

**Pilot Study on Intrahousehold Food
Distribution in A Rural Area of Bangladesh**

**Rita Das Roy
SM Ziauddin Hyder**

**BRAC
Research and Evaluation Division
66 Mohakhali C/A, Dhaka 1212**

INTRODUCTION

Pattern of food allocation within a household may lead to malnutrition among some family members. Availability of adequate food at the household level may not ensure equally adequate food for every household member. Among the various reasons of inequalities in intrahousehold food distribution, sex bias may be considered as a leading factor that is rooted in the culture of many developing countries. Sex differences in household food and other resource allocation have been observed in many countries where favouritism for male is always dominant (1 - 5). Chen's study in Bangladesh revealed that malnutrition among girls was substantially higher than boys in rural areas which may be attributed at least in part to marked differences in the intrafamilial allocation of food between children of different sexes (6).

Although a number of studies were carried out to understand food allocation pattern within the household, it is quite a tedious work to gather data on the relevant issue. Various methodologies were applied to gather data on preferential food allocation pattern within the household. In urban Guatemala, Engle and Nieves collected anthropometric data, observed dietary patterns and mealtime behaviour, and used a method of direct weighing of foods for the main meal (7). A study done in Bangladesh collected prospective data on anthropometry, morbidity and nutrient intake within a household to explore sex bias in the intrahousehold food allocation (6). The methodology used in a study in rural Nepal was very simple and effectively used to explore intrahousehold food allocation pattern focusing the mealtime behaviour of both the food server and consumer (8). The present study has attempted to test a revised methodology to understand behaviour in relation to preferential food distribution pattern to a brother and a sister residing in the same household.

OBJECTIVE

The objective of this pilot study was to test a rapid and simple tool to assess inequality in intrahousehold food distribution between brothers and sisters in rural Bangladesh.

MATERIALS AND METHODS

The study was carried out in a village of south Uddomdi about 5 km southwest of Matlab thana head quarter. The village is in the sampling frame of BRAC-ICDDR,B joint research project where only BRAC interventions are there. Uddomdi is under Baradia union. Since 1992, BRAC has been implementing the Rural Development Programme (RDP) and Non-formal Primary Education Programme (NFPE) in the study area. Majority of the inhabitants of Uddomdi are Muslim who are primarily engaged in agro-based occupations. Most of them are involved in farming and others are daily labourers, fishermen, rickshaw pullers, small businessmen, boatmen and service holders. One primary school, two NFPE schools, one madrasa, two youth clubs, one government *samity* (organization of poor villagers organized by the government-operated Bangladesh Rural Development Board) and three BRAC-RDP village organizations (VOs).

Data were collected in November 1995. Fifteen households were purposively selected from different corners of the study village. Each selected household must had one woman with BRAC VO membership who had a school-going son and a daughter aged 8-16 years. It is assumed that brothers and sisters within the above age range may be in an ideal situation to be allocated with almost equal amounts of food during household meals and, moreover, they would be honest and prompt in giving answers regarding their food intake.

Data on food consumption and distribution were collected through household visits and interviewing the brother and sister. Direct observation of a major household meal such as lunch or dinner was done to collect data on the behavioural aspects of food distribution particularly between the brother and sister. Attitude of the food server towards the boy and girl child was also noted through the same technique. A structured questionnaire was used to gather demographic (age, sex, education, etc.) and food recall data by interviewing the brother and sister separately on the same day and preferably at the same location. A list of food items that are regarded as special in the community was prepared by discussing with adult women.

Mealtime observations were made for recording the types of food being served to the household members particularly to brother and sister and how the foods were being served. It was performed once for each household focusing either the noon or the evening meal depending on the consent of the household members. Households were not informed exactly on the purpose of visit, because it was thought that it might alter the usual mealtime behaviour. Moreover, the researcher built-up a friendly relationship with the mothers as well as with the children. As such, the mothers did not hesitate to distribute food among their children in front of the researcher. The observer selected a place in the house from where the activities related to food consumption could not be missed. The observer took notes on a checklist on who served the food, if the food was served equally between the brother and the sister, if the food was automatically served or requested by the consumer or asked by the server or self-served.

