

CFAO Graduate Student Posterboard Abstracts

University of Alberta

THE VALIDITY AND RELIABILITY OF LINEAR MEASUREMENTS USING VIRTUAL STUDY MODELS: A SYSTEMATIC REVIEW

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Introduction: Linear measurements on three-dimensional virtual study models, acquired by laser or holographic scanning of models, or CBCT scanning of impressions, can be performed in lieu of conventional plaster models.

Aim: To perform a systematic review of the literature to assess validity and reliability of linear measurements using virtual versus plaster study models.

Methods: An electronic search strategy was developed for PubMed, Medline, All EBM Reviews, Web of Science and Lilacs. Two evaluators determined the eligibility of papers by applying specific selection criteria. The data was weighted by sample size and analyzed in terms of the validity and reliability of linear measurements on virtual and plaster models.

Results: 277 papers were electronically identified and ultimately distilled to 19 papers. Measurements involving two landmarks on virtual models had weighted mean differences up to 0.2 mm smaller than plaster models, ICC values greater than 0.882 and Pearson's R values greater than 0.617. Measurements requiring more than two landmarks on virtual models had weighted mean differences of up to 0.6 mm greater than plaster models, ICC values greater than 0.984 and Pearson's R values greater than 0.963.

Discussion: The validity and reliability of linear measures were high using virtual or plaster models, with measures requiring only two landmarks generally better than those requiring more than two landmarks. The same conclusions can be found whether the virtual models were acquired by laser, holographic or CBCT scanning.

Conclusions: Linear measurements from virtual study models can be used clinically.

A SURVEY OF CANADIAN ORTHODONTISTS – BUSINESS TRAINING

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Introduction: Orthodontics is a business and business decisions made early in a career may impact the future structure, functionality and profitability of the practice for years to come. Costly mistakes may be made, especially if the pursuit of business knowledge and the organized and intentional development of practice management skills and abilities is not realized prior to the commencement of orthodontic practice.

Aim: The intention of this survey was to explore the business practices and practice management educational needs and perspectives of practicing Canadian orthodontists. The final goal was to explore opinions about how graduate programs may better prepare the newly graduating orthodontists for a successful business career.

Methods: All orthodontists listed with Canadian provincial licensing boards (except QC) as of late 2009 were contacted and asked to participate in an online survey. The anonymous survey was available at a simplified web address and took 20-25 minutes to complete.

Results: A response rate of 19% was obtained (136/713). Descriptive statistics indicated that the sample may be considered representative of Canadian orthodontists.

Discussion: Canadian orthodontists profiled largely perceived that graduate programs have not adequately prepared new orthodontists for the business aspects of orthodontics. Many report feeling unprepared for the business challenges experienced in the early years of practice, and a large majority would have preferred a graduate orthodontic program that would have devoted more time to formal business-related training.

Conclusions: Graduate orthodontic programs should put more emphasis in the preparation for of the business side of orthodontics.