

Summary

Objective- The aim of this study was to assess the prevalence and the severity of dental fluorosis, and its socio-psychological impact on fifteen year old school children in endemic high fluoride area in Polonnaruwa. Awareness of fluorosis and the perception of dental cosmetic treatments of this group was also assessed.

Study design- A sample of 401 students of fifteen years old life time residents were selected using multi stage cluster sampling with probability proportionate to the size (PPS), from twelve schools in Thamankaduwa MOH area. Each student was examined for dental fluorosis with the use of Dean's index. A questionnaire consisting of questions regarding performances and functions to assess psycho-social impact and the knowledge of fluorosis was given. Moreover students were interviewed to assess the knowledge about cosmetic treatments and their treatment demand for dental fluorosis.

Results- Results showed that 25.2 % of children had normal teeth while the rest (74.8 %) had fluorotic teeth. Majority of students with fluorotic teeth belonged to "Very Mild" "Mild" or "Moderate" categories with the percentages of 22.7 %, 26.2 % and 24.9 % respectively. Comparatively few students had "questionable" (0.7 %) or "Severe" (0.2 %) fluorosis. Only 0.9 % in the "fluorosis with stains" group was satisfied with the colour of their teeth while in contrast it was 54.8 % in the group with "normal" teeth. However 36.6 % were satisfied with the position of their teeth in the "fluorosis with stains" group. Children with fluorotic teeth have scored less marks in all the items in daily performances, considered in the study. Lowest mean marks have been scored for the items of Smiling, Feeling of embarrassment and Finding a partner for life. The differences of the mean scores of the items of performances dimension among fluorosis and non-fluorosis groups was statistically significant. Out of the maximum score of 03 students have scored a mean score less than 2.5 in every question regarding the awareness of fluorosis which showed that their knowledge of fluorosis was at moderate level. 69 % of all students have known that cosmetic treatments were available for dental fluorosis. 49 % of students perceived aesthetic treatments while only 25 % needed them normatively.

Conclusion- Prevalence of dental fluorosis was high in Thamankaduwa MOH area. Children with fluorotic teeth were dissatisfied with the colour and the position of their teeth than children with normal teeth. Compared to the children with normal teeth many activities have been affected negatively in children with fluorotic teeth. Of them smiling, feeling of embarrassment and finding a partner for life were the mostly affected function in children with fluorotic teeth. Awareness of fluorosis was at a moderate level in the whole group. The perceive need of aesthetic treatments was much higher than normative need in this study group.

Education programmes to enhance the knowledge of fluorosis of the students in this area is essential. Furthermore, provision of dental aesthetic treatment facilities in government hospitals and expansion of defluoridation of water in this area are also needed.

