

## Exploring Constraints for Willingness-to-join to Community-based Health Insurance Scheme Perceived by Rural Households of Gaibandha District in Bangladesh

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**Abstract:** *Due to the lack of necessary public funding and the absence of health insurance, the low-income rural people of Bangladesh have no protection against catastrophic health expenditures. Many policymakers recommended introducing self-financed healthcare service schemes, such as community-based health insurance schemes (CBHI) for ensuring health security, which could be a new source of financing apart from tax revenue. Hence, the CBHI scheme can provide healthcare services to a large number of those low-income rural populations. To explore the demand of the households for the CBHI scheme, it is necessary to assess the willingness-to-join (WTJ) of the CBHI scheme in the study area together with exploring the reasons for not joining the scheme. It is believed that this study will help policymakers to assess the WTJ and to identify the constraints for not joining the scheme of the rural households in Bangladesh. Thus, 10 (Ten) reasons had been identified that were the barriers for WTJ to the scheme. The Relative Importance Index (RII) method had used to describe the relative importance of the specific causes and effects based on the reasons for unwillingness to join the CBHI scheme by using the Likert scale of five categories. In the study, about 90.1% of respondents expressed their WTJ though inexperienced with 97.1% for the CBHI scheme. On the other hand, 9.9% were unwilling to join the scheme, and the majority of households of them explored their financial inability as the barrier to WTJ the scheme. Besides, according to the RII method, “Government will provide all types of healthcare services free of cost” had considered the most important reason, and “Lack of trust in the management of the fund” had considered the least important reason for the unwillingness of joining to CBHI scheme. To ensure financial protection, it is very necessary to improve communication, coordination, and partnerships between nongovernment organizations, donors, and government stakeholders involved in CBHI, were recommended.*

**Keywords:** *Community-based health insurance, Willingness-to-join, Unwillingness-to-join, Gaibandha, RII*

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**Abbreviations:** Community-based health insurance (CBHI), Willingness-to-join (WTJ), Shasthaya Shurokkha Karmoshuchi (SSK), Ministry of health and family welfare (MOHFW), Socio-Economic Status (SES), Bangladesh taka (BDT), Standard Deviation (S.D), Universal Health Coverage (UHC), Out-of-pocket (OOP), Relative Importance Index (RII).

## **Background**

In reducing poverty and ensuring sustainable development, Universal Health Coverage (UHC) is a very significant criterion. Under UHC, all people can receive healthcare services without falling into unexpected financial hardship who need it the most (Fadlallah *et al.*, 2018). Like other low and middle-income countries, Bangladesh is also trying to achieve UHC for ensuring access to healthcare services for all. In reference to significant improvements in several health indicators such as; immunization, maternal and child mortality, and life expectancy at birth can be addressed that Bangladesh had achieved this in recent decades (Ahmed *et al.*, 2016). However, it has been difficult to achieve UHC because of the small tax base and resource constraints for financing healthcare services in Bangladesh like many low and middle-income countries in the world.

Every year about 15.6% of households are facing catastrophically impoverished situations due to the high and undue burden of out-of-pocket (OOP) payments in Bangladesh (Ahmed *et al.*, 2016). It is noted that the OOP payments constituted 63.3% of total healthcare expenditures which has been considered the major payment strategy in the country ((BNHA, 1997-2012). Many experts have recommended self-financing mechanisms as community-based health insurance (CBHI) schemes to solve the financing problems in healthcare (Abdilwohab *et al.*, 2021).

Most of the CBHI schemes are of similar characteristics to risk-sharing, community solidarity, and participatory nature in decision-making through designing the benefit package, premium setting, as well as claims settlement (Binnendijk, 2014; Abdilwohab *et al.*, 2021). Individuals or households in a community can get healthcare services under a benefit package of a CBHI scheme. Thereby, the premium amount of money has to be paid by the insured members for the included services in the benefit package, though joining the scheme is voluntary in nature (Fadlallah *et al.*, 2018).

