

## University of British Columbia

### ORTHODONTIC TREATMENT NEED OF ADOLESCENTS IN HAIDA GWAII, CANADA

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**Objectives:** The aims of the cross-sectional study were to determine the prevalence of malocclusion and orthodontic treatment need among schoolchildren of Haida Gwaii in British Columbia, Canada.

**Methods:** Out of 535 schoolchildren, 215 (90 boys and 125 girls) agreed to participate in the clinical examination. A trained examiner assessed orthodontic treatment need with the Index of Complexity, Outcome, and Need (ICON) score and the ICON complexity grade. A questionnaire measured the schoolchildren's expectations of and self-perceived need for orthodontic treatment; 192 schoolchildren were old enough to complete the questionnaire.

**Results:** The mean age (N=215) was  $12.9 \pm 2.8$  years. The mean ICON score (N=215) was  $43.46 \pm 26.2$ . There were no statistically significant differences in ICON scores regarding gender (independent sample t-test,  $P=0.207$ ), ethnicity (independent sample t-test, paternal ethnicity  $P=0.886$  and maternal ethnicity,  $P=0.389$ ), or school (ANOVA with Post Hoc Bonferroni Adjustment  $P=0.317$ ). Overall, 43.7 % of the schoolchildren need orthodontic treatment (ICON > 43). Based on the ICON complexity grade, 31% of the schoolchildren have moderate to very difficult malocclusions. Adolescents with higher ICON complexity scores felt a greater need for orthodontic treatment, for extractions, that treatment would give them confidence, and that they were willing to be treated (One way ANOVA with Post Hoc Bonferroni Adjustment,  $P < 0.001$ , 0.014, 0.002,  $< 0.001$ , 0.007 respectively) compared to those with lower ICON scores.

**Conclusion:** There is need for orthodontic treatment among Haida Gwaii schoolchildren and specialty orthodontic services are recommended. The adolescents' self-perceived need for orthodontic treatment corresponded to their clinical need.

**Keywords:** Malocclusion, ICON, orthodontic treatment need, Aboriginal, children