**DISCUSSION**

Food safety is an important public health issue. Day by day it is getting worst dimensions with various types of health impacts at all levels of the society. Underdeveloped and developing countries with low socioeconomic condition and lack of education employing a alarming situation. This cross sectional descriptive study was carried out to find out the knowledge and practice regarding food adulteration of rural people. Eighty eight respondents were interviewed.

**Socio-demographic information of the respondent**

In this study regarding the sex of the respondents, majority are female, 85.23% and only 14.77% are male. This may be due to the fact that we interviewed the respondents in evening time when the male were engaged in their daily activities outside their residence.

(Ref.Table No. – 1)

Regarding the age of the respondents 19.31% respondents are of the age group 16-20 years, 29.55% are of 21-25 years group, 22.73% are of 27-30 years group and 28.41% aged 31 or more. It is seen that 69.32% respondents studied up to primary level, 27.27% up to SSC and 3.41% up to the level of HSC or above. (Ref.Table No. – 2 &3)

We recorded the occupations of the respondents and found77.27% respondents are housewives, 3.41% are service holders, 7.95% are businessmen, 2.27%teachers, 1.14% farmer, 1.14% respondents 6.82% are engaged in other occupations. In relation to total numbers of family members; 31.82% families have 1- 5 members in their family, 62.5% have 6-10 and 5.68% have 11-15 members in their family. (Ref. Table No. – 4 &5)

Regarding the number of children the respondents have; 18.18% respondents have no child, 17.05% respondents have 1 child, 19.31% respondents have 2 children, 21.60% respondents have 3 children and 23.86% respondents have 4 or more children. So, it is seen that already about half; 45.46% families not conforming to 2 child norm family. We also had an idea about the financial status of the respondents and found 14.77% respondents earn <4000 taka, 15.91% respondents earn 4000-6000 taka, 20.45% respondents earn 6001-8000 taka, 06.82% respondents earn 8001-10,000 taka and 42.05% respondents earn >10,000 taka.So, about half; 48.85% of the respondent have a monthly income in excess of 8000 taka per month.(Ref. Table No. – 6 &7)

**Knowledge of the respondents regarding food adulteration**

More than half of the respondents; 60.23% said that food is said to be adulterated when it is rotten, 32.95% said by anything added which is harmful, low quality food 7.95%, by chemical 31.82%, by artificial color 23.86%, do not have any idea 9.09%. In a study conducted in 2006 in Dhaka city; among the respondents, 23% said rotten food, 18% said anything added which is harmful, 16% said substandard food, 15% said chemicals, 12% said artificial colour, did not know 13%. So, the knowledge found far better than the consumers of Dhaka city. It is to be mentioned here that the time gap is 10 years. So this improvement in knowledge may be due to the fact that for the last few years Government and different organisations are very much concerned in educating the people in this regard. (Table – 8)

Regarding common food items those are being adulterated; 19.32% respondents said it is oil, 69.32% said fish, 62.50% said vegetables, 65.91% said fruits, 17.05% said spices, 21.59% said milk, 04.55% said puffed rice, 13.64% said juice, 13.64% sweetmeat, 02.27% said butter, 07.95% common salt, 09.09% fast food, 18.18% bakery food , 01.14% have no idea and 03.41% said other food items. In this regard in the same study mentioned before conducted in 2006 in Dhaka city the respondents said; oil 43%, fish 33%, vegetables 31%, fruits 19%, spices 18%, milk 15%, puffed rice 9%, juice 7%, sweetmeat 6%, butter 3%, common salt 3%, fast food 2%, bakery food 1%, did not know 4%. Again the respondents showed better knowledge in our study findings might be due to the same reason mentioned earlier in the previous paragraph. (Ref. Table – 9)