The experiences of various countries can be shared in this context. As a representation of low-income countries, the experiences of health insurance in Ghana can be addressed. In 2012, about 35% of population coverage was achieved in the country, though they started financing health insurance schemes in 2005 (Mahmood, 2015). There are various similarities in the socio-cultural and financial characteristics of Bangladesh and India. Thus, while implementing health protection schemes, the challenges faced by India can be relevant to Bangladesh. In India, to provide healthcare services for the below-poverty-line population, “Rashtriya Swasthya Bima Yojana (RSBY)” was established in 2008. It was the largest voluntary health insurance scheme in the country, which was operating at the national level. Nevertheless, about 25% - 26% of the total population was covered under any kind of health insurance scheme in India (Mahmood, 2015). In Thailand, there were four health insurance schemes that covered about 75% of the total population by the year 2000 (HEU, 1999; Poletti *et al.*, 2007).

Though studies were conducted regarding the CBHI scheme, limited study has been done about the barriers confronted while joining the scheme. A low level of awareness, high level of premium, poor quality of services, limited benefit package, unavailability of drugs as well as medical supplies, inadequate information campaign, and lack of trust have been identified as the barriers to joining the CBHI scheme in relevant studies (Demissie *et al.*, 2021; Kigume *et al.*, 2021; Conde *et al.*, 2021).

While reviewing the literature, there were very few studies regarding health insurance in Bangladesh. Thus, limited experiences were identified from the literature, where most of the studies were linked to the micro health insurance schemes with micro-finance programs. The starting journey in health insurance was introduced by Gonoshasthya Kendra (1970s) and Grameen Bank (1990s) with their pre-paid health insurance programs in Bangladesh (Howlader *et al.*, 2001). Another pre-paid scheme can be addressed named “Amader Shasthya” in 2012 by International Centre for Diarrhoeal Disease (ICDDR’B) in the country as well (Iqbal *et al.*, 2017). Those were private initiatives and a government pilot project “Shasthaya Shurokkha Karmoshuchi, SSK” can be addressed as a government initiative in Bangladesh in this regard. Reducing OOP payments of the poor as well as increasing their access to healthcare services of them was the aim of the project (SSK, MOHFW, 2014). The aim is very similar to the aim of the hypothetical CBHI scheme, which was proposed in the present study.

The Gaibandha district was selected as the study area which was a disaster-prone area where most of the people suffer from different kinds of diseases with their low socioeconomic status (SES). Thereby, they cannot get proper healthcare services and sometimes get untreated resulting in their untimely death of them. Moreover, while receiving treatment, large OOP payments result in financial hardship. In absence of health insurance, the rural poor households in the study area generally face large OOP expenditures which sometimes force them to choose various hardship financing mechanisms for healthcare like borrowing with interest, asset selling, etc.

### **Justification of the Present Study**

To get relief from financial insecurity, as an alternative healthcare financing mechanism, a hypothetical CBHI scheme was proposed in the study. This will increase access to healthcare as well as will relieve people from catastrophically impoverished situations which were observed from the experiences of many CBHI schemes. Especially, the rural and vulnerable segments of society would be more benefitted from the scheme (Poletti *et al.*, 2007). Except for the hill tracts, most of the communities are of close characteristics, thus, the community people in the study area will be a representation of the rural community of Bangladesh. As there was no CBHI scheme running in the study area, thus the acceptance and willingness-to-join (WTJ) of the scheme among the community people were necessary to know. Besides, the barriers for WTJ were needed to identify, for ensuring the full functionality of the scheme. Thus, the present study has tried to identify the reasons for the unwillingness of joining the CBHI scheme.

### **Main Theme and Objectives**

There was no available study that has examined the barriers to the CBHI scheme enrolment adequately in the study area to the level of the researcher's knowledge. Thus, to explore the household's demand for the scheme, assessing the WTJ for the scheme together with identifying the reasons for unwillingness-to-join to the scheme in the study area was necessary. Therefore, the study has tried to explore the barriers to joining the CBHI scheme which poses identifying difficulties for health planners and policymakers to take proper initiatives while implementing the scheme.

