 62% of respondents said that framework design was the most preferred step for digitization. As far as the confidence level in digital adaptation is concerned, 29.3% felt very confident in adopting digital CPD workflows. Among them, not confident were (8.1%) or unsure (22.8%) highlighting the need for enhanced training.

Conclusion:

This study concludes that dental students and practitioners demonstrated positive knowledge and attitude toward digital Cast Partial Denture fabrication, recognizing its advantages and future potential. However, limited clinical exposure and low confidence in adopting digital workflows were evident. This highlights the need for structured training and hands-on experience to facilitate effective integration of digital technologies into routine prosthodontic practice.

Keywords:

Cast Partial Denture; Digital Dentistry; CAD/CAM Technology; Knowledge and Attitude; Dental Students and practitioners; Questionnaire-Based Study; Prosthodontics; Gujarat

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