

ORIGINAL ARTICLE

ASSESSMENT OF ORAL HEALTH EDUCATION PROGRAMME ON THE QUALITY OF LIFE OF PAEDIATRIC POPULATION WITH AND WITHOUT DENTAL DISEASES

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ABSTRACT:

Background: Literature shows that there has been increasing growing interest of health professionals and researchers in the socio-dental approach for improvement of the quality of oral care, which focuses more on the subjective well-being of individuals and is guided by Oral Health-Related Quality of Life (ORL) measures. Hence, we planned this study to assess the impact of oral health education program on changes in paediatric population's ORL. **MATERIALS & METHODS:** The present study was conducted in the dental wing of the primary health care centre and included assessment of the oral health status and ORL of the paediatric population who were educated with dental health care programme from 2013 to 2015. The Child Perceptions Questionnaires was used to evaluate ORL in the two groups. The questionnaire was self-administered but the researchers initially read and explained the questions to all the children who participated. All the results were recorded and analyzed. **RESULTS:** 9.13 was the baseline score of the functional limitations in the dental treatment group. 17.82, 4.82 and 3.66 was the baseline scores of the CPQ8- 10, oral symptoms and functional limitations in the caries free group respectively. Significant results were obtained while comparing the various scores of CPQ8-10, oral symptoms and functional limitations at different observation times in the dental treatment group. **CONCLUSION:** Oral health education significantly alters the oral health status of the paediatric populations.

Key words: Education, Oral health, Paediatric

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INTRODUCTION

Recent data from the literature shows that there has been increasing growing interest of health professionals and researchers in the sociodental approach for improvement of the quality of oral care, which focuses more on the subjective well-being of individuals and is guided by Oral Health-Related Quality of Life (ORL) measures.^{1,2} The subjective assessments of the psychosocial impacts of oral disorders complement clinical indicators and provide a more comprehensive oral health diagnosis of individuals and populations.³ Hence, we planned this study to assess the impact of oral health education program on changes in paediatric population's ORL.

MATERIALS & METHODS

The present study was conducted in the dental wing of the primary health care centre and included assessment of the oral health status and ORL of the paediatric population who were educated with dental health care programme from 2013 to 2015. Ethical approval was taken from institutional ethical committee and written consent was obtained in

written after explaining in detail the entire research protocol. A total of 400 paediatric subjects were enrolled in the present study. At the beginning of the study, all schoolchildren were clinically examined for the presence of decayed, missing, and filled teeth (DMFT and dmft indexes) related to dental caries in permanent and primary teeth. Four calibrated examiners performed the examinations under natural light, outside the classrooms, using WHO probe and mirrors, in accordance with the recommendations of the World Health Organization (WHO) for epidemiological studies. Before the examinations, calibration exercises comprising practical and theoretical activities were carried out. Intra-rater reliability was assessed and an 85% rate was considered to have good agreement. The Child Perceptions Questionnaires was used to evaluate ORL in the two groups. The questionnaire was self-administered but the researchers initially read and explained the questions to all the children who participated. This questionnaire was developed by Jokovic et al. and translated and validated for the Brazilian population by Barbosa et al. all the data were

recorded and assessed.^{4, 5} All the results were analyzed by SPSS software. Chi square test and univariate regression curve was used for the assessment of level of significance. P-value of less than 0.05 was taken as significant.

RESULTS

Table 1 shows the mean of all the data recorded at baseline time, one month time and one year time. 42.51 was the baseline score of CPQ8- 10 in the dental treatment group. 10.52 was the baseline score of the oral symptoms in the dental treatment group. 9.13 was the baseline score of the functional limitations in the dental treatment group. 17.82, 4.82 and 3.66 was the baseline scores of the CPQ8- 10, oral symptoms and functional limitations in the caries free group respectively. **Graph 1** show the mean of all the data recorded at baseline time, one month time and one year time. Significant results were obtained while comparing the various scores of CPQ8-10, oral symptoms and functional limitations at different observation times in the dental treatment group.

Table 1: Mean of all the data recorded at baseline time, one month time and one year time

Parameter		Baseline	1 month	1 year	p-value
Dental treatment group	CPQ8- 10 score	42.51	21.25	22.62	0.01*
	Oral symptoms	10.52	5.22	9.01	0.01*
	Functional limitation	9.13	4.10	4.30	0.01*
Caries free group	CPQ8- 10 score	17.82	16.52	14.55	0.25
	Oral symptoms	4.82	3.96	6.25	0.52
	Functional limitation	3.66	4.01	3.58	0.71

