



## Original Article

### Reflection of Health Insurance among Bangladeshi Primary School Teachers

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**Abstract:** Over 1.3 billion people in the world are challenged to access good and cheap healthcare when become ill. Health insurance policies are a fantastic strategy to assist people who can't afford medical care. For middle- and low-income nations, there hasn't been much research on the ability to pay for health insurance for public employees like school teachers. Therefore, this cross-sectional questionnaire based research has been undertaken to explore the reflection of health insurance among 383 Bangladeshi school teachers of 5 divisional city center primary school and were being surveyed online between 1<sup>st</sup> August to 30<sup>th</sup> August 2022. According to survey, monthly average (mean) health expenditure of respondents were 7668.93 BDT (Bangladeshi Taka equivalent to \$80.72) with 95% confidence interval. Of 35% responders suffered from high blood pressure, approximately 8% people were suffering from arthritis and asthma, 7.8% people have heart disease and 8.1 % people suffer from cholesterol problem. Maximum respondents (80%) agreed that health insurance is burden for them. About 51% teachers had no idea about health insurance. However, there was no significant relation in between educational status and health insurance perception for male and female teacher respondents. Moreover, the comparative data highlighted that more awareness and more exploration might be needed in health insurance perception for primary school teachers. This result can contribute to form people's choice-oriented health insurance policy.

**Key words:** Reflection, perception, health insurance, primary school, school teachers

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**Introduction:** Health insurance is considered differently from most other insurances due to a policy standpoint as there is not any drive for government subsidized insurance<sup>1</sup>. It might be claimed that this disparity is due to two factors<sup>2</sup>. Firstly, public health insurance may be regarded by policymakers as a crucial component of the social safety net that extensively need to allocate assets to lower-income communities<sup>3</sup>. Secondly lack of awareness and knowledge regarding health insurance among people<sup>3</sup>. This research might not all directly relate to the present policy discussion. However considerably, reflection of primary school teacher on health insurance of health will provides crucial insights into how coverage influences the use of healthcare services, the treatment and outcomes of diseases, self-reported health, and mortality<sup>4</sup>. Looking forward to health screening status among Asian based on health insurance perception, it is noticeable that Asians are much more likely to report receiving an immunization across all types of insurance status<sup>5</sup>. In addition, Asians tend to use immunizations like flu injections more frequently than other screening methods. However, it is unclear whether the reduction of screening among Asians are caused by access issues of the primary health care setting or knowledge gaps or language difficulties or affordability based on health insurance<sup>6</sup>.

Universal health coverage (UHC) says *everyone can access the medical care they require without facing financial hardship with universal health coverage*<sup>7</sup>. Prior to the pandemic, nearly one-third of the world's population still lacked access to basic medical services<sup>8</sup>. According to World Health Organization, 25% of households spend more than 10% of their total income or expenses on health-related expenses in the world<sup>9</sup>. Additionally, greater people now than ever spend more than 10% of their household income on health expenses, and therefore, half a billion people are either forced or driven deeper into extreme poverty (\$1.90/day) because of out-of-pocket health expenses<sup>10</sup>. Although there is slight information on the pandemic's effects on UHC at this time, there are early evidence that by the end of 2021, health insurance coverage would still be significantly below pre-pandemic levels and that financial protection would have gotten worse<sup>9</sup>.

However, the goal of 75% of national health policies, strategies, and plans of Bangladesh, is to implement universal health coverage<sup>11</sup>. Nevertheless, by household spending, 3.72% of the entire population are