### **Methods**

#### *Study area and Sample size*

A community-based household survey was conducted in rural areas of the Gaibandha district, as the study area. By using a multi-stage sampling procedure,

initially, four (4) Upazilas were randomly selected from the seven (7) Upazilas of the Gaibandha district; secondly, the villages were selected randomly from each Upazila, and in this process from each Upazila, two villages were selected to conduct the survey. The selected Upazilas were named Fulchhari, Gaibandha Sadar, Gobindaganj, and Sundarganj. A total of 516 samples were selected finally by using a simple random sampling technique for the study. Among them, the household head or the spouse of the household head or their parents or their child, who were above 18 years, were eligible for the study.

### *Research Approach*

Both quantitative and qualitative research approaches had been used to conduct the study.

### **Data Sources**

#### *Primary Data*

February 2019 to March 2019, was the time period for conducting the survey. A total of 15 (fifteen) ‘Open-ended’ and 33 (thirty-three) ‘Structured’ type questions were answered for collecting the primary data. Besides, 24 (twenty-four) Key Informant Interviews (KIIs) served as the primary data. Before designing a questionnaire, some key informants were interviewed in the research area such as the community leaders, teachers, health workers, and village-level NGO staff to identify the factors as barriers to joining the scheme. Thus, 10 (Ten) reasons were identified for unwillingness to join the scheme. The respondents were asked to give their opinion on a Likert scale from strongly disagree to strongly agree for the reasons. The identified reasons or statements were as follows:

Reason-1: Don’t understand the CBHI scheme.

Reason-2: There is a possibility to incur losses if not affected by diseases according to benefit package.

Reason-3: He/she does not need health insurance.

Reason-4: Out-of-pocket payment is affordable for him/her.

Reason-5: Poor cannot pay high premiums.

Reason-6: Lack of trust in the management of the fund.

Reason-7: Difficulties in functioning any health financing in the village.

Reason-8: I shall decide after running the scheme.

Reason-9: Government will provide all types of healthcare services free of cost.

Reason-10: God will take care of all diseases.

### *Secondary Data*

Population and Housing Census, 2011, Zila report: Gaibandha, Bangladesh budget, web pages, relevant books, and journal articles were the secondary data sources.

### *Data Analysis and Presentation*

SPSS version 21 was used for analyzing the edited data. Thereby, the frequency tables and cross-tabulations were generated. The derived data was presented in tabular and graphical forms using Microsoft Excel. The ‘Relative Importance Index (RII)’ method has been used to describe the relative importance of the specific causes and effects based on the reasons for unwillingness to join the CBHI scheme by using the Likert scale. In the study, the RII method has been used for exploring which reasons are most important and which reasons are least important for unwillingness to join the CBHI scheme.

### *Socio-Economic Status (SES)*

The head of the household in the study areas was selected as the study respondent and if the head of the household was not available while interviewing, any family member who was above 18 years, as well as a permanent resident, was interviewed. The age distribution ranged from the lowest up to 30 to 45 years (Table-1). The mean age was 38 years (Mean  $\pm$  S.D;  $38 \pm 12.567$ ), and 23.4% of them were elderly (45 years and above) people. About 65.9 % were male and 34.1% were female from a total of 516 respondents. The average family size was 5 (Five) with 97.3% married household in the study areas. The highest percentage of respondents were in daily labor which was 37.8% followed by 22.7% were of service holders, but the majority of them were employed in informal sectors like salesman, waiter, etc., whereas, a very tiny portion was employed in formal sectors, 21.3% were of self-employed in businesses, and 18.3% were of self-employed in agriculture. The people who did not earn a living were excluded from the study. The highest percentage of respondents were 42.8% who had achieved primary level education, followed by 37.0 % who had no kind of formal education, 15.5% who had secondary or higher secondary education, and only 4.7% who had graduation or higher degree. The mean annual income was BDT 112852 (Mean  $\pm$  S.D;  $112852 \pm 85322.641$ ), where the minimum income was BDT 18000, and on the other hand, the maximum income was BDT 650000 annually.

