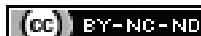


School Dental Nurse: Role in the Indian Primary School Education System

K VENUGOPAL REDDY

**Keywords:** Children, Prevention, Survey

Dear Editor,

Nursing care is a crucial component of any healthcare delivery system. The services offered by these paramedical staff are commendable, making them an inseparable part of healthcare delivery systems worldwide. The concept of incorporating nurses into oral healthcare delivery systems originated in New Zealand when Richmond Dunn, a member of the New Zealand Dental Association, proposed the creation of the dental nurse profession in 1917. The New Zealand School Dental Service (SDS) was subsequently formed in 1921. The SDS's success is evident in the decrease in extractions per 100 fillings due to dental caries: from 114.5 during 1921-22 to 25.5 in 1930-31 [1].

Introducing dental nurses into India's primary school system offers a novel approach, supported by several factors:

- Oral hygiene practices and dietary patterns established in early childhood are difficult to change [2].
- Schools, alongside homes, are ideal locations for promoting oral health [2].
- School dental education is a crucial tool for disease prevention.
- Promoting oral health in schools positively impacts families and communities [2].
- School dental health programmes improve children's oral health [2].
- This initiative contributes to creating a decay-free nation.

India has witnessed a steady increase in dental diseases among schoolchildren, particularly in primary schools, due to modern lifestyles and dietary habits. Studies support this: Karunakaran R et al., (2014) reported a 65.88% caries prevalence with a mean dmft of 2.86 among 4-6-year-olds in Namakkal District, Tamil Nadu, India [3]. Hiremath A et al., (2016) found a 78.9% prevalence with a mean Decayed, Missing and Filled Teeth (DMFT) of 2.97±2.62 and mean DMFT of 0.17±0.53 [4]. Pai NG et al., (2018) reported a 78.3% prevalence among 9-13-year-olds, with a mean DMFT of 1.94±1.70 [5]. Shwethashree M et al., (2020) reported an 86.1% (rural) and 96.5% (urban) prevalence among 3-14-year-olds. Other conditions included dental fluorosis (1.8%), aphthous ulcers (0.25%)

and malocclusions (0.05%) [6]. These findings highlight the urgent need for early intervention.

Dental nurses could receive at least two years of training in preventive and basic paediatric dental care at recognised dental colleges. Upon certification, they could work as school dental nurses. Training would cover diagnosing common dental ailments in children, extracting deciduous teeth under local anaesthesia, oral prophylaxis, cavity preparation and temporary restorations, emergency pain relief (e.g., abscess drainage), preventive procedures (brushing techniques, fissure sealants, topical fluoride applications, dietary counselling) and parent-teacher education, with referrals for complex cases. They could also integrate dental hygiene into the school curriculum using models, videos, slides, games and role-playing, focusing on oral hygiene, diet, nutrition and fluoride use. The programme could later extend to middle and high schools if successful in primary schools. In conclusion, employing school dental nurses offers a cost-effective solution with significant implications for improving the oral health of young Indians, particularly in remote areas with limited dental professionals, paving the way for a dental disease-free generation.

REFERENCES

- [1] Moffat SM, Foster Page LA, Murray Thoomson W. New Zealand's School Dental Service over the decades: Its response to social, political, and economic influences, and the effect on oral health inequalities. *Front Pub Health*. 2017;5:177.
- [2] Baginska J, Rodakowska E, Kobus A, Kierklo A. The role of polish school nurses in the oral health promotion for 7-19 year old-children and adolescents. *Eur Arch Paediatr Dent*. 2021;22(2):265-72.
- [3] Karunakaran R, Somasundaram S, Gawthaman M, Vinodh S, Manikandan S, Gokulnathan S. Prevalence of dental caries among school-going children in Namakkal district: A cross-sectional study. *J Pharm Bioallied Sci*. 2014;6(Suppl 1):S160-S161. Doi: 10.4103/0975-7406.137432. PMID: 25210362; PMCID: PMC4157258.
- [4] Hiremath A, Murugaboopathy V, Ankola AV, Hebball M, Mohandoss S, Pastay P. Prevalence of dental caries among primary school children of India - a cross-sectional study. *J Clin Diagn Res*. 2016;10(10):ZC47-ZC50. Epub 2016 Oct 1. Doi: 10.7860/JCDR/2016/22474.8642. PMID: 27891457; PMCID: PMC5121803.
- [5] Pai NG, Acharya S, Vaghela J, Mankar S. Prevalence and risk factors of dental caries among school children from a low socio economic locality in Mumbai, India. *International Journal of Applied Dental Sciences*. 2018;4(1):203-07.
- [6] Shwethashree M, Georgea PS, Prakasha B, Smithaa MC, Shabadia N, Narayana Murthy MR, et al. Prevalence of oral diseases among school children of Mysuru and Chamarajanagar districts, Karnataka, India. *Clinical Epidemiology and Global Health*. 2020;8(3):725-27.

PARTICULARS OF CONTRIBUTORS:

1. Professor and Head, Department of Public Health Dentistry, Ranjeet Deshmukh Dental College and Research Centre, Nagpur, Maharashtra, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. K Venugopal Reddy,
Professor and Head, Department of Public Health Dentistry, Ranjit Deshmukh Dental College and Research Centre, Lata Mangeshkar Hospital Campus, Dighod Hills, Hingna Road, Nagpur-440019, Maharashtra, India.
E-mail: venureddy2@gmail.com

AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? NA
- For any images presented appropriate consent has been obtained from the subjects. NA

PLAGIARISM CHECKING METHODS:

- Plagiarism X-checker: Aug 08, 2024
- Manual Googling: Dec 24, 2024
- iThenticate Software: Dec 26, 2024 (3%)

ETYMOLOGY: Author Origin

EMENDATIONS: 5

Date of Submission: Aug 06, 2024

Date of Peer Review: Dec 04, 2024

Date of Acceptance: Dec 28, 2024

Date of Publishing: May 01, 2025