

NUTRITIONAL STATUS OF ELDERLY ASSAMESE HINDU WOMEN

Author: Dr. Bhagyashree Baruah

Abstract

The global elderly population is rapidly increasing, causing significant social transformations in the 21st century. This shift impacts labor, financial markets, health, nutrition, demand for goods and services, family structures, and intergenerational ties. The Indian government adopted a National Policy on Older Persons in 1999, defining elderly as those aged 60 and over. India's elderly population above 60 years old is also increasing steadily from 5.6% in 1961 to 8.6% in 2011. For males it was marginally lower at 8.2%, while for females it was 9.0%. This proportion is expected to rise to 13.1% by 2031. Both the share and size of elderly population is increasing over time. State-wise data on elderly population of 21 major states divulge that Kerala has the maximum proportion of elderly people in its population (16.5%) followed by Tamil Nadu (13.6%), Himachal Pradesh (12.6%), the Punjab (12.6%) and Andhra Pradesh (12.4%) in 2021. On the contrary, proportion is the least in the States of Bihar (7.7%) followed by Uttar Pradesh (8.1%) and Assam (8.2%). India's elderly population faces high illiteracy rates (56%), with women experiencing higher illiteracy rates and economic dependency. They also face gender and class-based discrimination. Rural

elderly, comprising 70% of the population, have lower education and long-term savings, exacerbating their vulnerability. Such factors seem to have negative impact on their health and nutritional status calling for improved policies and support urgently. (Malik et al, 2021).

In India, there is limited literature on elderly women, with an average age of less than 60 years. With increased life expectancy and a higher percentage of elderly women, social researchers are concerned about traditional family structures shrinking due to urbanization and resource scarcity. India's elderly women are facing increasing health issues like chronic morbidity, poor vision, cataract, blood pressure, back pain, malnutrition, depression, impaired physical performance, and elder abuse.

They also face marginalization, isolation, and gender discrimination, posing significant social development challenges (Kaur et.al .2019).

INTRODUCTION :

The present exploratory study, entitled NUTRITIONAL STATUS OF THE ELDERLY ASSAMESE HINDU WOMEN is concerned with the complex issues of ageing, health and nutritional status among Assamese Hindu elderly women belonging to age 60 years and above living in villages Kamrup (Rural) District and the city of Guwahati located in the Kamrup (Metropolitan) districts of Assam. For analytical purpose, the study covers both rural and urban elderly non-tribal Assamese Hindu women of the districts and focuses on their health and nutritional status by using inputs from both biological and socio-cultural anthropology. The study attempts to look at these two issues of health and nutrition from both biological as well as socio-cultural aspects.

Objectives:

The major objectives of the present study are:

1. To depict the socio-demographic background of the elderly participants, both rural and urban
2. To present and compare the health status of rural and urban participants by analysing their self-reported and medically diagnosed diseases or morbidity pattern:

- a. as per different bodily systems involved
- b. as per broad age groups
3. To find out and compare the nutritional status as per:
 - c. As per rural and urban variations and.
 - d. Age-wise variation
4. Perception about one's own overall health status
5. To identify the Rural-urban and age-wise variation patterns in respect dietary intake
6. To know about their preference for medical systems.

Locale: The data for the rural segment was collected from the rural areas of Kamrup (Rural) district and Guwahati city (located in Kamrup Metro District), Assam The present study has been conducted in two contexts: rural and urban For the urban context, data has been collected in the city of Guwahati which happens to be the only metropolitan city of Assam as well as the entire North East India. Only those urban participants from Guwahati have been selected who have been living in the city for at least two generations back or for more than 20 years continually. The rural surveyed localities include 25 villages within Hajo, Palasbari, Kamalpur, Rangia. Pt, Chhaygaon, North Guwahati Revenue Circles situated in Kamrup (Rural) District of Assam.

Limitation of the study: This is purely an exploratory study. The study examines diseases, ailments, and morbid conditions among participants, excluding cancer cases and complex medical issues and cases of cancer and a few other terminal diseases. Participants' BMI was determined using anthropometric measurements and Mini Nutritional Assessment questions. No co-relations were attempted and elderly women living in old age homes were excluded. The study uses the comparative approach of Anthropology. The health and nutritional status of elderly women in India varies across regions, castes, classes, religions, and communities. This study focuses on the Assamese, Hindu community, which is the largest religious community in Assam. The term Assamese in academic circles, refers to long-settled inhabitants recognized for their language, culture, and way of life. . (Cantlie, 1984, x) living mostly in the Brahmaputra Valley. (Das, 2010,26). with the study area in the lower Assam zone referring exclusively to non-tribal Assamese Hindu communities.

