Indian Journal of Social Science and Literature (IJSSL)
ISSN 2583-0643 (Online), Volume-2 Issue-3, March 2023

Determinants of Healthcare Services for Aged Women in Rural Bangladesh

Dipika Chandra, Delip Kumar Mondal, Rina Aktar

Abstract: ***In Bangladesh, one of the world's poorest nations, a significant share of the deprived inhabitants are elderly women who live in rural regions with little access to healthcare. The primary goal of this investigation was to analyse the determinant of healthcare services for aged women in rural Bangladesh. This study employed a survey research method, utilising an interview schedule. It was carried out in four villages in the Satkhira district. It was followed by purposive sampling, and a sample size of 260 was selected. The study revealed that 53.1 percent of the respondent took medical help promptly during the time of illness. Besides this 73.1 percent of the respondent took medical care from a qualified doctor and only 42.2 percent of the respondent get the old allowance. However, the nature of the treatment was influenced by the distance to a health facility (p < .001) and the response to seeking healthcare (p < .001). The results indicate that the head of the household's year of schooling (p = 0.001) and monthly household income (p = 0.001) had a significant relationship with the response to seeking healthcare.***

Key words: ***Determinants, healthcare, aged women and treatment***

I. INTRODUCTION

A change is taking place in the demographic structure around the world with a steady transition towards a higher proportion of older people. As a result, they are living longer than ever before, which poses a new kind of problem for the modern world (Biswas, Kabir, Nilsson & Zaman, 2006[7]). While old age affects both males and females, the societal perspectives show us that women are most vulnerable compared to men. In this study, aged women were defined as those who were 60 years or older. Health services were comprised of qualified doctors who provided services in a hospital or clinic and held a medical degree, as well as unqualified means, such as self-treatment, *kabiraj*, or taking medication directly from a drugstore or pharmacy. Even the inferior status of women in society is largely responsible for this consequence, which leads to gender inequality (Abed, 2013[1]). Surprisingly, Bangladesh seems to have the third-largest number of the poorer older population in the world (Tareque et al., 2013[20]).

Manuscript received on 01 March 2023 | Revised Manuscript received on 10 March 2023 | Manuscript Accepted on 15 March 2023 | Manuscript published on 30 November 2023.

** Correspondence Author (s)*
Dipika Chandra, Associate Professor, Department of Sociology Discipline, Khulna University, Khulna 9208, Bangladesh.
Delip Kumar Mondal, Former Student, Department of Sociology Discipline, Khulna University, Khulna 9208, Bangladesh.
Rina Aktar*, Assistant Professor, Department of Sociology Discipline, Khulna University, Khulna 9208, Bangladesh. E-mail: rina@soc.ku.ac.bd, ORCID ID: 0000-0003-3885-2244

In 2015 there were 7.3 million elderly women in Bangladesh with an estimated increase to 12 million by 2022 and 24.1 million by 2050 (BBS, 2015[5]; Economic and Social Commission for Asia and the Pacific, 2013). Particularly, 73 percent of aged women live in remote villages and rural or semi-rural areas in Bangladesh, and they are experiencing a longer duration of illness in comparison to rural males and other Bangladeshi demographic categories (Rahman, 2006[19]; Abed, 2013).

Therefore, older women in Bangladesh, especially those who live in rural areas, face various types of challenges. As a result, they suffered several health problems in third world countries that go untreated because of financial obstacles in accessing health care, discrimination, erratically scattered services between rural and urban areas, etc. (Ahmed et al., 2013; Hemachandra & Manderson, 2009[13]; Hossen & Westhues, 2011[16][23]). Besides that, in rural areas aged women are still receiving poor health services than their male counterparts. However, equal access to healthcare is a fundamental right, as stated in the Constitution of the People's Republic of Bangladesh. This constitutional right indicates that access to healthcare prioritises childbearing women, and funding is geared towards programs in maternal and child healthcare. On the other hand, elderly women's healthcare is a part of the same health program (Hossen, 2010; Abed, 2013[17]). However, aged women's health problems have received little consideration from health policymakers in the developing world. Moreover, statistics show that the average duration of illness among rural elderly women is 76 months for all kinds of diseases, which is higher than the normal duration of the disease at a time (Bangladesh Bureau of Statistics, 2015). Sometimes rural elderly women are not seeking health care as they do not consider their illness too severe to solve this (Biswas et al., 2006[8]; Hossen, 2013). As well as the average usage rate of rural public health facilities in Bangladesh is 30%, with the private and conventional healthcare systems offering medical care to most citizens. (Vaughan, Karim, & Buse, 2000[22]). The presence and involvement of aged women in social and financial structures in rural Bangladesh are nearly invisible; the circumstances of their daily lives differ according to their social status, financial context, and cultural features like social segregation; economic marginalization, norms, and narrow-minded values, persecution, dependence, and harsh conditions of living, familial relationships, etc. (Biswas et al., 2006; Tareque, et al., 2013[10]). Further, an insufficient health care infrastructure and poor management system appear to be major barriers to accessing health care services for elderly rural women in Bangladesh.

The health care service of Bangladesh comprises public, private, and traditional treatment options (Ahmed et al., 2013[2]). Public health services include district hospitals, local health centers, welfare Centers, and community hospitals (Uddin & Hamiduzzaman, 2009[21]).

Moreover, the Hockbaum et al. (1950[15]) found that the Health Belief Model (HBM) is a psychological model that aims to explain and predict health behaviours. According to the Davidson & Andersen framework for healthcare service usage, an individual's use of healthcare services is determined by three factors: predisposing, enabling, and need factors. The authority needs to reassess the laws and processes in place to ensure that older people in Bangladesh have access to basic healthcare, given the country's rapidly ageing population. The development of policies, the planning and cost-effective implementation of programs, and the calculation of their impact are crucial areas that need to be addressed. Today's challenge is to build a healthcare system that ensures fair coverage for everyone, including older women. In this regard, this study aims to explore the factors impacting older women's access to healthcare.