*: Significant

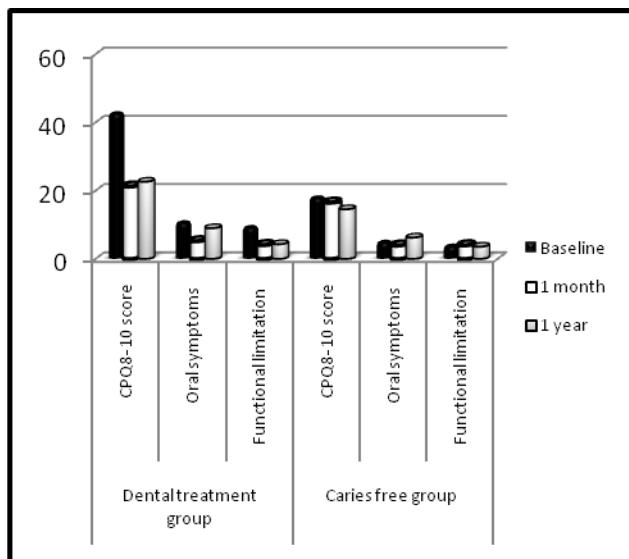
DISCUSSION

Significant improvement in the ORL occurs in paediatric population who have access to oral care to treat their dental caries quickly.⁶ This was also observed in studies which evaluated changes in the ORL of children after a short-term dental caries treatment and corroborates the importance of the promotion of equal access to dental care and quality of treatment outcomes to reduce inequalities in oral health.^{7, 8} Hence , we planned this study to assess the impact of oral health education program on changes in paediatric population’s ORL.

In the present study we observed that significant increase in the quality of the oral health occurs in the paediatric patients who are subjected to ORL (**Table 1, Graph 1**). de paula et al evaluated the long-term effects of the caries treatment provided by a dental care program on changes in schoolchildren's ORL. A one-year follow-up was conducted with a sample of 372 children aged 8 to 10 years which were clinically examined and divided into two

matched groups according to their caries experience: dental treatment group (DTG) and group without caries (GWC). Both groups were assessed three times (at baseline, at 4 weeks, and at 1 year) using the Child Perceptions Questionnaire (CPQ8-10). The normality test was performed for the statistical analyses; the Friedman test was used for the dependent variables (longitudinal assessment repeated three times for the same group); and the Mann-Whitney test was used for the independent variables (test and control groups in each time period). There was improvement in all domains and in overall CPQ8-10 ($p < 0.0001$) in the DTG over time, but no significant changes ($p > 0.05$) were observed at baseline for overall CPQ8-10 and for the emotional well-being domain in the GWC. The comparison between groups demonstrated that ORL was persistently better for the GWC ($p < 0.05$) over time. In conclusion, dental caries treatment has a long-term positive impact on schoolchildren's ORL, highlighting the importance of health policies that promote access to dental care for this population.^{9, 10}

Graph 1: Mean of all the data recorded at baseline time, one month time and one year time



Fernandes et al assessed caries prevalence in children with sickle cell disease (SCD), and the association of dental caries with socioeconomic factors, disease severity, and oral-health related to quality of life (OHRQoL). The sample was comprised of 106 children with SCD aged 8 to 14 years who were attending the Center for Hematology (Hemominas) in Belo Horizonte, Brazil. They were matched to 385 healthy peers. Data collection included interviews with guardians concerning SCD characteristics, and previous social and oral examinations to determine the caries prevalence. Caries prevalence as measured through the Decayed, Missing and Filled (dmft and DMFT) indices. OHRQoL was evaluated through the Brazilian versions of

the Child Perceptions Questionnaires (CPQ8-10, and CPQ11-14 short-form version). Statistical analyses were performed using the chi-square test or Fisher's exact test and the Mann Whitney test, as well as linear regression. The DMFT index was 1.3 (SD: 2.1) in younger children with SCD and 1.5 (SD: 1.9) in SCD teens. Younger children with SCD had lower caries experience compared to healthy peers ($p = .03$). The experience of dental caries among teens with SCD was similar to healthy peers ($p > 0.05$). In addition, we did not see a significant difference on the mean overall scores of CPQ8-10 between SCD younger children and controls. There was no statistically significant difference in the mean overall scores of teens CPQ11-14 between SCD and the control group. Socioeconomic variables were not associated with dental caries in the participants with SCD. However, SCD severity was associated with higher DMFT indexes ($p < 0.05$). Younger children with SCD had a low experience of dental caries. The dental caries experience in teenagers with SCD was similar to their healthy peers. OHRQoL was similar between SCD participants and controls.^{11, 12} Paul JS compared the perceptions of oral health-related quality of life (OHRQoL) among school children presents dental caries with that of caries-free school children, and to evaluate the subjective impact of atraumatic restorative treatment (ART) on the OHRQoL of school children. From the results the authors concluded that dental caries exerts a strong influence on the OHRQoL of children. ART was shown to be a simple and painless caries management approach that could improve the OHRQoL of school children.^{13,14}

CONCLUSION

From the results, the authors concluded that oral health education significantly alters the oral health status of the paediatric populations. However, future studies are recommended.

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