

Salt Intake Behavior Among the Faculties And Doctors of Bangladesh University of Health Sciences

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Abstract:

Key words:
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Background: Excess of salt consumption increases blood pressure which is a leading risk for developing cardiovascular diseases. The real salt intake practice among Bangladeshi population is still unknown which demands further research. The objective of the study was to assess the salt intake pattern among the faculties and doctors of Bangladesh University of Health Sciences (BUHS).

Methods: A cross-sectional study was conducted among a total of 92 faculties and doctors of BUHS in 2015 using a semi-structured, self-administered and modified version of WHO STEPS questionnaire of salt intake. The questionnaire included information regarding knowledge and practice of salt intake.

Results: Among the total respondents 58% were women and 60% were academicians with mean age 41.1 ± 10.6 years. The prevalence of added salt intake in meal was 28.2%. Regarding practice, 31.6% used salty sauce in meal, 52.8% used salty sauce in cooking, and 41.8% consumed processed food with high salt. But almost three fourth (72.8%) of the respondents believed that lowering salt in meal is very important and 93.5% of them believed that excess salt or salty sauce can cause a health problem.

Conclusion: The respondents had overall good knowledge regarding added salt intake but the practice was low. To reduce the prevalence of added salt intake further awareness needs to be developed.

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Introduction:

Cardiovascular diseases result 17.5 million premature deaths alone globally. Among all the major NCDs,¹ hypertension is considered as an independent as well as etiologically relevant risk factor for CVDs.² The surge of hypertension is significantly contributed by high dietary salt intake and a causal relationship between them is globally established now.³ The physiological need of dietary salt is 3.8 gm which is less than the recommendation of 5gm salt per day by WHO. Hence it is considered that there is a pragmatic compromise exists between the beneficial and achievable in terms of reducing salt consumption.⁴ Evidence suggests that a reduction in salt intake from 9-12gm a day to a recommended level would project to prevent 2.5 million annual deaths from cardiovascular diseases worldwide.^{5,6} Therefore, population wide salt reduction is considered as one

of the quickest and cost effective way to combat high blood pressure.^{7,8} But implementation of salt reduction program in the context of Bangladesh will have to harmonize with salt iodization. This coordination is necessary to achieve both the targets and it is worth fully possible to reduce salt consumption by ensuring that iodine requirements are met.⁹

The mean of daily salt consumption was 5-16gm in coastal areas,¹⁰⁻¹² 5-7g in rural areas and 9-11gm in different urban areas among Bangladeshi general population which is more than the WHO recommendation for total salt consumption.^{13,14} But the salt intake pattern in term of knowledge, attitude and practice was not assessed yet in Bangladeshi urban population. In a survey of Nottingham University a high proportion of respondents (83.8%) believed salt to be detrimental to health but overall there was a poor level of

knowledge of the salt content of a range of foods and 85% per cent of respondents had purchased reduced salt food product.¹⁵ Two thirds of survey participants in Australia were aware of the adverse effects of salt on health, three quarters knew that most salt in the Australian diet comes from processed foods and about one half of participants reported regularly checking food content labels.¹⁶ But there is no evidence exists regarding salt intake pattern among the health professionals like clinicians and academicians in other countries as well as in Bangladesh.

The important role of health care providers (HCPs) in disease control has been well documented, including role modeling of health behaviors, as well as providers and educators of information related to lifestyle modification and people are likely to obey their advice. In these circumstances, a study on salt intake pattern and behavior among the health professionals may reveal the actual salt intake practice in this group which will create the need for similar type of further study among the general population.

Methods:

The study was conducted by single time data collection procedure from all the faculties and doctors of Bangladesh University of Health Sciences (BUHS) in the period of May to June 2015. BUHS is a private medical university in Bangladesh with its own hospital setting called Bangladesh Institute of Health Sciences and Hospital (BIHS&H). The list of the faculties and doctors were collected from the registrar office of BUHS and human resource department of BIHS hospital respectively. The respondents who were on leave were excluded from the study as because of the difficulty in reaching the absent respondents. The survey questionnaire was sent to the respondents along with the written consent form.

There were 73 academicians, of them 6 were on leave for longer duration and 3 were involved in the study as investigator. Therefore, excluding 9 faculties, data were collected from 55 faculties out of the rest 64 faculties i.e. response rate was 85.9%. There were total 61 clinicians in the hospital, of which 3 were on leave. Excluding this number the total clinicians was 58 and, data were collected from 37 clinicians. Rest of the clinicians did not participate in the study. The response rate of the

clinicians was 63.8%. Among the academicians 35 were women and 20 were men and among the clinicians 18 were women and 19 were men. The total response rate of the study was 74.6%. Before data collection written permission was taken from the authorities of BUHS and BIHS&H.

Data collection instrument-

A semi-structured, self-administered questionnaire was used in which a total of 15 questions were asked on their socio-demographic characteristics and salt consumption behavior, among which some questions were directly adopted from core and expanded portion of dietary salt section of the STEPS instrument version 3.1. The STEPS Instrument covers three different levels of noncommunicable disease risk factors assessment: Step 1 (questionnaire), Step 2 (physical measurements) and Step 3 (biochemical measurements). Only Step 1 was used in this study and some additional questions on added salt intake in meal were included in the questionnaire for the comprehensiveness and completeness of the information. A pretesting of the questionnaire was conducted among 10 respondents from the same population. After pretesting, few modifications in the questionnaire were done accordingly. The modified questionnaire was used in the final data collection procedure.