The majority of the sampled households had a toilet facility (54.3%) those used a pit latrine with slab/without slab/open pit and 31.2% used a modern toilet whereas 14.5% had no kind of toilet facility. All the households reflected the percentage of about 100% who used their own/shared tube well in the study areas. They did not use any surface water like a pond or river for drinking but rather for the purpose of washing clothes, cattle, or jute.

#### *Characteristics of the Proposed CBHI scheme*

In most aspects, the household's utilities differ in distinct geographic locations (Haile,2014). A hypothetical CBHI scheme needed to present in front of the respondents of the Gaibandha district to express their WTJ for the scheme as there was no running CBHI scheme in the study area as well as their inexperience with the CBHI scheme. The hypothetical CBHI scheme will move on the basis of the cross-subsidization method among population groups, such as; the rich people will subsidize the poor people and the younger group will subsidize the older portion, etc. The proposed benefit package, which had attached to the CBHI scheme, consisted of both curative and preventive services where the small intensity of hospital care had included at the initial stage of the scheme. While raising the pooling fund, the magnitude of hospital care will increase as well.

### **Results**

#### *Healthcare status of Gaibandha district*

About 94.2% had health expenditures and 42.6% had to meet hospitalization costs among the sampled households during the year preceding the survey. There were 35% of households, were seeking healthcare services from public healthcare facilities whereas 65% were seeking those from private sources though they had financial insolvency.

#### *Knowledge and WTJ to CBHI scheme in Gaibandha district*

About 97.1% of households in the study areas, were inexperienced with the CBHI scheme, whereas only 2.9% had knowledge about it through mass media, friends, and relatives. The study revealed that from a total of 516 households, 90.1% (465) were willing to join and 9.9% (51) were unwilling to join the scheme (Fig-1). The average monthly premium was identified as BDT 97.34 (1.148 USD) for joining the scheme. Although the contribution varied ranged from BDT 20 to BDT 300 among the sampled households in the study areas.

*Reasons for Unwillingness-to-join to CBHI scheme*

In the study, according to the Likert scale, the highest percentage of strongly agreed reasons cited by the respondents for unwillingness-to-join to CBHI scheme was “Government will provide all types of healthcare services free of cost”, followed by “I shall decide after running the scheme”. On the other hand, the highest percentage of the strongly disagreed reasons for unwillingness-to-join to the scheme were “He/she does not need health insurance”, “Lack of trust in the management of the fund”, and “Difficulties of functioning any health financing in the village” and “God will take care for all diseases”.

*Relative Importance Index (RII) method*

According to (Hatkar *et al.*, 2016, and Kassem *et al.*, 2020), the higher value of the index of RII is the most important reason that is determined by the equation as follows:

$$RII = \frac{\sum w}{A * N}$$

Where: RII – is Relative Importance Index.

W –is the weight given to each factor by the respondents from 1, 2, 3, 4, and 5 for strongly disagree, disagree, neutral, agree, and strongly agree, respectively.

A (Highest weight) = 5

N (Total number of respondents) = 51 (For unwillingness-to-join)

Table 4 and Table 5 exhibited that the statement “Government will provide all types of healthcare services free of cost” had the highest RII value which was 0.847 followed by “I shall decide after running the scheme” with an RII value of 0.815. The third was “Poor cannot pay high premium” with an RII value of 0.776, the fourth was “God will take care of all diseases” with an RII value of 0.698, fifth was “Don’t understand CBHI scheme” with an RII value of 0.686, sixth was “Out of pocket payment is affordable for him/her ”with an RII value of 0.678, seventh was “Difficulties of functioning any health financing in the village ” with an RII value of 0.643, eights were “There is a possibility to incur losses if not affected by diseases according to the benefit package”, and “ He/she does not need health insurance” with an RII value of 0.639, and the ninth was “Lack of trust to the management of the fund” with an RII value of 0.596 which was explored as the least relative important value.