The previous day's food intake of the brother and the sister were determined through interview. They were asked to recall the previous day's food intake from morning to evening meals. Data collected during the interview included: number of food items eaten, if the food was equally distributed, if they took

any snacks, the order of food intake and perception on amounts of food eaten (see attached questionnaire for details). Furthermore, data on gender bias in relation to serving special food was collected by asking what type of special food was cooked during the last 7 days, who received more and why.

Four different types of serving methods, such as, I) automatically served (AS); ii) consumer asked (CA); iii) self-served (SS); and iv) server asked (SA) were formulated for analyzing the mealtime behaviour in relation to serving food. For quantifying the different behaviour, each serving category was taken as numerator and the sum of category was taken as denominator. For example,

$$AS = \frac{AS}{AS + CA + SS + SA}$$

Data on number of food items eaten during the last 24 hours were analyzed by converting it into a quantitative scores. The following formula was used to calculate the food items eaten by each brother and sister:

$$\text{Score} = \frac{\text{No. of food items eaten by brother or sister}}{\text{Total no. of food items cooked at home}}$$

Data on consumption of snack was also converted into quantitative scores by applying the above formula.

Order of food intake between the brother and the sister during morning, noon and evening meals was calculated using quantitative scores. Values such as 1, 0.5 and 0.25 were assigned against before, together and after respectively of eating a particular meal.

Data on adequate or inadequate food distribution among the brother and sister as perceived by them were analyzed also by putting quantitative scores. If food was adequately eaten 1 point was scored. Similarly, if food was inadequately eaten 0.5 point was scored and zero was scored if food was not at all eaten. The reasons were also asked in case a particular meal was not at all eaten either by the brother or the sister.

Limitations of the study

The pilot study was designed to gather information on meal observation of a brother and a sister aged 8-16 years. Because of the wide range, the brother and sister were not available at the same time. For the same reason, the interviewers had to observe meals at night to ensure the presence of both brother and the sister at home. Since the sample size was small, it was difficult to draw a conclusion about gender discrimination in intrahousehold food distribution between brothers and sisters.

FINDINGS

The data reveals that mean age of the study brothers and sisters were 11.3 years (range 9 -15 years) and 11.6 years (range 8 - 16 years) respectively. All of them were enrolled in schools and the majority were reading in class III. Average household size was 7 with males as household heads of all the households. One woman from each household was involved with BRAC as a VO member suggesting that all the study households belonged to the poor stratum of the community (BRAC's target household).

The data in relation to serving food showed that the majority of the brothers (13) and sisters (11) were served automatically. However, 8 brothers and 4 sisters were asked by the servers (mothers in all cases). Furthermore, 5

brothers and 6 sisters asked the food servers to serve more. While serving food, 2 brothers and 4 sisters served their own food from the pot. All but 1 were served by their mothers. Pulses and small fish were found to be of good quality food in major meals in most of the households.

With respect to number of food items taken, out of 15 households, 8 brothers and 8 sisters were found to have eaten equally, 6 sisters ate more than brothers and 1 brother ate more than the sister.

Analysis of data on sex preference during food distribution shows that 5 brothers and 4 sisters scored high and the rest scored the same.

Data on adequacy in food distribution shows that in the morning meals, 11 brothers and 10 sisters were found to have eaten adequately. In the evening meals, 12 brothers and 13 sisters were found to have eaten adequately. After scoring, 10 brothers scored higher than the sisters. Further analysis shows the reasons behind the inadequacy in food consumption which are shortage of food, unpalatable food, and food got cold.

Special foods, as perceived by the community, were cooked in most of the households (12). Of these households, 6 brothers and 6 sisters identified the same food as a special food. For others, types of special foods might not be the same. In relation to intake of special food, 8 brothers and 1 sister were found to have eaten equal amounts. Moreover, 3 brothers and 1 sister were found to have eaten more than their counterparts.

