

Influence of Dental Midline Deviation with Respect to Facial Flow Line on Smile Esthetics - A Cross-sectional Study

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Abstract : Background/Objective: A contemporary concept states that dental midline deviation towards the direction of facial flow line (FFL) can mask the compromised smile esthetics. This study aimed to identify a range of midline deviations that can be perceived towards or away from the FFL influencing smile esthetics. Materials and methods: A cross-sectional study was conducted using a frontal smile photograph of an adult female. The photograph was altered on Adobe Photoshop software into six different photographs by deviating the dental midlines towards and away from the FFL. A constant deviation of the chin towards the left side was incorporated in all the photographs. Forty-three laypersons (LP) and dental professionals (DPs) evaluated those photographs on Visual Analog Scale (VAS). An Independent t-test was used to compare the perception of dental midline deviation between LP and DPs. Simple linear regression was run to identify the factors associated with the VAS scoring. Results: A statistically significant difference was observed for picture two with 4 mm towards FFL in the perception of midline deviation between LP and DPs. LP could not perceive the midline deviations up to 4 mm, while DPs were able to perceive deviations above 2 mm. Age was positively associated with the VAS score, while the female gender had a negative association. Limitations: Only one component of mini-esthetics was studied. This study did not include an ideal picture for comparison. Only one female subject was studied of normal facial type. Conclusions: 2-4 mm of midline deviation towards the facial flow line can be tolerated by laypersons and dental professionals.

Keywords : midline, facial flow line, smile esthetics, female

Conference Title : ICRDO 2022 : International Conference on Restorative Dentistry and Orthodontics

Conference Location : Toronto, Canada

Conference Dates : September 20-21, 2022