

OP42 MODERATION EFFECTS OF PERSONALITY TRAITS ON THE RELATIONSHIP BETWEEN ORTHODONTIC TREATMENT NEED AND ORAL HEALTH-RELATED QUALITY OF LIFE

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**AIM:** To explore the moderation effects of personality traits on the relationships between orthodontic treatment need and oral health-related quality of life (OHRQoL).

**SUBJECTS AND METHOD:** Two hundred and thirty subjects (125 girls, 105 boys) aged 11-14 years. Orthodontic treatment need was measured using the Index of Complexity, Outcome and Need (ICON). The Child Perceptions Questionnaire (CPQ) was used to assess the OHRQoL and the Basic Personality Traits Inventory (BPTI) for personality traits. Potential moderating effects were evaluated with Pearson correlations and hierarchical regression analyses, respectively.

**RESULTS:** There were weak correlations between treatment need and quality of life with social and emotional well-being dimensions ( $r = 0.233$ ,  $r = 0.268$  and  $r = 0.195$ ). The moderating effect of extraversion was observed in the relationship between orthodontic treatment need and OHRQoL and social well-being (SWB;  $\Delta R^2 = 0.027$ ,  $P = 0.017$ , and  $\Delta R^2 = 0.038$ ,  $P = 0.004$ ). Openness to experience affected the relationship between orthodontic treatment need and OHRQoL and emotional well-being (EWB;  $\Delta R^2 = 0.035$ ,  $P = 0.014$ , and  $\Delta R^2 = 0.038$ ,  $P = 0.002$ ). In children with higher extraversion, the increase in ICON scores resulted in a lower increase in CPQ total and SWB scores. In children with higher openness to experience, the increase influenced CPQ total and EWB scores similarly.

**CONCLUSIONS:** The relationship between orthodontic treatment need and quality of life is moderated by personality traits. Younger adolescents with higher extraversion and openness to experience seem to be less affected by an increased orthodontic treatment need.