II. MATERIALS AND METHODS

The survey method was followed for collecting quantitative data, which is capable of obtaining information from large samples of the population (Glasow, 2005[11]). Data were collected using an English interview schedule, which consisted of both closed-ended and open-ended questions. The research was conducted purposively in *Shyamnagar Upazila*, Satkhira District. More specifically, four villages—Arpangashiya, Borokupot, Fulbari, and Chingrakhali —under Atulia and Shyamnagar unions were selected for the study. The inclusion criteria of the participants were – (i) The participant must be an aged woman 60 years or more, (ii) The participant must have lived in the selected area for at least 10 years. After finalizing the schedule, the fieldwork was carried out by the researcher and the survey extended from 16 April to 08 July, 2021. In this study, the researcher chose to use non-probability sampling because it is the only sampling method that allows for a representative sampling design. A pre-test was conducted to revise and finalise the interview schedule and ensure its practicability. As a candidate for multivariate analysis, any variable that has a significant univariate test at some arbitrary level is considered. Bivariate analysis was used to assess the statistically significant association between the dependent variables and the chosen independent variable. Pearson's chi-square ($\chi 2$) test of independence was used to determine statistical significance for categorical variables. Finally, the effect of the independent variable on dependent variables was investigated using binary logistic regression. The logistic models were created using the variables that were discovered statistically significant on Pearson's chi-square ($\chi 2$) test of independence. Lastly, qualitative data were analyzed thematically.

III. RESULTS

Personal Attributes of the Respondents: Among the 260 respondents, the proportion of respondents in the 65-69 age group was higher, at approximately 49 per cent. The mean and standard deviation were 66.52 and 4.623, respectively. It also showed that 47.7 percent of the respondent didn't know how to read and write. As most respondents were not financially well-off at times, they received the old allowance. The study discovered that 42.3 percent of the respondent get an old allowance on the contrary 57.7 percent of the respondent did not get any social assistance.

Information about Household: As most elderly women in Bangladesh are dependent on their families, familial information plays a crucial role in determining their access to healthcare services. As the head of the family made most decisions, their education also influenced the health-seeking behaviour of the elderly women. The results showed that most of the household heads were farmers (61.5 per cent), as the study was conducted in a rural area where they lived with seven or more family members. Most households have a monthly income of 25000 takas or above (29.2 percent) where 26.2 percent of the respondent is indicated that their family income was between 10000to 14000 taka.

Type of Health Problems: From the survey the study found that the most commons type of illness among the aged women are visual problem (79.2 percent), hearing problems (46.25), asthma (43.85 percent), Joint pain (81.5 percent)', cough (55.4 percent)', piles problem (13.8 percent)', blood pressure (66.9%), diabetes gastric (54.6%)', water bone diseases (17.7 percent) eye infections (23.1 percent), urinary problem (54.6 percent), etc.

Nature of Health Care Service: The study revealed that 53.1 percent of the respondent take medical help promptly during the time of illness, on the contrary 46.9 percent of the respondents seek medical help delayed during the time of illness. The study also found that 73.1 percent of the respondent take medical care from a qualified doctor and only 26.9 percent of the respondent seek medical care from an unqualified doctor. In terms of place of treatment, most respondents (48.5 per cent) seek healthcare from government hospitals, while 20 per cent of respondents seek medical care from non-government or private medical hospitals. The table also showed that 45.4 percent of the women spent 600 to 2000 taka on their medical treatment during the last 6 months when the data was collected.

Response in Seeking Health Care and Its Covariates (Chi-square Test): Among the personal information, respondents' religion, marital status, and living arrangement were not associated with their response in seeking health care (p> .583, p> .448, p>.314), respectively. That means those variables don't have any association with whether the respondent takes health services promptly or delays. Other personal attributes, such as the respondent's occupation, monthly income, and monthly savings, were also not related. However, the results showed that personal information, such as the respondent's age ($p < .004$), educational qualification ($p < .017$), and receipt of social assistance ($p < .028$), was associated with the response regarding seeking healthcare. In the familial factor, the head of the household ($p > .790$) and the number of the family were not related to the response in seeking health care. However, the results showed that the year of schooling of the head of the household ($p < .001$), the occupation of the head of the household ($p < .001$), and monthly household income ($p < .001$) had a significant relationship with the response regarding seeking healthcare. Among the variables within the nature of

the healthcare services, including the place of treatment, distance to the healthcare facility, and total cost of treatment (over the last 6 months), there is a significant association with the response in seeking healthcare, with p-values of <.001, <.001, and <.001, respectively. Furthermore, there was no relationship between cost bearers and their response in seeking healthcare.

Nature of Treatment and its Covariates (Chi-square Test): This study found that the nature of treatment for aged women was not associated with age, religion, marital status, education, number of children, living arrangement, and receipt of social assistance among the respondents. Furthermore, among the familial factors, the nature of treatment was influenced by the year of schooling of the household head ($p < .014$), occupation of the household head ($p < .001$), and monthly household income ($p < .001$). However, the research did not find any significant association between the nature of treatment and the head of the household ($p > .770$), or with the treatment cost bearer of the respondent. However, the nature of the treatment was influenced by the distance to the health facility ($p < .001$), the total cost of treatment within the last 6 months ($p < .001$), and the response in seeking healthcare ($p < .001$).

Place of Treatment and its Covariates (Chi-square Test): By this study, it is found that the place of treatment was not influenced by age of the respondent (p>.190), education of the respondent (p>.294), or by whether she got social assistance (p>.506) or not. However, the size of the family ($p < .017$) influences the place of treatment. Furthermore, the results showed that the education of the head of the household ($p < .002$), occupation ($p < .001$) of the household, and monthly household income ($p < .001$) have a significant relationship with the place of treatment. Additionally, the distance to a health facility ($p < .001$) and the total cost of treatment ($p < .001$) significantly influence where a respondent received their treatment.