## **Discussion**

In the study, the majority portion of households were males that reflecting the consistency of the study with Indian and African household settings in rural areas. Generally, in our social structure, males are the major decision-maker at the household level, which views were also similar to the present study. The 23.4% of respondents were 45 years and above, those were considered elderly people in the study area. Though the percentage was less than the younger portion, they were more sufferers of illness than younger individuals because of decreasing immunity, as per the researchers' view. A sense of family responsibility among households was reflected highly by marital status, and having families may encourage enrolment in CBHI, which can be considered as a strategy to meet up their healthcare needs. A high percentage of respondents had very little primary-level education (42.8%) or no kind of formal education (37.0 %) which reflected the education level was not quite satisfactory in the study area. The sanitation situation was not also quite satisfactory; however, a very satisfactory situation was observed in the context of drinking water in the study area which is very consistent (98%) with the national context of Bangladesh (Health Bulletin, 2017).

The number of family members varied highly among the study respondents. The average number of family members in households with 5 persons was consistent with the national context as well as in a study in Ethiopia (Ebrahim *et al.*, 2019), where the average number of family members in the households was 4.48 persons.

The majority of households were willing to join the CBHI scheme though it was a new concept for them. Compared to some studies (Kebede *et al.*, 2014; Aderibigbe *et al.*, 2017), high interest was reflected in the present study among the rural households in participation in the scheme. On the other hand, in a study in Ethiopia (Haile *et al.*, 2014), about 33% (59 out of 179) of the respondents did not want to join the CBHI scheme. In another study in Ethiopia (Ebrahim *et al.*, 2019), about 26.4% (109 out of 413) of the respondents did not want to join the CBHI scheme. Though the percentage of unwillingness to join was found small (9.9%) in the present study compared to other studies, it is significant for taking initiatives and policy-making to implement the scheme successfully.

A piece of very poor knowledge was reflected by the study respondents as only 2.9% had knowledge regarding the scheme which they heard from friends, relatives, and mass media. In a study by Aderibigbe *et al.*, 2017, it was 13% which was high compared to the current study. A poor understanding of the CBHI scheme was found because the CBHI scheme was expressed as a new concept in the study area. In addition, an overall lacking of understanding regarding health insurance, in general, was observed also.

The financial insolvency to pay a premium for joining the CBHI scheme was identified as the main barrier for rural poor households. In the study, high demand for the CBHI scheme was indicated, even though they were poor. The perceived understanding existed among all types of households in the Gaibandha district as they believed that such a policy would protect the rural households and their family members from any health-related shocks.

Proper marketing initiatives were necessary to inform people about the new concept of CBHI. In reference to the experience of Ghana, lacking sufficient marketing initiatives to inform the people regarding National Health Insurance Scheme (NHIS), created a low level of awareness and trust, resulting in disinterest in the scheme (Mahmood, 2015; NHIA, 2012; Jehu-Appiah *et al.*, 2011). The lack of accountability in health service provision found a barrier to the health systems in India. Moreover, the lack of good quality care did not make any difference in healthcare services between the insured and uninsured people of the country (Mahmood, 2015).

The health-seeking behavior of the households in the study area was satisfactory though the healthcare services while seeking treatment from private sources, were sometimes even unsafe. In most cases, while seeking treatments, they were dependent on traditional healers, pharmacies (drug sellers), self-prescribed medicine, etc. rather than seeking treatment from qualified doctors which resulting even untimely death of the rural people. Thus, due to the lack of affordability for low-income rural poor populations, healthcare utilization may decrease, which must need to be avoided.

