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**Prevalence and Factors Associated with Goitre among 6-12-year-old Children in a Rural Area of Karnataka in South India**

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**Abstract**

In India, endemic goitre is present in sub-Himalayan region and in pockets in states of Andhra Pradesh, Karnataka and Gujarat. Being a public health problem amenable for prevention, the assessment of prevalence of endemic goitre in an area helps in understanding whether the preventive strategies under National Iodine Deficiency Disorder Control Program (NIDDCP) have any impact on the control of endemic goitre. Hence, the current study was carried out to determine the prevalence, distribution and factors associated with iodine deficiency goitre among 6-12-year-old children in a rural area in south Karnataka. A cross-sectional study was conducted among 838 children, using a questionnaire adopted from Iodized Salt Program Assessment Tool and the tools prescribed by WHO for goitre survey. The prevalence of goitre in the study area was 21.9% (95% CI 19.2-24.8). There was higher prevalence of goitre among those having salt iodine <15 ppm than those with >15 ppm (P = 0.01; OR 1.59; 95% CI 1.10-2.29). In 10% of the children, urinary iodine excretion (UIE) was assessed and prevalence was higher among those with <100 μg/l of UIE than those with normal UIE, which was not statistically significant (P = 0.8, OR 1.36; 95% CI 0.62-2.96). Multiple logistic regression revealed that gender (P = 0.002; OR 1.7; 95% CI 1.21-2.35) was an independent variable associated with goitre. The study area was found to be moderately endemic for goitre based on the WHO criteria. Higher prevalence of goitre was found to be still associated with consumption of low iodized salt (<15 ppm) necessitating emphasis on monitoring of salt iodine levels in the study area. Though NIDDCP is being implemented since five decades in India, the burden of iodine deficiency disorders (IDDs) is still high demanding further impetus to the monitoring systems of the programme.

**Keywords:**Children; Endemic goitre; Iodine-deficiency goitre; Salt iodine.