Binary Logistic Regression in Terms of Response in Seeking Health Care: Table 7 demonstrates the outcome of the multivariate analysis of the factor of whether an elderly woman's response in seeking health care was prompt or delayed. The result showed that the odds of prompt response increase by 1.119 (95% C.I., 1.028, 1.219; p<.010) times with an increase in the value of the age of the respondent. Similar kinds of results were identified in terms of the education of both the respondent and the head of the household. It revealed that the odds of a prompt response increased by 1.341 (95% CI: 1.102, 1.632, $p < .003$) and 1.271 (95% CI: 1.119, 1.438), respectively, compared to those who had fewer school years. The study also found that respondents who received social assistance were 0.453 (95% CI: 0.223, 0.921, $p < .029$) times less likely to respond in healthcare. Furthermore, the size of the family and the number of children had a significant relationship with the response in seeking care. Besides other factors, the cost of treatment played an important role in determining the availability of healthcare services. The research found that the odds of a prompt response increased by 1.003 (95% CI: 1.002, 1.003; $p < .001$) with an increase in the value of the treatment cost. Another important determinant of healthcare services is income. The study indicates that those whose families earned between 15000-19000 taka per month (6.545, 95% CI: 1.288, 33.257; p < .023) were 6.545 times more likely to respond promptly in health-seeking behaviour than those who earned 10000-14000 taka per month. Similarly, those who earned 20000-24000 taka per month (OR=.00 95% C.I; 18.063, 522.092 p<.001) have higher odds of response in health-seeking promptly during illness. It indicates that the higher the household income, the higher the probability of responding in health-seeking behaviour.

A. Determining Factors of Healthcare Services for Aged Women

Opinion about Access to Medical Care: In terms of inadequate diagnostic equipment, 29.2 per cent of respondents disagree with the statement, whereas 42.3 per cent agree with it. Again, 43.8 percent of the respondent disagrees with the statement "unavailability of skilled physician" where 23.1 percent of respondents were neutral about the fact and 31.5 percent was agreed with the fact. Adequate medicine supply also curtails a better health service system. The table indicates that 40.8 per cent agreed with the fact that there is an inadequate medical supply. Where 33.1 percent of the respondent has remained silent about this statement. In terms of long-distance health care centers from home, 43 percent of the respondent disagrees with the fact and 42.3 percent of the respondent agree with the fact. Regarding the unhealthy environment at the Medical Centre, 53.8 per cent of the respondents disagreed with the fact, while 24.6 per cent agreed with the statement and about the lack of ambulance facilities majority of the people agreed (72.3) with the fact and another 20 percent of the respondent remained salient about the fact. In terms of the unsatisfactory behavior of medical service providers, 52.3 percent of the respondent disagreed with the fact and 34.6 percent of the respondent agreed with the fact.

Opinion about Economic Factors: From the table, it identified that about lack of income source 53.8 percent of the respondent agree with the fact and 42.3 percent of the respondent agreed with the fact beside this 1.5 percent strongly agreed with the statement. About the inability to buy nutritious food 88.5 percent of the respondent disagree with the fact and only 9.2 percent of the respondent agreed with the point. About unhealthy house structure and unhealthy sleeping/lying place, 92.3 and 93.8 percent of the respondent disagreed with the fact. Regarding the high medical costs, 80 per cent of the respondents agreed. About lack of familial financial support, 79.2 percent of the respondent disagreed.

Opinion about Environmental Factors: 49.2 percent of the respondents disagreed that they faced waterlogging and 43.8 agreed about waterlogging. About the variation, in temperature and rainfall, 57.7 percent of the respondent disagreed with the statement whereas only 28.5 percent of the respondent agreed. About the pollution majority of the people agreed ((60.8%) and 29.20 percent disagreed. About the destruction of sanitation facilities, 80.8 percent of people disagreed about the fact whereas only 14.6 percent agreed about the fact. Furthermore, 54.6 percent of the people agreed about the spread of insects and mosquitoes.

Behavioral Factors: The table indicate that 66.2 percent respondent disagreed that they take food irregularly and 27.7

percent agreed about the statement. In term of excessive physical activity majority of the respondent disagreed with the statement and another 13.1 percent of the people agreed with the fact. About the lack of physical exercise 43.8 percent approved and another 43.8 percent disagreed. The table demonstrated that none of the respondents consumed any kind of alcohol or were addicted to smoking. Fifty percent of the respondent strongly disagreed about the fact and 48.5 percent were disagreed. Besides this, the majority of respondents strongly disagreed (3.8%) and disagreed (61.5%) with the statement that one should not wash their hands before taking a meal. However, 29.2 percent of the respondent agreed about the fact. Furthermore, about not washing hand with soap after toilet 40.8 percent of the respondent agreed with the fact. In the contrary 48.5 percent of the respondent disagreed about the fact.

Opinion about Social Factor: The result demonstrate that 83.8 percent of the respondent agreed that they have good relationship with their family members and 8.5 percent of the respondent disagreed with the fact. About the good relationship with the neighbor's 76.2 percent of the respondent agreed with the point. And 21.5 percent of the respondent disagreed with the fact. In terms of caring family member 81.5 percent respondent agreed with the fact in the contrary only 7.7 percent disagreed with the statement. Furthermore, 46.9 percent respondent decided that they have available recreational facilities. But 44.6 percent of the respondent disagreed with the fact.

IV. DISCUSSION

The present study was conducted to identify the determinants of healthcare services for older women. The research found that the percentage of older women in the overall population of women has increased from 5 percent in 1991 to 6 percent in 2001 to 10 percent in 2015, and will reach 20 percent around 2050 (Hamiduzzaman et al., 2018[12]). Education is one of the most crucial factors in accessing healthcare services. The present research data indicates that the majority of respondents are illiterate, being unable to read or write. Similarly, they found that the older women's literacy rate was 19.6 percent, and only 5 percent of women attended formal schooling in rural West Bengal, India (Chakraborty, 2005[9]). The results also showed that a higher percentage of elderly women were married, and most of the respondents were homemakers who didn't have any monthly income or savings and were dependent on their families for their livelihood. Besides, previous research identified that 98 percent of older women in rural regions are jobless, with just 2 percent participating in the main rural economy (HIES, 2010[14]). The study indicated that the majority of respondents lived with their spouse and children, or exclusively with their children. Other research similarly suggests that between 2001 and 2011, rural homes saw a gradual rise in the number of widowed and lone older women (Begum & Wesumperuma, 2012[6]). The study revealed that approximately forty percent of the respondent get an old allowance which was a monthly 500 taka. However, the government's 1997 introduction of the Old Age Allowance (OAA) for the elderly has not increased healthcare access, purportedly due to financial restrictions (Begum & Wesumperuma, 2012).