now living below the \$1.90 per day poverty threshold. Due to higher household health costs, the poverty threshold may gap grow more<sup>12</sup>. Moreover, in Bangladesh, where paying out-of-pocket is the primary method of healthcare financing and there, out of pocket expenditure proportion has dangerously climbed from 55.9% in 1997 to 67% in 2015 whereas minimizing financial burdens is especially important<sup>13</sup>. In addition, this situation is made more insecure by the presence of low-income people, which causes a great deal of Bangladeshi homes to bear a terrible financial strain to bear health care facilities, to achieve UHC due to this group's high mobility, lack of organization, geographical dispersion, and lack of formal tracking through the national registration system<sup>13,14</sup>. The World Health Organization recommends using possibility arrangements to pay for medical care. It is difficult to include these employees in health insurance. The "understanding gap" for health insurance, among other obstacles, contributes to Bangladesh's poor insurance acceptance<sup>16,17,18</sup>. Actually, public satisfaction is an essential determinant of the quality of healthcare and is frequently linked to increased adherence to medical technology, the use of healthcare services, and positive health outcomes<sup>15</sup>. Following the evaluation of public satisfaction regarding healthcare insurance, it is necessary to know whether they have adequate perception on health insurance or not. Moreover, the perception of health insurance among people might assist to establish the relationship among demographic domains such as- age, sex, knowledge, education level, household income, expenditure. Therefore, the aim of this study is to evaluate the social and demographic statistics of health care insurance perception among primary school teachers in Bangladesh.

This study focused on primary school teachers' perception on health insurance so that after analyzing result, it could give more emphasize on training and evidence-based knowledge for primary school teachers based on health insurance advantages and disadvantages. According to that, from primary level, teachers might share their knowledge to the community and, it will give more importance on health insurance policy from local level which might affect globally in future.

**Methodology:** A cross sectional study has been conducted among 383 primary school teachers from 5 primary school of 5 districts (Dhaka, Rajshahi, Barisal, Chittagong and Sylhet) of Bangladesh. The selected school were 1. Azimpur Model Government Primary

School in Dhaka 2. Chittagong Municipal Model Government Primary School in Chitagong, 3. The Agrani College and School in Sylhet, 4. Barisal's Sher-e Bangla government primary school in Barishal and 5 Rajshahi's Uposhohor Model Primary School in Rajshahi. Respondent were surveyed online between 1<sup>st</sup> July 2022 to 30<sup>th</sup> July 2022. The participating teachers' email addresses were gathered. Emails were distributed including consent forms and a link to a Google form of semi- structured questionnaire containing 26 question which took 10 to 15 minutes to answer. The questionnaire was closed ended (Yes/No/Don't Know) type. No names and identification has been used in the google survey questionnaire form which has made it anonymous. The participants are being ensured with proper privacy for data protection and, password has been used to encrypt the study folder on the computer. Participation in this were entirely voluntary, and participants were free to choose not to answer any questions. Ethical clearance was obtained from Ethics Review Committee of the Bangladesh Bioethics Society. Ethical Clearance no 0032/16/2022. Primary school teachers from selected schools and who agreed to give consent, participated the survey.

Result had been analysed with 95% confidence level in this case, 5 standard deviations and a 5% confidence interval for the marginal error. Data had been examined using the SPSS 26.0 programme. Demographic and other variables analyzed by frequency and percentage distribution. Comparison of d have been done by  $\chi^2$  test.

Categorical variables (age, sex, demography, history of disease, health insurance knowledge, health services accessibility), frequency and descriptive statistics had been explored to show how many responders pose their view based on questionnaire. Similarly, continuous variables (monthly income, family number, health expenditure) have been analyzed by exploring descriptive statistics to find out the mean, median and standard deviation. Finally,  $\chi^2$  test has been done to discover the significance level in between categorical and continuous variable and different variable between male and female reflection between on health insurance. A  $P < 0.05$  was considered statistically significant.

**Result and Discussion:** Among 383 participants, 100% of the participants responded in the survey. Regarding gender statistics, 59.8% of respondents were female, and 40.2% of respondents were male (Table 1). The majority of primary school teachers (78%) had age between 25 to 35 years. Age between 36 to 45 years (21%) and only 1 % of primary school teachers were between 46 and 55 aged (Table 1). Following their educational level, most (63.4%) hold master's degrees, 24.3% had bachelor's degrees and only 12.3% people passed HSC. However, the relation between education status and health insurance not statistically significant ( $P>0.05$ ) (Table 3).

