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| **Effect of health promotion intervention on salt intake (estimated from spot urine samples) among urban adults in Chandigarh, India: A cluster RCT** |
| **Background**The share of chronic diseases in deaths in India has surged, with 28.1% of all deaths due to cardiovascular diseases (CVDs). High salt intake is a major risk factor for hypertension – a leading cause of CVD. Although 24-h urinary sodium excretion is the gold standard for estimating salt intake, it has high participant burden. Available evidence suggests that spot urine samples could provide valid estimates of population salt intake and may estimate changes in mean population salt intake. This study evaluated the effect of ‘SMART Eating’ health promotion intervention on salt intake among urban adults.**Methods**A cluster RCT was conducted among 732 participants (35-70 years), in Chandigarh, a city in North India. IT-enabled dietary intervention was compared with nutrition education by pamphlets in the comparison group. Salt intake was estimated using spot urine samples as well as food frequency questionnaire (FFQ). Mean salt intake (g/day) from a single spot urine sample was estimated using Kawasaki formula. Multi-level mixed effects linear regression models, was used to determine the net change in salt intake in the intervention group, relative to the comparison group.**Results**Participants’ mean age was 53 years, 76% were women, and 10% were single. Mean salt intake estimated from spot urine samples (n=708) and FFQs (n=732) were 13.09 g/day and 8.5 g/day, respectively. The intervention group had a significant net reduction of 0.830 g/day in the mean salt intake estimated from spot urine samples (equivalent to a 9% net change) compared to the comparison group (p<0.01). Dietary data also indicated a change in the mean salt intake in the same direction – with a significant net reduction of 0.508 g/day (equivalent to a 4% net change) compared to the comparison group (p<0.001).**Discussion**Salt consumption inurban adults wasmore than double the WHO recommendation of 5 g/day in pre-intervention phase. The intervention was effective in reducing mean salt intake, irrespective of the objective or self-reported FFQ used for estimating salt intake and the presence of discrepancy between those estimates. The validity of the spot urine samples for estimating intervention-induced changes in salt intake and effectiveness of this intervention needs to be explored through implementation research before its potential scale up. **Keywords:** Adults, Cluster Randomised Control Trial, Salt intake, Chronic disease |