In the study, it was explored that the majority of households wanted to join the scheme due to the illness of family members. On the other hand, "Government will provide all types of healthcare services free of cost" had considered the most important reason for unwillingness-to-join to CBHI scheme from the community perspective. It reflected that majority of households that did not want to join the

scheme due to their dependency on the healthcare services provided by the Government of Bangladesh. Due to the financial barriers of the respondents, they were dependent on government healthcare services which they can get free of cost whatever the service quality existed. On the other hand, "Lack of trust in the management of the fund" had considered the least important reason. Social capital can improve trust issues while implementing the CBHI scheme.

In various studies, (Haile *et al.*, 2014, Ebrahim *et al.*, 2019, Howlader *et al.*, 2001), lack of money and lack of trust in the insurance people had been identified as the major constraints for willingness to join the CBHI scheme. In a study in Bangladesh, the identified reasons for unwillingness to join were the lack of knowledge regarding health insurance, financial inability to pay the premium, lack of trust in insurance people, dependency on the government-provided healthcare services, financial losses whether not affected by the major diseases and overall, dependency on God for relief from any kind of diseases. Those were very similar to the present study (Howlader *et al.*, 2001).

In a study in Uganda (Mudasir, 2012), the identified barriers to joining the scheme were, limited understanding of the CBHI scheme, the lack of community participation in the management of the scheme, poor attitude towards the scheme, poor quality of services offered by the scheme, inappropriate benefit package offered by the scheme, poor health seeking behavior, lack of trust in the management of the scheme, and inability to pay the insurance premium. The identified reasons from those studies were consistent with the present study which should be considered at the policy level.

### **Recommendation and Conclusion**

The marketing of the CBHI scheme is needed for encouraging membership. Thereby, an information delivery system and communication procedure should be developed as well. Improving communication, coordination, and partnerships between the non-government organization, donors, and government stakeholders who are involved in the CBHI scheme is very necessary for ensuring financial protection which has been considered the main barrier joining to the scheme. The policymaker and health planners should consider the identified barriers through the present study to join the scheme. It was recommended to introduce the cross-subsidization method that may increase the extent of financial protection. From various studies, the inclusion of hospital care was suggested which had already been included in the present study at a limited scale initially

while designing the proposed CBHI scheme. Improving social capital can encourage the premium to be paid by cross-subsidization. However, the overall scenario reflected that launching the scheme will be well accepted in the Gaibandha district. Besides, more issues may arise for further research including the barriers of provider factors and scheme management factors. Those factors should be considered at the policy level for ensuring the full functionality of the CBHI scheme in terms of increasing quantity and improving the quality of supplied healthcare services to prospective clients.

### **Limitations of the Study**

As the household heads were not available all the time for interviewing, thus, the study may not reflect the actual attitude of household heads. Besides, the identified barriers explored the community perception, whereas the perception of the provider point of view and scheme management factors were not explored in the study.

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### **Contribution of Author**

The first author has formulated the research questionnaire, data collection, processing, and analyzed the collected data with the SPSS software, Microsoft Excel, and finalized the manuscript. The second author took part in analyzed and revised it critically for important intellectual content. Both authors have agreed to be published in the journal to which the article has been submitted and agreed to be accountable for all aspects of the study.

### **Conflict of Interest**

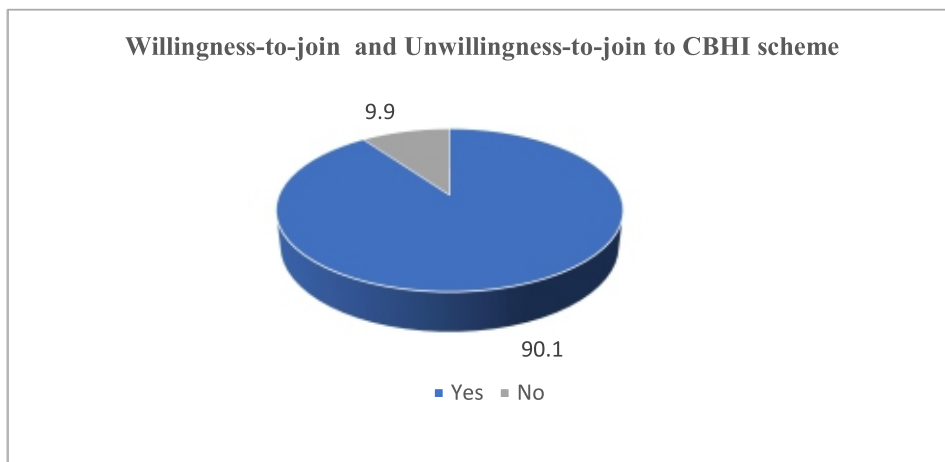
The authors declared that they have no conflict of interest regarding this study.

