

RESEARCH LETTER

Salt intake knowledge, attitude and behaviour in a rural population of Bangladesh

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Dietary salt intake is higher among Bangladeshi people especially, in rural area.¹ Excess salt or sodium intake is one of the major contributors to hypertension and other non-communicable diseases (NCDs) which cause 4.1 million deaths annually.² Therefore, the worldwide monitoring system for controlling major NCDs has chosen it as a key indicator.³ We aimed to determine salt intake knowledge, attitude and behaviour as well as the amount of added salt while eating meal of a rural adult population of Bangladesh.

A cross-sectional study was conducted between December 2020 and February 2021 among adult residents (aged 18 years or older) of Ekhlaspur, a rural village situated in the Matlab north region of Chandpur district in Bangladesh. A total of 220 adults (112 women and 108 men) were recruited systematically. Data were collected using an interviewer-administered questionnaire, adapted from WHO modified salt module of STEPS questionnaire.¹ The amount of salt added while taking a meal was determined by showing a teaspoon sample, which was finally converted to grams for statistical analysis. One spoonful was considered to have 5 grams of salt. Multiple linear regression analysis was done to ascertain the mean (95% confidence interval) added salt consumed during meals, adjusted for age, sex, education, and occupation.

Among 220 respondents, 112 (51%) were women. The mean (standard deviation) age was 49.0 (18.0) years. Less than half (45%) of them had above primary level of education and 19% were involved in hard physical labour-related occupations such as day labourer, agriculture and other labourers. More than three-fourths (77%) residents added salt while having a meal. This was similar between the sexes.

HIGHLIGHTS

1. Most people of this rural area had knowledge, a positive attitude and had been attempting to reduce excess salt intake.
2. The amount of added salt while eating meals alone was almost near to the daily recommended amount.

Around three fourth of the participants had knowledge that excess salt intake is related to 'hypertension'. Most of them (89%) had favourable attitude towards the importance of reducing dietary salt intake. About nine in every ten (88%) had been attempting to reduce dietary salt intake.

The average, self-reported amount of added salt (convert from teaspoon to grams) while having meal was found to be 3.5 (95% CI 3.5 – 3.6) grams/day. The amount of added salt was not found to be associated with knowledge, attitude and practice from the multiple linear regressions model, adjusted for age, sex, education and occupation (**TABLE 1**).

We found adding salt while eating meal is slightly higher (77%) than two other Bangladeshi studies (72.5% and 62.6%) respectively^{4,5} also notably higher than the faculties and doctors of a health-related university (28.3%).⁶ This proportion suggests that people in the study area are still very much fond of salty taste.

The proportion of participants having knowledge on excess salt causes hypertension and favourable attitude towards the importance of reducing salt intake is higher than another Bangladeshi study.⁴ The amount of participants taking an attempt to reduce excess salt intake in our study is higher than other similar study (45.6%).⁵ It might be due to the 'yard meetings' done by the local organization, Ekhlaspur Center of Health (ECOH).

TABLE 1 Background information and mean added salt while eating meal of the participants (n=220)

Characteristics	Number (%)	Added salt while eating meal (grams/day)*
Mean (standard deviation) of age, years	49.0 (18.0)	-
Women	112 (51.0)	-
Any primary or no education	121 (55.0)	-
Occupation that needs hard physical labour†	41 (18.6)	-
Always or often added salt while having meal	169 (76.8)	-
Added salt intake	-	3.5 (3.5 – 3.6)
High salt intake causes hypertension		
Yes	160 (72.7)	3.5 (3.4 – 3.6)
No	60 (27.3)	3.6 (3.5 – 3.7)
Dietary salt reduction is important		
Yes	195 (88.6)	3.5 (3.5 – 3.6)
No	25 (11.4)	3.7 (3.5 – 3.8)
Attempts to reduce salt intake		
Yes	193 (87.7)	3.5 (3.5 – 3.6)
No	27 (12.3)	3.6 (3.4 – 3.7)

*Multiple linear regression adjusted for age, sex, occupation and education; Mean (95% confidence interval)

†Day labourer, agriculture and other labourer

In conclusion, three-quarters of this rural population consume salt while taking meal and this average intake was 3.5 grams per day, which is not associated with knowledge, attitude and practice after adjustment of age, sex, education and occupation. This could be due to their homogeneity or the salt intake measurements using teaspoon is sensitive enough. Generalization of the findings of this study needs further corroboration.

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Author Contributions

Conception and design: MAIK, RB, SS. Acquisition, analysis and interpretation of data: MAIK, RB. Manuscript drafting and revising it critically: MAIK, RB, MNS, SS. Approval of the final version of the manuscript: MAIK, RB, MNS, SS. Guarantor accuracy and integrity of the work: MAIK, RB.

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Conflict of Interest

The authors have no conflicts of interest to declare.

Ethical Approval

This study was approved by the ethical review committee of the National Institute of Preventive and Social Medicine (Memo no: NIPSOM/IRB/2020/1225). Written informed consent was taken from all the participants. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013).

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