From the findings of the chi-square test, it is evident that the nature of treatment is not significantly associated with the age of the respondent, the respondent's education, the number of children, receipt of social assistance, living arrangement, or the head of household. However, the study found that the nature of the treatment has a significant relationship with the year of schooling of the household head. However, findings show that the nature of therapy is influenced by the year of education of the household head and their occupation. The present study results indicate that participants receive treatment from both qualified and unqualified doctors. Here, 'qualified doctors' refer to government-registered doctors, and' unqualified doctors' include Kabiraj, Homoeopaths, etc. Other studies also find similar kinds of results, a study showed that they depended on both Western and traditional drugs, or a combination of both, to treat their problems. Women saw medication as only a means to a goal, and they were not reliant on doctors. (Hossein, 2010). Other researchers have shown that women in rural Bangladesh are less likely to have access to more expensive professional allopathic doctors for health care. Only one rural old woman in every 1,000 receives treatment from public or private hospitals or clinics, compared to two elderly women in every 1,000 who seek care from pseudo-professionals and traditional lay individuals such as village physicians, pharmacy salespersons, and witch doctors (*kabiraj*) (Andaleeb et al., 2007[4]).

Research using the chi-square test revealed a significant relationship between the distance to a health facility and the nature of the treatment. Another study indicates that older women had to pay substantial medical fees and travel great distances to access healthcare, thereby increasing the indirect cost of care (Aldana et al., 2001[3]). A study conducted in West Bengal, India, found a similar type of health problem among older women (Chakraborty, 2005). The results indicate that the head of the household's year of schooling ($p = .001$), employment ($p = .001$), and monthly household income ($p = .001$) all have a significant relationship with the response to seeking healthcare. That means that the variable influences whether the respondent seeks health care promptly or delays it. From the binary logistic regression, the study found that the age of the respondents, year of schooling of the respondent, year of education of the head of the household, whether the respondent gets social assistance or not, nature of the treatment, monthly family income, and the place of treatment was the most significant determinants of health-seeking response among the mother. The odds of a prompt response increase by 1.119 times with an increase in the value of the age of the respondent. The study also found that respondents who received social assistance were 0.453 times less likely to respond in healthcare. This could happen because those who received the old allowance lived in poverty. They tend to respond in healthcare lately. Other studies on aged women of rural Bangladesh found that they frequently do not seek treatment because, for cultural and economic reasons, they do not believe their sickness is severe enough (Biswas et al., 2006;

Hossen, 2010[18]; Rahman & Roy, 2009).

V. CONCLUSION

When it comes to rural older women in Bangladesh, there are a lot of impediments that prevent them from using and accessing medical and healthcare services. Besides, older women continue to be devalued citizens with severely insufficient healthcare access, which is frequently a result of their financial independence and diminished choice competence. As the study found that none of the respondent had any income, they were highly dependent on their family. Although the majority of respondents seek health care promptly, many respondents did so in a delayed manner. Because they faced various types of disparities in accessing healthcare services, such as inadequate diagnostic equipment, the unavailability of skilled physicians, inadequate medicine supplies, long distances to healthcare centres from home, and high medical costs. Social-economic vulnerability factors such as social exclusion, dependency upon others, an absence of familial support, as well as bad relationships with the neighbour are likely to continue to have a detrimental effect on rural aged women's healthcare access and well-being, thereby making them a growingly socially disadvantaged class in Bangladesh. In this view, developing a financially and electorally responsible health plan for rural older women in Bangladesh has become a matter of national self-interest in a country where senior women will soon hold significant power.

ACKNOWLEDGEMENTS

I am grateful to all the respondents who provided their valuable help and support by sharing the necessary information for my study. Without their kind effort, it would have been impossible to complete my research.

DECLARATION STATEMENT

Funding	No. I did not receive.
Conflict of Interests	There are no conflicting interests to the best of my knowledge.
Ethical Approval and Consent to Participate	Ethical consideration is a crucial component of a study, ensuring that respondents provide information without fear or hesitation. In this research, ethical considerations were met by seeking consent from the participants. Any misleading information or representation in a biased way was avoided.
Availability of Data Material	Certain sources might require access through an organization.
Author Contribution	All authors have equal participation in this article.