Table 1 Shows the demographic data of the primary school teacher (n=383)

| Variable                                 |                                                                        | Frequency<br>(Percent (%)) | Total<br>(Percent (%)) |
|------------------------------------------|------------------------------------------------------------------------|----------------------------|------------------------|
| Sex                                      | Female                                                                 | 229 (59.8%)                | 383 (100%)             |
|                                          | Male                                                                   | 154 (40.2%)                |                        |
| Age                                      | 25 to 35 years                                                         | 299 (78%)                  | 383 (100%)             |
|                                          | 36 to 45 years                                                         | 80 (21%)                   |                        |
|                                          | 46 to 55 years                                                         | 4 (1 %)                    |                        |
| Education                                | Master                                                                 | 243 (63.4%)                | 383 (100%)             |
|                                          | Bachelor                                                               | 93 (24.3%)                 |                        |
|                                          | HSC                                                                    | 47(12.3%)                  |                        |
| Family type                              | Joint family                                                           | 183(47.8%)                 | 383 (100%)             |
|                                          | Nuclear family                                                         | 200 (52.2%)                |                        |
| District wise population                 | Dhaka                                                                  | 75 (19.53%)                | 383 (100%)             |
|                                          | Chittagong                                                             | 229 (59.79%)               |                        |
|                                          | Barisal                                                                | 75 (19.50%)                |                        |
|                                          | Sylhet                                                                 | 2 (0.56%)                  |                        |
|                                          | Rajshahi                                                               | 2 (0.62%)                  |                        |
| Disease stratification of schoolteachers | High blood pressure                                                    | 173 (45.22 %)              | 383 (100%)             |
|                                          | Asthma                                                                 | 36 (9.4 %)                 |                        |
|                                          | High cholesterol,                                                      | 32 (8.35 %)                |                        |
|                                          | Heart disease                                                          | 30 (7.83 %)                |                        |
|                                          | Diabetes                                                               | 26 (6.8 %)                 |                        |
|                                          | Multi-morbidities like diabetes-asthma, high cholesterol heart disease | 86 (22.4%)                 |                        |
| Monthly Health expenditure               |                                                                        | 7668.93 BDT                | 383(100%)              |

From this result interpretation, more exploration might be needed to find out why education status did not reflect any significant relationship. However, these connections have also increased the probability of risk for health insurance sector financial incentives that might clash with socio-demographic variables (education, financial stability) <sup>19</sup>.

Table 1 Shows the demographic data of the primary school teacher (n=383)

| variable                                                                                      | Frequency (%) |                     | Total     |
|-----------------------------------------------------------------------------------------------|---------------|---------------------|-----------|
| Do you think or consider your health expenditure is a burden for you ?                        | No            | 74(19.32%)          | 383(100%) |
|                                                                                               | Yes           | 302 (78.86%)        |           |
|                                                                                               | Don't Know    | 7 ((1.82%)          |           |
| Do you think the prices of medicine is high?                                                  | No            | 28(7.31%)           | 383(100%) |
|                                                                                               | Yes           | 340(88.77%)         |           |
|                                                                                               | Don't know    | 15 (3.92%)          |           |
| Do you have knowledge of health insurance?                                                    | No            |                     | 383(100%) |
|                                                                                               | Yes           | Male 78 (20.37%)    |           |
|                                                                                               |               | Female 126 (32.90%) |           |
|                                                                                               | Don't know    | 179 (46.73%)        |           |
| Do you think having health insurance is a sign of financial stability of a person or family?  | Yes           | 222(58%)            | 383(100%) |
|                                                                                               | No            | 61(15.9%)           |           |
|                                                                                               | No idea       | 100(26.1%)          |           |
| Do you think Bangladesh government should develop good health insurance structure and policy? | Yes           | 324(85%)            | 383(100%) |
|                                                                                               | No            | 59 (15%)            |           |
|                                                                                               | No Idea       | 0                   |           |

According to the district survey, primary school teachers came from Chittagong (59.79%), Barisal (19.50%) Dhaka (19.53%), Rajshahi (0.56 %), and from Sylhet (0.62 %) respectively (Table 1). From family type statistical analysis, Table 1 shows that just a little below half (47.8%) people were living in joint families, and a little more than half (52.2%) people were from nuclear families.

Considering the school teachers' disease statistics, it was evident that respondents had high blood pressure (45.22%), asthma (9.4%), high cholesterol (8.35%), heart disease (7.83%), history of diabetes (6.8%), people with multi-morbidities like diabetes-asthma, high cholesterol heart disease (22.4%) respectively (Table 1).