Regarding the common food adulterants those are being used, the respondents said; 27.28% said adulterants are color, 05.69% said adulterants are urea, 79.55% said adulterants are formalin, 18.18% said adulterants are chemicals, 25.00% said adulterants are brick dust, 03.41% said adulterants are carbide, 05.69% said adulterants are soil, 18.18% said adulterants are water, 11.37% don’t know adulterant materials, 01.14% said other adulterants not in the list. In the study conducted in 2006 in Dhaka city mentioned earlier; among the respondents of Dhaka city said colour 40%, urea 22%, formalin 21%, chemicals 17%, brick dusts 2%, carbide 1%, sand 1%, water 1%, 11.37% don’t know adulterant materials, 01.14% mentioned other adulterants. This study shows that the respondents are more aware in much more numbers than of the Dhaka city in 2006 regarding formalin, chemicals, brick dust, sand, carbide etc. (Ref. Fig. – 1)

Fish adulteration is a worst concern in Bangladesh especially in cities. In this regard the respondents said that fish is adulterated with formalin 81.82%, with colour 3.41%, don’t know 14.70%. For vegetable with colour 1.14%, don’t know 25.00%; Fruits with Formalin 70.45%, colour12.50%, don’t know 7.96%; Shutki with colour2.27%, DDT 10.23% and don’t know 87.50%. Spices are costly and amongst the common items that are being adulterated. The respondents said Spice is adulterated with colour19.32%, with wood dust 6.82%, with brick dust 39.77%, don’t know 34.09%; Bakery food with colour 63.64%, with harmful cheap materials 34.09%, and don’t know 2.27%. Singara, Somocha, chanachur with colour 7.95%, with burnt engine oil 19.32% and don’t know 72.73%. Knowledge about the deleterious effects of adulterated food 03.41% respondents said that adulterated food is not harmful, 44.32% said harmful, 43.18% said very harmful, 05.68% said deformity of organs can occur, 09.09% said death may cause and 05.68% do not know. (Ref. Table – 10, 11 & Fig. - 2)

**Steps taken by the respondents to avoid harmful effects of adulterated food.**

We saw the how consumers buy food items while adulteration is a common practice. It is revealed that 19.32% of respondents buy open foods observing its colour, 62.50% of respondents observing its freshness, 10.23% of respondents check its smell, 32.95% of respondents observe it’s cleanliness, 02.27% of respondents consider the price and 10.23% respondents have no idea of checking food while buying open foods. Children are very much vulnerable to food adulteration as bakery products are usually preferred by the children as tiffin in the school and as snakes in the home as well. More than third of the respondents; 34.10% said they allow fast food and bakery food to their children, 26.14% don’t allow and 39.75% of respondents allow their children occasionally. In this regard it is seen that 89.77% respondents know about the harmful effects of adulterated food on children’s mental and physical development and 10.23% respondents don’t know about the harmful effects of adulterated food on children’s mental and physical development. (Ref. Table – 12, 13 & Fig. - 3)

Knowledge regarding testing of iodized salt found poor. Only 18.18% respondents know well about the testing of iodised salt, 4.55% respondents know wrongly about the test of iodised salt and 77.27% respondents don’t know about the test of iodised salt at all. About the knowledge of testing fish for formalin found poor too; 30.68% respondents know correctly, 11.36% know incorrectly, 57.96% don’t know at all. (Ref. Table – 14 & Fig. – 4)

Food safety requires consciousness of the consumers. But it is observed that none of the respondents inform sanitary inspector though 70.45% respondents throw these, 23.86% eat these, 13.64% return these, and 02.27% do other things. Very few; 10.23% respondents got the information from Newspaper, from Television 73.86%, known person 43.18%, none from Radio and others 2.27%. (Ref. Table – 15 & Fig. – 5)

Awareness and education is essential to combat with food hazards. In this regard the respondent’s opinion is quite good. A very few numbers; 4.65% respondents said male should be educated, 3.48% said female, 5.81% respondents remain undecided but the majority’ 86.06% said both male and female should be taught. Children are the future of the nation. Besides food adulteration practice worsening day by day. We don’t know what shape it will take in future. So, we do not have option that to teach them adequately. In this regard 57.95% respondents said that the relatives should take responsibilities, 52.27% said school teachers and 03.41% said others should play the role. (Ref. Table – 16, 17)