Data collection procedure-

According to the list of the faculties and doctors, the questionnaire along with the written consent form, in a sealed envelope, was given to the respondents by hand to hand on a pre-scheduled date of data collection. Then the questionnaire and the consent form were collected afterwards from each respondent at their convenient time. A total of 92 respondents returned their questionnaire.

Statistical analysis-

After data collection, all the completed questionnaires were checked for any error or inconsistency before coding and entering them into the database. The data were entered in a Microsoft Excel sheet first and then imported into SPSS for analysis. In SPSS, logical checking of data was done by sorting and frequency running.

All the categorical data regarding knowledge and practice of salt intake were expressed as frequency and percentage. The continuous variables like age, was shown as mean, standard deviation.

Ethical considerations:

The ethical approval of the study was taken from the ethical review committee of Bangladesh University of Health Sciences. Permission was also taken from appropriate authorities for data collection. All the respondents were described about the study purpose in detail. Written informed consent was taken from each respondent prior to fill up the questionnaire. All the information collected from the respondents was kept confidential. The respondents had the right to refuse to answer any question without providing the reasons for their decisions and could withdraw from the study at any time.

Results:

Of the 92 respondents, 53(57.6%) were women and their mean age was 41.1±10.6 years. Regarding their knowledge and attitude towards salt intake behavior, most of the participants (29.3%) thought

that they are used to take just right amount of salt. About 72.8% of the participants believed that lowering salt in meal was very important while 93.5% believed that too much salt or salty sauce can cause health problem (Table I). Regarding practice of added salt intake, more than two fifth (44.6%) respondents used low quantity of salt while cooking, 33.7% of them look at the sodium content of food label but only 7.6% buy low sodium alternatives (Table II). On the other hand, the prevalence of added salt intake in meal was 28.3% while 31.6% used salty sauce in meal, 52.8% used salty sauce in cooking, and 41.8% consumed processed food with high salt (these percentages were obtained combining the percentage of always, often and sometimes category in Table III where always+often+sometimes=yes and rarely+never+don't know=no).

Table-I
Knowledge and attitude about salt intake among the respondents (n=92).

Variables	Percent
<i>Amount of salt or salty sauce consumption</i>	
Too much	10.9
Just the right amount	29.3
Too little	23.9
far too little	17.4
Don't know	7.6
<i>How important lowering the salt*</i>	
Very important	72.8
Somewhat important	13.0
Not at all important	8.7
<i>Salt or Salty sauce can cause your health problem</i>	
Yes	93.5

*missing value=2

Table-II
Practice of added salt intake among the respondents before meal (n=92).

Variables	Yes (%)
Look at the salt or sodium content on food label	33.7
Buy low salt / sodium alternatives	7.6
Use low quantity of salt when cooking	44.6
Do other things specifically to control your salt intake	17.4

Table-III
Practice of added salt intake among the respondents during meal (n=92).

Variables	Always	Often	Sometimes	Rarely	Never	Don't know
Adds salt intake in meal	6.5	7.6	14.1	38.0	33.7	-
Adds salty sauce in meal	1.1	3.3	27.2	43.5	22.8	2.2
Adds salty sauce in cooking*	15.4	6.6	30.8	28.6	14.3	4.4
Takes processed food with high salt**	3.8	11.4	26.6	40.5	16.5	1.3

The result is in percentage, *missing value=1, **missing value=13

Discussion:

The study was conducted among the faculties and doctors of a reputed medical university to assess their salt intake behavior. Their knowledge regarding salt intake was high but that has little reflection in their habit of consuming added salt. Almost ninety four percent of the population knew about the salt-health problem relationship, but more than a quarter of the study population intake added salt in meal and the percentage was found higher in women. This knowledge level is higher than the data available from the general population of some developed and developing countries.¹⁵⁻²⁰

A study conducted among health professionals in Scotland in 2003, showed that the knowledge of salt-health problem relationship among general practitioner (56%), practice nurse (81%) and dietician (53%) is lower than the current result.²¹

Almost three in every ten participants used to take just right amount of salt and there is no individual who consumed far too much salt. This practice of lowering salt intake revealed that one third of the population looked at the sodium content on food level which is higher than the rates of other studies.¹⁸⁻²² Near half of the study population practiced to limit salt intake such as used low quantity of salt when cooking. Whereas a study in China among general population found that almost all of the urban and rural population use low quantity of salt in cooking.²² But the practice of using low salt/sodium alternatives of the current population is far less than the result of another Indian study (34%).¹⁸ Less processed food consumption is another important practice to reduce the consumption of salt as this type of food contain higher amount of salt. Among the current population, the rate of processed food consumption was almost similar to the Australian population

(44%) but higher than the Canadian (24%) and far lower than the Greece population (77.6%).^{18,23,24}

This study, so far, is the first attempt to assess the knowledge, attitude and practice regarding salt consumption in a population of Bangladesh, also the first salt intake behavioral study among the health professionals in Bangladesh. In future, based on the findings of this study further study can be conducted and the salt intake behavior of general population can be assessed in contrast to this result. However, there are some limitations of the study. The study was conducted in limited sample of a health institution which may not be representative of all health professional in Bangladesh.

Conclusion:

The knowledge and attitude regarding added salt intake in the study population is appreciable. Though the participants were well educated and engaged in health related occupation but still the prevalence of added salt intake is higher. This study provided a scenario of salt intake behavior among educated urban population which may differ badly for other professionals. So future policies can be formulated to ensure the practice of recommended salt intake, to reduce the burden of hypertension for this group of population.

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Conflict of Interest - None.

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