

Abstract

The aim of the study was to assess the Prevalence and correlates of permanent tooth mortality and its impact on wellbeing.

The study was conducted in two phases phase I and phase II. The sample for phase I consisted of a total of 1380 individuals who were aged 20 and above selected from 60 clusters in the Colombo district. Data were collected by means of an interviewer administered questionnaire, clinical oral examination and physical examination. The number of missing teeth and adjusted missing teeth, associations between tooth loss and socio-demographic and behavioral variables, minimum number of teeth needed for satisfactory oral health related quality of life and the effect of tooth loss on the nutritional status were assessed in this phase of the study. Phase II: The sample included of 480 individuals who were 20 years and above attending dental clinics for a dental extraction, who received an appointment for a dental extraction and/or who eventually ended up with a dental extraction. This phase assessed the reasons for tooth extraction and factors leading to the decision to extract teeth.

Overall prevalence of tooth loss was 81% and for the three age groups (20-39, 40-59 and ≥ 60 years) it was 69%, 93% and 96% respectively while the median tooth loss for the three age groups was 2, 7 and 14 teeth. Median numbers of adjusted missing teeth for the three age groups were 2, 8, and 16 respectively. Age, (OR=1.101, CI= 1.083-1.119) gender, (1.86, CI=1.197-2.88) ethnicity, (OR= 0.363, CI= 0.223-0.591) frequency of tooth brushing, (OR= 0.599, CI= 0.451- 0.795), use of fluoridated tooth paste, (OR= 0.498, CI= 0.331-0.75) and current smoking (OR= 0.390, CI= 0.2-0.726) emerged as correlates of tooth loss. Posterior teeth were lost more than the anterior teeth.

The prevalence of oral health impacts was 27.5% and “uncomfortable to eat” (13.5%) and “pain” (13%) were the most commonly reported impacts. Age, (OR=1.02, CI= 1.002-1.03) ethnicity, (OR= 0.422, CI= 0.26-0.67) number of missing teeth, (OR= 2.39, CI= 1.55-3.68,

OR= 2.67, CI= 1.21-5.89) teeth needing extraction, (OR= 1.51, CI= 1.09-2.1) occluding molar tooth pairs, (OR= 0.844, CI= 0.76-0.93) and presence of anterior spaces (OR= 0.597, CI= 0.41-0.88) emerged as predictors of oral health impacts. The minimum number of teeth needed for satisfactory oral health related quality of life for the two age groups 40-59 and \geq 60 year were 26-27 and 21-22 teeth respectively. BMI and BMA were significantly associated ($p < 0.01$) with missing teeth. Prevalence of malnutrition was 19.3% and 29.8% when BMI and BMA were considered respectively. Frequency of tooth brushing ($p = 0.036$) and number of missing teeth ($p = 0.006$) emerged as predictors of nutritional status in the 60 and above age group. Dental caries emerged as the main cause of tooth extraction followed by periodontal disease.

In conclusion it was evident from the study that the prevalence of missing teeth and adjusted missing teeth was high among the population, especially the older age groups. Several socio-demographic and behavioral factors were associated with tooth loss. Tooth loss was related to oral health related quality of life. The minimum number of teeth needed for satisfactory oral health related quality of life decreased with age. Missing teeth emerged as a main factor in determining the nutritional status of elders. Dental caries was the main cause of tooth extraction followed by periodontal disease. The importance of periodontal disease as a cause of tooth loss increased with age.