REFERENCES

1. Abed, F. Bangladesh's health revolution. The Lancet, 382(9910), 2048-2049. doi:10.1016/s0140-6736(13)62112-1 (2013). https://doi.org/10.1016/S0140-6736(13)62112-1
2. Ahmed, S. Changing health-seeking behaviour in Matlab, Bangladesh: do development interventions matter? Health Policy And Planning, 18(3), 306-315. doi: 10.1093/heapol/czg037 (2013). https://doi.org/10.1093/heapol/czg037
3. Aldana, S. G., & Pronk, N. P. Health promotion programs, modifiable health risks, and employee absenteeism. Journal of Occupational and Environmental Medicine, 36-46 (2001). https://doi.org/10.1097/00043764-200101000-00009
4. Andaleeb, S. S., Siddiqui, N., & Khandakar, S. Patient satisfaction with health services in Bangladesh. Health policy and planning, 22(4), 263–273. https://doi.org/10.1093/heapol/czm017 (2007). https://doi.org/10.1093/heapol/czm017
5. Bangladesh Bureau of Statistics (BBS). Adjusted Population and Housing Census 2011. Dhaka: Government of the People's Republic of Bangladesh (2015).
6. Begum, S., & Wesumperuma, D. The old-age allowance programme in Bangladesh: challenges and lessons. Social Protection for Older Persons: Social Pension in Asia, 187-213 (2012).
7. Biswas, P., Kabir, Z. N., Nilsson, J., & Zaman, S. Dynamics of health care seeking behaviour of older adults in rural Bangladesh. International Journal of ageing and later life, 1(1), 69-89 (2006). https://doi.org/10.3384/ijal.1652-8670.061169
8. Biswas, P., Lloyd-Sherlock, P., & Zaman, S. Understanding elderly client satisfaction with primary health care in rural Bangladesh. Asian Journal of Gerontology & Geriatrics, 1(3), 133-140 (2006).
9. Chakraborty, Satyajit. Health-seeking behaviour of the aged population of a rural block in West Bengal, Working Paper No. 8, Achuta Menon Centre for Health Science Studies, Thiruvananthapuram, Kerala (2005).
10. Economic and Social Commission for Asia and the Pacific. Statistical Yearbook for Asia and the Pacific—2013. New York, NY: United Nations (2013).
11. Glasow, P. A. Fundamentals of survey research methodology. Retrieved January 18, 2013 (2005).
12. Hamiduzzaman, M., De Bellis, A., Abigail, W., & Kalaitzidis, E. Social determinants of rural older women's healthcare access: a systematic review of qualitative literature. The Indian Journal of Social Work, 79(4), 469. doi: 10.32444/ijsw.2018.79.4.469-496 (2018). https://doi.org/10.32444/IJSW.2018.79.4.469-496
13. Hemachandra, D. K. N. A., & Manderson, L. Menstrual problems and health seeking in Sri Lanka. Women & Health, 49, 405–421 (2009). https://doi.org/10.1080/03630240903238636
14. HIES. Expenditure Survey HIES 2010. Preliminary Report on Household Income and Expenditure Survey. Dhaka: Statistics Division, Ministry of Planning, The Government of the People's Republic of Bangladesh (2010).
15. Hochbaum, G., Darley, J. G., Monachesi, E. D., & Bird, C. Socioeconomic variables in a large city. American Journal of Sociology, 61(1), 31-38 (1950). https://doi.org/10.1086/221660
16. Hossen, A., & Westhues, A. Improving access to government health care in rural Bangladesh: the voice of older adult women. Health Care for Women International, 32(12), 1088-1110. doi: 10.1080/07399332.2011.603862 (2011). https://doi.org/10.1080/07399332.2011.603862
17. Hossen, M. A., Westhues, A., & Maiter, S. Coping strategies of older rural Bangladeshi women with health problems. Health Care Women Int, 34(12), 1116-1135. https://doi.org/10.1080/07399332.2013.817410 (2013). https://doi.org/10.1080/07399332.2013.817410
18. Hossen, M. Bringing medicine to the hamlet: exploring the experiences of older women in rural Bangladesh who seek health care. PhD thesis. Lyle S. Hallman Faculty of Social Work, Waterloo, Canada: Wilfrid Laurier University (2010).
19. Rahman, M. R. Human rights, health and the state in Bangladesh. BMC International Health and Human Rights, 6(4), 1-12. doi:10.1186/1472-698X-6-4 (2006). https://doi.org/10.1186/1472-698X-6-4
20. Tareque, M. I., Begum, S., & Saito, Y. Gender differences in disability-free life expectancy at old ages in Bangladesh. Journal of Ageing and Health, 25(8), 1299–1312 (2013). https://doi.org/10.1177/0898264313501388
21. Uddin, M.N. & Hamiduzzaman, M. 'Problems and prospects of decentralized rura health care system in Bangladesh', SUST Journal of Public Administration, 2(1), 47–75 (2009).
22. Vaughan, J. P., Karim, E., & Buse, K. Health care system in transition iii. Bangladesh, Part 1. An overview of the health care system in Bangladesh. Journal of Public Health Medicine, 22(1), 5–9 (2000). https://doi.org/10.1093/pubmed/22.1.5
23. Worcester, M. I. Family coping: caring for older people in home care. Home Health Care Services Quarterly, 11, 121–185 (2011) https://doi.org/10.1300/J027v11n01_04

Table 1: Measurement Units of the Variables

Variable	Measurement unit
Age of the respondent	1 = 60-64, 2 = 65-69, 3 = 70-74, 4 = 75 and above
Respondent's year of schooling	1 = Unlettered, 2 = Class 1-3, 3 = class 4-5, 4 = class 4-5 5 = Class 6-7
Year of Schooling (HHH)	1= Primary, 2 = Secondary, 3= Higher Secondary, 4 = Graduation or above
Occupation (HHH)	1 = School Teacher, 2 = Farmer, 3 = Business, 4 = Other
Monthly Household Income	1 = 10000-14000, 2 = 15000-19000, 3 = 20000-24000, 4 = 25000 and above
Size of Family	1 = 1-3, 2 = 4-6, 3 = 7 and above

Table 2: Personal Attributes of the Respondents

Variables	Participants (Percentage)		Statistics (Mean & Std. Deviation)
Age			
60-64	74	(28.5)	66.52 and 4.623
65-69	126	(48.5)	
70-74	46	(17.7)	
75 and above	14	(5.4)	
Religion			
Islam	134	(51.5)	
Sanatan	126	(48.5)	
Respondent's year of schooling			
Unlettered	124	(47.7)	1.74 and 1.939
Class 1-3	78	(30.0)	
class 4-5	50	(19.2)	
Class 6-7	8	(3.1)	
Marital status			
Married	140	(53.8)	
Widow	120	(46.2)	
Number of children			
1-3	102	(39.2)	4.06 and 1.554
4-6	140	(53.8)	
7 and above	18	(6.9)	
Living arrangement			
With spouse and children	138	(53.1)	
With spouse only	2	(.8)	
With children	120	(46.2)	
Getting social assistance			
No	150	(57.7)	
Yes	110	(42.3)	

