

Evaluation of the Golden Proportion in Natural Dentition: A Systematic Review and Meta-Analysis

Mahmood Dashti*, Jimmy Londono

Department of Dental, Augusta University of Medical Sciences, Georgia, USA

Description

Beauty and asymmetry are side by side of each other in everything such as a beautiful smile. There are many proportion for teeth width ratio, but Golden proportion is the most used proportion. The prevalence of golden proportion has been discussed in many race and population but never a meta-analysis has been taken place.

Keywords: Golden percentage, golden proportion, recurring esthetic dental, maxillary anterior teeth

Purpose

The objectives of this systematic review were to investigate the existence and suitability of Golden proportion, and to assess the prevalence of golden proportion among populations.

Materials and Methods

A systematic search was based on the PICO and PRISMA guideline and the electronic search was conducted using PubMed, Cochrane, Scopus, Web of Science and Embase in January of 2021 without any time limitations and identifying English- and non-English-language articles. Additional studies were identified by searching reference lists of the articles identified. Eligible studies were selected based on the inclusion criteria, and quality assessments were conducted. Descriptive statistics were applied for a number of outcome measures. Using a meta-analysis software program, data extracted from each selected study were statistically combined using by weighted mean differences, 95% confidence intervals, and heterogeneity were calculated for each measurement.

Results

The search study resulted in a total of 566 articles were found based on the keyword, after going through the articles based on the inclusion and exclusion criteria, we only included 6 articles for the meta analysis.

Different proportions are described in the literature for the size of maxillary anterior teeth. Golden proportion[1,2] is based on

the theory that a relationship exists between the beauty in nature and mathematics. It states that the width of maxillary lateral incisor, when viewed from front, should be in Golden proportion to the width of maxillary central incisor. Thus, the width of maxillary lateral incisor should be 62% the width of maxillary central incisor and the width of maxillary canine should be 62% the width of resulting lateral incisor. Golden Percentage proportion given by Snow[3,4] states that the width of maxillary central incisor should be 25% the intercanine distance, when measured from distal of canine on one side to the distal of canine on the contralateral side in the frontal view. Width of maxillary lateral incisors and canines should be 15 and 10%, respectively, of the intercanine distance [5].

Conclusions

The outcomes of the review and analyses demonstrates that ,There was no sign of existence of golden proportion in natural smiles and the Golden proportion in dentistry represent as a myth not fact , However, the golden percentage theory can be applied if percentages are modified , and taking into consideration in the critical aspect of esthetic dentistry .

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Corresponding Author: Mahmood Dashti, Department of Dental, Augusta University of Medical Sciences, Georgia, USA. Tel: +989222746706, Email: mahmood.d@gmail.com.

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