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- <https://www.exchangerates.org.uk/Dollars-to-Bangladesh-Taka-currency-conversion-page.html>, 1 USD = 84.7895 BDT on March 2021

## Appendices



**Figure-1:** “Yes” represents Willingness-to-join and “No” represents Unwillingness-to-join to CBHI scheme

**Table-1:** Socio-demographic characteristics of the study respondents in the Gaibandha District

| Variables             | Frequency (n) | Percentage | Mean<br>$\pm S.D$  | Minimum | Maximum |
|-----------------------|---------------|------------|--------------------|---------|---------|
| <b>Age group</b>      |               |            |                    |         |         |
| Lowest up to 30       | 197           | 38.2       | 38<br>$\pm 12.567$ | 18      | 80      |
| 31-45                 | 198           | 38.4       |                    |         |         |
| 45 above              | 121           | 23.4       |                    |         |         |
| <b>Gender</b>         |               |            |                    |         |         |
| Male                  | 340           | 65.9       |                    |         |         |
| Female                | 176           | 34.1       |                    |         |         |
| <b>Marital Status</b> |               |            |                    |         |         |
| Unmarried             | 3             | 0.6        |                    |         |         |
| Married               | 502           | 97.3       |                    |         |         |
| Widow/Divorce         | 11            | 2.1        |                    |         |         |
| <b>Family size</b>    |               |            |                    |         |         |
| Lowest up to 3        | 378           | 73.3       | 5<br>$\pm 1.734$   | 1       | 14      |
| 4 to 7                | 133           | 25.8       |                    |         |         |
| >7                    | 5             | 1.0        |                    |         |         |
| <b>Education</b>      |               |            |                    |         |         |
| No education          | 191           | 37.0       |                    |         |         |
| Primary               | 221           | 42.8       |                    |         |         |
| Secondary and         | 80            | 15.5       |                    |         |         |
| Higher secondary      |               |            |                    |         |         |
| Graduation /          | 24            | 4.7        |                    |         |         |
| Masters               |               |            |                    |         |         |
| <b>Occupation</b>     |               |            |                    |         |         |
| Service holder        | 117           | 22.7       |                    |         |         |

|                                                         |     |      |             |       |        |
|---------------------------------------------------------|-----|------|-------------|-------|--------|
| Business                                                | 110 | 21.3 |             |       |        |
| Farmer                                                  | 94  | 18.2 |             |       |        |
| Daily labor                                             | 195 | 37.8 |             |       |        |
| <b>Annual income</b>                                    |     |      | 112852      | 18000 | 650000 |
| Lowest up to                                            | 330 | 64.0 | ± 85322.641 |       |        |
| 100000                                                  | 139 | 26.9 |             |       |        |
| 100001-200000                                           | 47  | 9.1  |             |       |        |
| 200000 above                                            |     |      |             |       |        |
| Sources of drinking water                               | 516 | 100% |             |       |        |
| <b>Toilet facility of households</b>                    | 75  | 14.5 |             |       |        |
| No toilet                                               | 280 | 54.3 |             |       |        |
| Pit latrine with slab/Pit latrine without slab/Open-pit | 161 | 31.2 |             |       |        |
| Modern                                                  |     |      |             |       |        |
| <b>Knowledge of the CBHI scheme</b>                     |     |      |             |       |        |
| Yes                                                     | 15  | 2.9  |             |       |        |
| No                                                      | 501 | 97.1 |             |       |        |
| <b>Households with health expenditures</b>              | 486 | 94.2 |             |       |        |
| Yes                                                     | 30  | 5.8  |             |       |        |
| No                                                      |     |      |             |       |        |