Source: Field Survey, 2021

Table 3: Information of the Household

Variables	Participants (Percentage)		Statistics (Mean & Std. Deviation)
Head of Household (HHH)			
Husband	84	(32.3)	-
Son	176	(67.7)	
Year of Schooling (HHH)			
Primary	24	(9.2)	8.45 and 3.426
Secondary	186	(71.5)	
Higher Secondary	22	(8.5)	
Graduation or above	28	(10.8)	
Occupation (HHH)			
School Teacher	22	(8.5)	-
Farmer	160	(61.5)	
Business	58	(22.3)	
Other	58	(22.3)	
Size of Family			
1-3	6	(2.3)	6.12 and 1.671
4-6	174	(66.9)	
7 and above	80	(30.8)	
Monthly Household Income (BDT)			

10000-14000	68	(26.2)	18576.92 and 6736.302
15000-19000	62	(23.8)	
20000-24000	54	(20.8)	
25000 and above	76	(29.2)	

Source: Field Survey, 2021

Table 4: Most Common Types of Health Problems

Variable	Participants (Percentage)
Most Common Health Problems	
Visual	206 (79.2)
Hearing	120 (46.2)
Asthma	114 (43.8)
Joint pain	212 (81.5)
Cough	144 (55.4)
Piles	36 (13.8)
Blood Pressure	174 (66.9)
Diabetes	100 (38.5)
Gastric	142 (54.6)
Waterborne diseases	46 (17.7)
Cold fever/ Cough/ Severe Cold	44 (16.9)
Eye Infections	60 (23.1)
Urinary problem	38 (14.6)

Source: Field Survey, 2021

Table 5: Nature of the Treatment

Variables	Participants (Percentage)	Statistics (Mean & Std. Deviation)
Response in seeking health care		
Delayed	122 (46.9)	–
Promptly	138 (53.1)	
Nature of Treatment		
Unqualified	70 (26.9)	–
Qualified	190 (73.1)	
Place of Treatment		
Pharmacy/Drugstore	82 (31.5)	–
Non-Govt. Hospital	52 (20.0)	
Govt. Hospital.	126 (48.5)	
Distance to get Health Facility (K.m)		
1-4	138 (53.1)	8.45 and 7.044
5-9	28 (10.8)	
15 and above	94 (36.2)	
Total Cost of Treatment [Last 6 Months]		
500 and below	62 (23.8)	2080.00 and 1802.169
600-2000	118 (45.4)	
2100-3500	32 (12.3)	
3600-5000	36 (13.8)	
5100 and above	12 (4.6)	
Cost bearer		
Children	212 (81.5)	–
Spouse	48 (18.5)	

Source: Field Survey, 2021

Table 6: Response in Seeking Health Care and Its Covariates

Independent Variable	Dependent Variable Response in Health Seeking				
	Delayed *f* (%)	Promptly *f* (%)	Pearson Chi-Square (df)	p- value	Fisher's Exact Test
Age of the respondent					
60-64	32 (43.2)	42 (56.8)	13.439 (3)	.004**	–
65-69	76 (0.0)	50 (0.0)			
70-74	14 (60.3)	32 (39.7)			
75 and above	0 (0.0)	14 (100.0)			
Religion					
Islam	66 (49.3)	78 (50.7)	.302	.583	.602
Sanaton	56 (44.4)	70 (55.6)			

Marital status					
Married	70 (50.0)	70 (50.0)	.577 (1)	.448	.484
Widow	52 (43.3)	78 (56.7)			
Education of the respondent					
Unlettered	72 (58.1)	52 (41.9)	10.230 (3)	.017**	_
Class 1-3	36 (46.2)	42 (46.2)			
class 4-5	14 (28.0)	36 (72.0)			
Class 6-7	0 (0.0)	8 (100.0)			
Living arrangement					
With spouse and children	72 (52.2)	66 (47.8)	2.314 (2)	.314	_
With spouse only	0 (0.0)	2 (100.0)			
With children	50 (41.7)	70 (41.7)			
Getting social assistance					
No	58 (38.7)	92 (61.3)	4.852 (1)	.028	_
Yes	64 (58.2)	46 (41.8)			
Year of schooling of the head of the household					
Primary	14 (58.3)	10 (41.7)	23.109 (3)	.001***	_
Secondary	106 (57.0)	160 (43.0)			
Higher Secondary	2 (9.1)	40 (90.9)			
Graduation or above	0 (0.0)	56 (100.0)			
Occupation (HHH)					
School Teacher	0 (0.0)	44 (100.0)			_
Farmer	88 (55.0)	144 (45.0)	19.153 (3)	.001***	
Business	18 (31.0)	80 (69.0)			
Others	16 (80.0)	8 (20.0)			
Distance to get health facility (K.m)					
1-4	82 (59.4)	56 (40.6)	16.460 (2)	.001***	_
5-9	18 (64.3)	10 (35.7)			
15 and above	22 (23.4)	72 (76.6)			
Total cost of treatment [Last 6 Months]					
500 and below	60 (96.8)	2 (3.2)	63.143 (4)	.001***	
600-2000	60 (50.8)	58 (49.2)			
2100-3500	2 (6.3)	30 (93.8)			—
3600-5000	0 (0.0)	36 (100.0)			
5100 and above	0 (0.0)	12 (100.0)			
Monthly household income (BDT)					
10000-14000	64 (94.1)	4 (5.9)	74.149 (3)	.001***	_
15000-19000	44 (71.0)	18 (29.0)			
20000-24000	12 (22.2)	42 (77.8)			
25000 and above	2 (2.6)	74 (97.4)			

