# Discussion:

Prevention and control of indoor air pollution and proper domestic waste disposal is of immense importance in maintaining acceptable health standard and wellbeing of the people of a country. In unban areas there are policies, plan and arrangements for the purpose. But in rural areas of Bangladesh it depends upon the families and individuals in the community. The infrastructure exists in Bangladesh is adequate to educate people and monitor. However continuous motivation is required as most of the peoples are ignorant and illiteracy is predominant. This cross sectional descriptive study was carried out to find out the knowledge and practice regarding indoor air pollution and waste disposal of rural people. Findings are discussed in the following pages.

# A. Socio-demographic information:

Regarding socio-demographic status Bangladesh falls into late expanding stage now and according to socio-economic status Bangladesh among the developing countries and with in the poorer countries.

To accomplish the study we required head of the households or his representative. So, regarding age respondents are almost evenly distributed; that is among the total 155; 39(25.16%) respondents belongs to the age group 21 – 30 years, 41(26.45% ) among 31 – 40 years, 48(30.97%) among 41 – 50 years though only 27(17.41%) respondents are in the age group more than 50 years of age that is the lowest number. Education affects life styles significantly in most cases. In this regard highest 66(42.58%) respondents studied up to primary level, very few the lowest number 7(4.51%) higher secondary level. Illiterates and secondary level study groups accounts almost equal; that is 42( 27.10 %) studied up to secondary level and 40(25.81% ) found illiterate.

Occupation relates significantly personal hygiene as well as family hygiene. Occupation of the respondents or the earning members in the family shows that marginally highest 36(23.21 %) are day labourer, among others second highest 33 (21.99%) are service holders, 30(19.35%) are businessman and 23(18.71% ) of them are engaged in different professions. A little number; although it is a village among 155 families only 20(12.90%) are farmers and the remaining 7(4.52 %) are in over seas employment. Regarding monthly family income highest 40(25. 81%) family income ranges 6001 – 9000Taka, lowest 27(17.42%) family income is less than 3000 Taka. Monthly income of taka ranging 3001 to 6000 and more than 12000 accounts same 34( 21.93%) and rest 20(12.91%) have a family income ranging 9001 to 12000 Taka.

Out of 155 families 4(2.58%) families yet to get child while 58(37.42%) have 3 – 4 and a significant number of families 35(22.58%) have 5 or more children. Although 58( 37.42%) families maintained national recommended family norms of having 1- 2 children during the study period.

**Indoor air pollution**

In Bangladesh 80% of the population lives in rural areas. Majority of them involved in agricultural works also includes some extent of animal husbandry, poultry, fishery, production of vegetables etc. The usually process & store their products in the premises of their housing.

Regarding total land areas in the premises of house; highest 57.42% houses have less than 10 decimals of land, lowest 1.29% has 31-40 decimals land area and only 4.51% has more than 40 decimals of land. Among rests 24.51% 11-20 decimals, 12.26% have 21-30 decimals. Areas of housing measuring less than 300 sft in more than two third of cases that is 72.90% families, others 21.29% has 301-600 sft and 5.80% has >600 sft. Regarding number of bedrooms about half of the respondents accounting 46.45% have 2 bedrooms, 21.29% have 1 bedroom, 18.06% have 3 and 14.19% >3 bedrooms. Regarding built of the floors almost three fourth that is 72.26% have their housing with brick built floors and the rest only 27.74% have floors made of soil. Findings regarding built of the walls of housing shows that 25.81% has brick built walls, 10.96% walls built of tin, 43.23% made of soil and 20% made of straw and other locally available materials. Windows are essential for ventilation but findings shows that almost two third of the houses, 62.58% has only one window that house has one window. This means there may be some ventilation during daytime but at night when all the family members are within the house are ill ventilated. Another 15.48% has 2 windows though the number of bedrooms is not correlated. So, whether ventilation is present or not could not be ascertained. Among rests only 3.87% has more than 2 windows and 18.07% has no window at all. Although almost all of the houses found ill ventilated knowledge regarding detrimental effect of ill ventilated house found good. Among 155 respondents 70.97% of them know diseases may result due to ill ventilated houses 29.03% respondents are not aware of it. Verandah is very much useful for many reasons. Study findings shows that 63.87% respondents have verandah while 36.13% do not.

Regarding storage of different products; 32.26% respondents stores their food grains and other products in separate place & 67.74% respondents do not have. This may affect in different ways according to the products and the way they store in their housing. Again knowledge in this issue exceeds the practice of the families; 73.55% respondents have knowledge of diseases produced by grain dusts & 26.45% respondents are not aware of this. Traditional ovens produce varying amount of smokes which is injurious to health specially the vulnerable groups – children and elderly peoples. Kitchen with in the house and without arrangement of exhaustion by no means acceptable. In this regard majority 70.97% housing has separate kitchen & 29.03% don’t. 73.55% of the respondents are aware of lung diseases from smoke from cooking & 26.45% respondents are not aware of if. Out of 155 families 84 have domestic animals. Use of smoke to dispel mosquitoes pollutes air. More than half of the families; 54.76% use smoke and rest 45.24% do not.

Temporary storage of food scraps particularly at nights with in house pollutes not only indoor air but also the cause of attraction of rodents specially cockroaches and mouse. In this regard 53.55% respondents informed that they dispose food scrapes just after dinner & 46.45% respondents dispose in the morning. Among them 87.09% respondents know food scraps attracts rodents though 12.90% respondents do not know. Access of flies and cockroaches to foods results in diseases know 90.32% respondents and 9.68% respondents do not. Poultry and cattle should be away enough from the dwelling house. It the study areas 90 families out of 155 do not have poultry. Among 90 families 30.77% people keep poultries in a separate sheds but attached to houses, 13.85%have sheds within the houses and 55.38%people keep poultries in separate sheds nearby the dwelling house. More than half of the families that is 85 out of 155 do not have domestic animal. Among 85 families 57.14%keep cattle and goats near by the house, 27.14% keep in a shed situated away from their houses but less than 25 feet away and only 15.72%keep 25 feet or more away from dwelling houses. Though more than half of the families do not have poultry or domestic animal but among the 155 respondents 72.26% are aware of the diseases that can be transmitted from cattle & poultries and 27.74% respondents are not aware of.

# Waste disposal

Waste disposal awareness along with good practice is essential in maintain health. In this regard half of the respondents that is 50.32% have no specific site of disposal. Rest half though dispose in specific areas but not ideal; 29.6% in canal near the house, 16.77% in pit hole and 3.22% in bushes. Knowledge in this regard is said to be good; 83.87% of the respondents know flies breed in garbage although 16.12% do not know. Only 84 families have domestic animals. 100% of them stores animal dung in open holes. This table shows that 48.39% of the respondents use Water seal latrine, 30.32% use septic tank and a significant number; 21.29% use open toilet.