**Table-2:** WTJ and WTP for the CBHI scheme among the respondents (percentage)

|     | Yes (%) | No (%) |
|-----|---------|--------|
| WTJ | 90.1%   | 9.9%   |
| WTP | 86.2%   | 13.8%  |

**Table-3:** Monthly WTP for the CBHI scheme among the respondents

| WTP (BDT)    | Frequency  | Percentage   | Mean  |
|--------------|------------|--------------|-------|
| .00          | 71         | 13.8         | 97.34 |
| 20.00        | 13         | 2.5          |       |
| 30.00        | 13         | 2.5          |       |
| 40.00        | 12         | 2.3          |       |
| 100.00       | 355        | 68.8         |       |
| 200.00       | 20         | 3.9          |       |
| 300.00       | 32         | 6.2          |       |
| <b>Total</b> | <b>516</b> | <b>100.0</b> |       |

**Table-4:** Frequency distribution for Unwillingness-to-join to the CBHI scheme

| Attributes | Strongly agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly disagree (1) |
|------------|--------------------|-----------|-------------|--------------|-----------------------|
| Reason-1   | 9                  | 17        | 16          | 5            | 4                     |
| Reason-2   | 2                  | 22        | 14          | 10           | 3                     |
| Reason-3   | 7                  | 17        | 11          | 11           | 5                     |
| Reason-4   | 10                 | 18        | 8           | 12           | 3                     |
| Reason-5   | 23                 | 11        | 6           | 10           | 1                     |
| Reason-6   | 2                  | 18        | 13          | 13           | 5                     |
| Reason-7   | 13                 | 8         | 12          | 13           | 5                     |
| Reason-8   | 25                 | 12        | 9           | 3            | 2                     |
| Reason-9   | 29                 | 13        | 2           | 6            | 1                     |
| Reason-10  | 14                 | 12        | 15          | 5            | 5                     |

**Table-5:** Relative Importance Index for Unwillingness-to-join to the CBHI scheme

| Attributes | Strongly agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly disagree (1) | Total | Total number(N) | A*N | RII         | Ranks |
|------------|--------------------|-----------|-------------|--------------|-----------------------|-------|-----------------|-----|-------------|-------|
| Reason-1   | 45                 | 68        | 48          | 10           | 4                     | 175   | 51              | 255 | 0.68627451  | 5     |
| Reason-2   | 10                 | 88        | 42          | 20           | 3                     | 163   | 51              | 255 | 0.639215686 | 8     |
| Reason-3   | 35                 | 68        | 33          | 22           | 5                     | 163   | 51              | 255 | 0.639215686 | 8     |
| Reason-4   | 50                 | 72        | 24          | 24           | 3                     | 173   | 51              | 255 | 0.678431373 | 6     |
| Reason-5   | 115                | 44        | 18          | 20           | 1                     | 198   | 51              | 255 | 0.776470588 | 3     |
| Reason-6   | 10                 | 72        | 39          | 26           | 5                     | 152   | 51              | 255 | 0.596078431 | 9     |
| Reason-7   | 65                 | 32        | 36          | 26           | 5                     | 164   | 51              | 255 | 0.643137255 | 7     |
| Reason-8   | 125                | 48        | 27          | 6            | 2                     | 208   | 51              | 255 | 0.815686275 | 2     |
| Reason-9   | 145                | 52        | 6           | 12           | 1                     | 216   | 51              | 255 | 0.847058824 | 1     |
| Reason-10  | 70                 | 48        | 45          | 10           | 5                     | 178   | 51              | 255 | 0.698039216 | 4     |