Source: Field Survey, 2021

Table 7: Nature of Treatment and its Covariates

Independent Variable	**Dependent Variable** Nature of treatment				
	Unqualified *f* (%)	Qualified *f* (%)	**Pearson Chi-Square (df)**	**p- value**	**Fisher's Exact Test**
Age of the respondent					
60-64	22 (70.3)	52 (70.3)	2.822 (3)	.420	
65-69	36 (28.6)	90 (71.4)			
70-74	12 (26.1)	34 (73.9)			_
75 and above	0 (0.0)	14 (100.0)			
Religion					
Islam	30 (22.4)	102 (77.6)	1.44 (1)	.229	.243
Sanaton	40 (31.7)	86 (68.3)			
Marital Status					
Married	34 (24.3)	106 (75.7)	.536 (1)	.464	.296
Widow	36 (30.0)	84 (70.0)			
Education of the Respondent					
Unlettered	36 (29.0)	88 (71.0)	1.755 (3)	.625	
Class 1-3	22 (28.2)	56 (71.8)			
class 4-5	12 (24.0)	38 (76.0)			_
Class 6-7	0 (0.0)	8 (100.0)			
Number of Children					
1-3	28 (27.5)	74 (72.5)	1.248 (2)	.536	
4-6	40 (28.6)	100 (71.4)			
7 and above	2 (11.1)	16 (88.9)			_
Living Arrangement					
With spouse and children	32 (23.2)	106 (76.8)	1.544 (2)	.462	
With spouse only	0 (0.0)	2 (100.0)			

With children	38 (31.7)	82 (68.3)			
Getting Social Assistance					
No	36 (24.0)	114 (24.0)		.380	.427
Yes	34 (30.9)	176 (69.1)			
Head of Household (HHH)					
Husband	24 (28.6)	60 (71.4)	.086 (1)	.770	.834
Son	46 (26.1)	130 (73.9)			
Year of Schooling (HHH)					
Primary	12 (50.0)	12 (50.0)		.014**	
Secondary	56 (30.1)	130 (69.9)	10.663 (3)		
Higher Secondary	2 (9.1)	20 (90.9)			
Graduation or above	0 (0.0)	28 (100.0)			
Occupation (HHH)					
School Teacher	0 (0.0)	22 (100.0)	21.048 (3)	.001***	
Farmer	46 (28.7)	114 (71.3)			
Business	8 (13.8)	50 (86.2)			
Other	16 (80.0)	4 (20.0)			
Distance to get Health Facility (K.m)					
1-4	44 (31.9)	94 (68.1)	18.895 (2)	.001***	
5-9	18 (64.3)	10 (35.7)			
15 and above	8 (8.5)	86 (91.5)			

Independent Variable	**Dependent Variable** Nature of treatment				
	Unqualified *f* (%)	Qualified *f* (%)	**Pearson Chi-Square (df)**	**p- value**	**Fisher's Exact Test**
Total Cost of Treatment (Last 6 Months in BDT)					
500 and below	44 (71.0)	18 (29.0)	46.020 (4)	.001***	
600-2000	26 (22.0)	92 (78.0)			
2100-3500	0 (0.0)	32 (100.0)			
3600-5000	0 (0.0)	36 (100.0)			
5100 and above	0 (0.0)	12 (100.0)			
Size of Family					
1-3	2 (33.3)	4 (66.7)	8.412 (2)	.015**	
4-6	60 (34.5)	114 (65.5)			
7 and above	8 (10.0)	72 (90.0)			
Monthly Household Income (In BDT)					
10000-14000	52 (76.5)	16 (23.5)	61.948 (3)		
15000-19000	14 (22.6)	48 (77.4)		.001***	
20000-24000	4 (7.4)	50 (92.6)			
25000 and above	0 (0.0)	76 (100.0)			

Significant at p <0.05**
Significant at p <0.01***
Source: Field Survey, 2021

Table 8: Place of Treatment and Its Covariates

Variable's	**Place of Treatment**				
	Pharmacy/Drugstore *f* (%)	Non-Govt. Hospital *f* (%)	Govt. Hospital *f* (%)	**Pearson Chi-Square (df)**	**p- value**
Age of the respondent					
60-64	26 (35.1)	10 (13.5)	38 (51.4)	**8.726 (6)**	**.190**
65-69	44 (34.9)	24 (34.9)	58 (46.0)		
70-74	12 (26.1)	10 (21.7)	24 (52.2)		
75 and above	0 (0.0)	8 (57.1)	6 (42.9)		
Education of the Respondent					
Unlettered	44 (35.5)	18 (14.5)	62 (50.0)	**7.304 (6)**	**.294**
Class 1-3	26 (33.3)	14 (17.9)	38 (48.7)		
class 4-5	12 (24.0)	18 (36.0)	20 (40.0)		
Class 6-7	0 (0.0)	2 (25.0)	6 (75.0)		
Getting Social Assistance					
No	42 (28.0)	34 (22.7)	74 (49.3)	**1.362 (2)**	**.506**
Yes	40 (36.4)	18 (16.4)	52 (47.3)		
Year of Schooling (HHH)					
Primary	14 (58.3)	2 (8.3)	8 (33.3)	**21.403 (6)**	**.002**
Secondary	78 (36.6)	28 (15.1)	90 (48.4)		
Higher Secondary	0 (0.0)	10 (45.5)	12 (54.5)		

Graduation or above	0 (0.0)	12 (42.9)	16 (57.1)		
Occupation (HHH)					
School Teacher	0 (0.0)	8 (36.4)	14 (63.6)	**23.041 (6)**	**.001**
Farmer	52 (32.5)	30 (18.8)	78 (48.8)		
Business	12 (20.7)	14 (24.1)	32 (55.2)		
Other	18 (90.0)	0 (0.0)	2 (10.0)		
Distance to get Health Facility (K.m)					
1-4	54 (39.1)	20 (14.5)	64 (46.4)	**28.322(4)**	**.001**
5-9	20 (20.8)	8 (7.7)	0 (24.6)		
15 and above	8 (8.5)	24 (25.5)	62 (66.0)		
Total Cost of Treatment (Last 6 Months in BDT)					
500 and below	58 (93.5)	0 (0.0)	4 (6.5)	**96.480 (8)**	**.001**
600-2000	24 (20.3)	16 (13.6)	78 (66.1)		
2100-3500	0 (0.0)	10 (31.3)	22 (68.8)		
3600-5000	0 (0.0)	16 (44.4)	20 (55.6)		
5100 and above	0 (0.0)	10 (44.4)	2 (55.6)		
Size of Family					
1-3	2 (33.3)	0 (0.0)	4 (66.7)	**12.074 (4)**	**.017**
4-6	78 (39.1)	24 (13.8)	82 (47.1)		
7 and above	12 (15.0)	28 (35.0)	40 (50.0)		
Monthly Household Income (In BDT)					
10000-14000	52 (76.5)	2 (2.9)	14 (20.6)	**98.478 (6)**	**.001**
15000-19000	26 (41.9)	0 (0.0)	36 (58.1)		
20000-24000	4 (7.4)	4 (7.4)	46 (85.2)		
25000 and above	0 (0.0)	46 (60.5)	30 (39.5)		