Table 2 shows that most of the primary school teachers (46.73%) did not know about health insurance. According to the data collected only 20.37% of males heard about health insurance, on the other hand, 32.90% female participants heard about health insurance (Table 2). However, male-female difference regarding the knowledge of health insurance was not significant ( $P>0.05$ ) (Table 3).

Table 2 shows that over 80% of respondents thought that if they spent on their health issues, it would be a burden for them and below 20% thought just the opposite notion and health expenditure was not a burden for them (Table 2). However, there was no significant relationship ( $P>0.05$ ) between males and females and their thinking about the burden of health expenditure (Table 3). In our study most (88.77%) of primary school teachers' opinions about the price of medicine were above their financial ability (Table 2). However, primary School Teachers of all districts expressed that health expenditure is a burden for them. Nevertheless, respondents from 5 divisions regarding the health expenditure and the burden were statistical significance ( $P>.05$ ) (Table 3). Our study evidence suggests about more than primary school teachers did not show interest in health insurance because of a lack of perception and

knowledge. A study in the rural part of India showed that only 22% has health insurance coverage rest have no idea about health insurance <sup>20</sup>. However, a study in China showed that health insurance reduces pocket health expenditure by 29.42% <sup>21</sup>.

At a question of what was the reason for having health insurance? Only 15.9% of primary school teachers thought that health insurance brought financial contribution during illness. Over 26.1% of respondents had no idea about health insurance, and only 15% of school teachers thought that health insurance was not necessary (Table 2), and it was a total waste of money (Table not shown). Therefore, it reflects those school teachers need proper knowledge about health insurance perception and health insurance policy does need more clarity among primary school teachers.

Table 3: Co-relation between the perception of health insurance and dependent variables.

| Perception                                                          | Pearson Chi-Square  | df | P    |
|---------------------------------------------------------------------|---------------------|----|------|
| Health Expenditure a burden between male and female                 | .351                | 1  | .553 |
| Health Expenditure a burden among different divisions of Bangladesh | 31.687 <sup>a</sup> | 14 | .004 |
| Heard about health insurance and divisions of Bangladesh            | 12.846 <sup>a</sup> | 14 | .539 |
| Education Status and health insurance perception                    | 1.102 <sup>a</sup>  | 2  | .576 |

However, opinion shows controversial thinking about whether health insurance could be a sign of stability in their life. Most 60% of primary school teachers thought that health insurance was not a sign of their financial stability and of (26.1%) had no idea about

health insurance and financial stability. Only (15.9%) of respondents thought that health insurance could be a sign of their financial stability (Table 2). In addition, over 60% of teachers considered the importance of health insurance for elderly people (Table not shown).

On the other hand, half of them do not know the reason for having health insurance. Around 15% of school teachers thought that health insurance was not necessary, and it was a total waste of money, and 1% of people thought that buying health insurance or having health insurance is restricted by religion (Table not shown). According to a study done in Malaysia on non-salaried persons, education level, marital status, race/religion, and out-of-pocket (OOP) medical expenses were the main influences on whether or not they decided to get health insurance <sup>30</sup>. Therefore, it reflects that school teachers need proper knowledge about health insurance, and health insurance policy does need more clarity.

**Limitations of the study:** This cross-sectional descriptive study used semi-structured closed-ended survey. For this, semi-structured interviews' flexibility might reduce their validity and create a high bias probability. This study is based on quantitative descriptive statistics. That's why, in death perceptions were not verified. Many questions remained outside the questionnaire and were not asked according to consistency. As a result, research results may contain some level of bias.

**Conclusion:** This study has been perceived to the reflection of the present knowledge attitude of primary school teachers on health insurance. About 51% of teachers had no idea about health insurance. However, there was no significant relation between educational status and health insurance perception for male and female teacher respondents. The comparison revealed a widespread lack of knowledge of the fundamental concept of health insurance perception which might be remedied following further recommendations. This study considerably explored that apart from socio-demographic variables, moralistic

factors like culture, politics, and religion might create awareness among primary school teachers' health insurance perception. Therefore, further study will explore cultural concepts statistics of primary school teachers and, whether cultural factors have significant value on teachers' health insurance perception or not.

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