The result also show that proportionately more brothers (13 out of 15) took snacks at and outside home than the sisters (9 out of 15).

CONCLUSION

The study was designed to test the tool to assess inequality in food distribution among the similar aged brothers and sisters as a proxy to measure the gender bias in intrahousehold food distribution that exists in the community. Findings of the study indicates the discrimination in food distribution among a brother and a sister in respect to special foods and snacks both within and outside the households. The methodology was found to be simple and useful in exploring existing inequalities in intrahousehold food distribution rapidly and with minimum cost.

The tool will be used in further research. A study is planned to be conducted to compare the impact of BRAC's programme on reducing gender bias in intrahousehold food distribution.

Foot notes

Special food: Special food means which is cooked occasionally at home. Special foods may be differ each from person to person. In this regard, a list of special food was made by asking the adult women in the village. The list made us clear that what types of food they considered as special food i.e. sweet rice, rice cake, *shamia*, big fish, meat etc.

Snack: Light food which is eaten during morning, afternoon and in the school time. In the village context *muri*, biscuits, *chanachur*, *gur*, *achar* etc. are such snacks.

Automatically served: Where the food server served food without asking or requesting of the consumer.

Consumer asked: Where the food served on consumers' request.

Server asked: Server asked the consumer if she/he would need extra food.

Self-served: Consumers took the food from pot without the server's help.

REFERENCES

1. Koenig MA and D'Souza S. Sex differences and childhood mortality in rural Bangladesh. *Soc Sci Med* 1986; 22(1): 15-22.
2. Gross DR and Underwood BA. Technological change and calorie costs: Sisal agriculture in northeastern Brazil. *Am Anthropol*. 1971; 73(3): 725-40.
3. Nelson M. Distribution of nutrient intake within families. *Br J Nutr* 1986; 55: 267-77.
4. Deaton A. The allocation of goods within the household : adults, children, and gender. World Bank, Living standards measurement study working paper, 1988; No 39:
5. Taha SA. Household food consumption in five village in the Sudan. *Ecol Food Nutr* 1978; 7: 137-42.
6. Chen CL, Huq E, D'souza S. Sex bias in the family allocation of food and health care in rural Bangladesh. *Pop Dev Rev* 1988; (7): 55 - 70.
7. Engel PL, and Nieves I. Intra- household food distribution among Guatemalan families in supplementary feeding program: behavior pattern. *Soc Sci Med* Vol 36 1993; No 12: 1605 -12.
8. Gittelsohn J. Opening the box: Intra-household food allocation in rural Nepal. *Soc Sci Med* Vol 33, 1991; No 10: 1141-54.

Introduction : Food allocation pattern within a household may lead to inadequate food intake among some family members. Availability of adequate food at the household level may not ensure equally adequate food for all the household members. Various methodologies were applied to gather data on preferential food allocation pattern within the household. The present study has attempt to test a revised methodology to understand behaviour in relation to preferential food distribution pattern to a brother and a sister residing in the same household.

Objective : The objective of the study was to test a tool to assess the existing inequality in intrahousehold food distribution between brothers and sister in a rural community in Bangladesh.

Methods : Fifteen households who had a school going sibling aged 8 - 16 years and belonged to BRAC samity (village organization) were selected from Uddamdi village of Matlab thana. The brother and sister were interviewed about previous day's food intake at home. At least one complete meal of each pair was observed to gather in-depth understanding on mother's behavior in relation to household food allocation pattern.

Results : On average, food allocation score was higher among brother than sister suggesting that brothers were given more preference over their sisters of similar age and occupation in daily food allocation. The results showed that higher number of brothers took snacks at and outside home than their sisters. The study found that discriminatory food distribution was apparent in favour of brother while meal observation was made. The study revealed that the tool could be used to examine the existing gender inequalities in food distribution among household members.

Conclusion: The study was designed to test a tool which was found to be simple and useful in exploring existing inequalities in intrahousehold food distribution rapidly and with minimum cost.