Significant at p <0.05**
Significant at p <0.01***
Source: Field Survey, 2021

Table 9: Binary Logistic Regression in Terms of Response in Seeking Health Care

Factors	Estimated regression coefficient (β)	P value	Odd ratio (OR)	95% CI of OR	
				Lower	Upper
Age of the respondent	0.112	.010	1.119	1.028	1.219
Year of Schooling of the respondent	.293	.003***	1.341	1.102	1.632
Year of Schooling of the head of the Household	.0.112	.001**	1.271	1.123	1.438
Getting Social assistance					
NO (ref)	0[a]				
Yes	-.792	.029**	.453	.223	.921
Size of the Family	.190	.086	1.209	.974	1.502
Number of children	.023	.842	1.023	.819	1.27
Total Cost of Treatment [Last 6 Months]	.003	.00***	1.003	1.002	1.003
Monthly Household Income.					
10000-14000 (ref)	0[a]				
15000-19000	1.879	.023**	6.545	1.288	33.257
20000-24000	4.025	.001***	56	10.309	304.196
25000 and above	6.384	.001***	592	51.258	6837.303

[a] set to zero because it is a reference category (ref)
Significant at p <0.05**
Significant at p <0.01***
Source: Field Survey, 2021

Table 10: Determining Factors of Healthcare Services for Aged Women

Opinion about Access to medical care						
Variable	***f (%)***					
	SD	**D**	**N**	**A**	**SA**	**Total**
Inadequate diagnostic equipment	0	76 (29.2)	72 (27.7)	110 (42.3)	2 (.8)	260 (100.0)
Unavailability of a skilled physician	2 (.8)	114 (43.8)	60 (23.1)	82 (31.5)	2 (.8)	
Inadequate Medicine supply	2 (.8)	56 (21.5)	86 (33.1)	106 (40.8)	10 (3.0)	

Long distances to health care centres from home	14 (5.4)	112 (43.)	22 (8.5)	110 (42.3)	2 (.8)
Unhealthy environment at the Medical Centre	6 (2.3)	140 (53.8)	50 (19.2)	64 (24.6)	0
Lack of ambulance facility	0	18 (6.9)	52 (20)	188 (72.3)	2 (.8)
Unsatisfactory behaviour of medical service providers	8 (3.1)	136 (52.3)	24 (9.2)	90 (34.6)	2 (.8)

Opinion about Economic Factor

Variables	*f (%)*					
	SD	**D**	**N**	**A**	**SA**	**Total**
Lack of an income source	0	140 (53.8)	6 (2.3)	110 (42.3)	24 (1.5)	260 (100.0)
Inability to buy nutritious food	0	230 (88.5)	4 (1.5)	24 (9.2)	2 (.8)	
Unhealthy house structure	0	240 (92.3)	10 (3.8)	10 (3.8)	0	
Unhealthy sleeping/lying place	2 (.8)	244 (93.8)	0	12 (4.6)	0	
High medical costs	0	2 (.8)	0	208 (80.0)	50 (19.2)	
Lack of familial financial support	8 (3.1)	206 (79.2)	0	42 (16.2)	4 (1.5)	

Opinion about Environmental Factor

Variables	*f (%)*					
Statements	**SD**	**D**	**N**	**A**	**SA**	**Total**
Water logging	10 (3.8)	128 (49.2)	0	114 (43.8)	8 (3.1)	260 (100.0)
Variation in temperature and rainfall	8 (3.1)	150 (57.7)	28 (10.8)	74 (28.5)	0	
Pollution (water/air)	4 (1.5)	76 (29.20)	12 (4.6)	158 (60.8)	10 (3.8)	
Destruction of sanitation facilities	4 (1.5)	210 (80.8)	8 (3.1)	38 (14.6)	0	
Spread of Insects and Mosquitoes	0	82 (31.5)	0	142 (54.6)	36 (13.8)	
Limitations in Communication Facilities	4 (1.5)	186 (71.5)	6 (2.3)	62 (23.8)	2 (.8)	

Opinion about Behavioural Factors

Variables	*f (%)*					
Statements	**SD**	**D**	**N**	**A**	**SA**	**Total**
Irregular food intake	8 (3.1)	172 (66.2)	8 (3.1)	72 (27.7)	0	260 (100.0)
Excessive physical activity	2 (8)	218 (83.8)	6 (2.3)	34 (13.1)	0	
Lack of Physical exercise	4 (1.5)	114 (43.8)	28 (10.8)	114 (43.8)	0	
Alcohol consumption/ smoking	130 (50.0)	126 (48.5)	2 (.8)	2 (.8)	0	
Not washing hands before taking a meal	10 (3.8)	160 (61.5)	12 (4.6)	76 (29.2)	2 (.8)	
Not washing hands with soap after using the toilet	4 (1.5)	126 (48.5)	24 (9.2)	106 (40.8)	0	

Opinion about Social Factors

Variables	*f (%)*					
Statements	**SD**	**D**	**N**	**A**	**SA**	**Total**
Good relationship with family members/relatives	0	22 (8.5)	10 (3.8)	218 (83.8)	10 (3.8)	260 (100.0)
Good relationship with neighbours	0	56 (21.5)	6 (2.3)	198 (76.2)	0	
Caring by family members/ relatives	4 (1.5)	20 (7.7)	12 (4.6)	212 (81.5)	12 (4.6)	

Availability of recreational facilities	4 (1.5)	116 (44.6)	18 (6.9)	122 (46.9)	0	
Knowledge about health consciousness	2 (8)	74 (28.5)	62 (23.8)	122 (46.9)	0	

Source: Field Survey, 2021