

Pre-extraction photographs in the selection of artificial teeth

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Abstract:

Objective: To explore the validity of using pre-extraction facial photographs in the selection of artificial anterior denture teeth. Design: A cross-sectional analytical study. Setting: Faculty of Dentistry and WHO Collaborating Centre for Oral Health, University of the Western Cape, Republic of South Africa Materials and Method: A convenient sample of thirty (30) dentate subjects, with sound healthy six (6) permanent maxillary anterior teeth, was used. Five (5) facial photographs of different views and sizes were taken for each subject. The principal investigator measured and compared actual and photographic dimensions of the maxillary anterior tooth widths, inter-iris distance and inner-central distance. The shapes of each subject's face, and maxillary central incisor, were traced on the full face anterior photograph and compared. Results: The central incisor tooth width calculated from full-face anterior view photographs of portrait (5' x 7') or postcard (4'x 6') size had an accuracy of between +0.2mm and + 1 mm when compared to actual tooth widths. Comparison of an individual's tooth and face shape found that sixteen (16) subjects (53.3%) had a face shape that was similar to their maxillary central incisor shape. Anterior tooth widths were found to be greater in males than females. Conclusion: Photographs are reliable pre-extraction records when used during selection of artificial anterior tooth size and shape. Anterior full-face views of size 4'x6' and s'x?' can be used to calculate maxillary central incisor width to an accuracy of within 1 mm. The application of photographs during anterior tooth selection is limited by their availability.