The field work began in the month of November 2019 and continued till November 2022 excluding the period of Lockdown

Universe and Sampling frame: Universe I for rural participants was framed with Village level Census data from different Circle offices where Assamese Hindu non-tribal population is predominant. Universe II for urban elderly Assamese Hindu participants from different Municipal Wards was also framed with the inputs and help from Guwahati Municipal Corporation office and Election Department (particularly Booth Level Officers). From these two Lists, 400 rural and 400 urban samples were drawn by using stratified random sampling Tools of data Collection:

Both secondary and primary data have been used. The secondary sources include census data and Voter's list collected from concerned authority, books, journals, articles, dissertations and reports from both library and internet sources. For collection of primary data, an interview schedule (divided into five parts: demographic, social, economic, health, and nutritional aspects like dietary history), Mini Nutritional Assessment, (recording diet, and anthropometric measurements.) along with standard anthropological tools like observation, interview and case study have been used Anthropometers, steel tape, electronic weighing scales, and BMI charts were used for anthropometric measurements. The schedule also included a schedule for assessing dietary history.

Data analysis:

The socio-demographic profile of the participants shows a progressively declining trend from younger to higher age groups in both rural and urban contexts. However, more rural elderly participants are in the youngest age group (62.5%) than urban ones (46.0%). The study reveals that 55.87% of participants are married, followed by 29.37% widows, 11.25% separated, and 3.50% never married. Rural married participants are higher than urban ones, with lower cases of divorce and never married rural participants.

The study shows that 40.38% of elderly women, regardless of rural-urban origin, have not been employed before. Comparatively higher proportion of rural participants were not employed before (50.25%) than urban participants (30.50%).

Urban participants have a higher percentage of government service (35.00%) than rural participants (22%) who are mostly engaged in household services and self-employment.

The study found that 28.50% of participants are dependent on relatives or others, while 28.0% live on pensions from previous government service. Cases of declaring family pension as their primary income is comparatively more in the urban context. In most cases, their husbands are former Government servants. The study found that 3.62% of participants had small seasonal and irregular private businesses or assignments like weaving or cultivation works in rural areas. Widow pensions are the most common source of income for rural participants, while professional participants are mostly from urban contexts.

The study found that 28.50% of participants are dependent on relatives or others, while 28.0% live on pensions from previous government service. Cases of declaring family pension as their primary income is comparatively more in the urban context. In most cases, their husbands are former Government servants. The study found that 3.62% of participants had small seasonal and irregular private businesses or assignments like weaving or cultivation works in rural areas. Widow pensions are the most common source of income for rural participants, while professional participants are mostly from urban contexts.

Rural elderly women's income is significantly lower than urban women, with 45.75% in the 4001-7000 income bracket and 58% in the 7001-10,000 bracket, largely shared by families.

Around 40.38% of participants, regardless of rural-urban origin, have not been employed before. Rural participants have a higher proportion of no past occupations (50.25%) than urban participants (30.50%). More urban participants are engaged in government services (35.00%), while among the rural participants, the proportion of household works (11.25%) and self-employment (9.0%) are more common.

More urban participants are (60.25%) of living in nuclear families, as against 43.25% rural ones. This includes the proportion of participants who are living alone. While 50% of rural and 37.25 % urban

participants are living in joint or extended families. It may be mentioned that 6.75% rural and 2.50% urban participants live with other family members, such as their siblings (brothers or sisters}.

There is little difference between rural (10%) and urban participants (11%) living alone, with urban participants having a higher proportion of living with their husbands only (24.00%). Half of rural participants live in joint families with their married sons, while there is little variation between rural and urban participants in joint/extended families with their married daughters' families.

The study also reveals that 50% of the rural participants are living alone either due to the death of their husbands or when their married son's family decides to live separately while this is applicable to only 18.18% of urban participants. In contrast, 50% urban participants are living alone because they are unmarried and their married brothers/ siblings live separately. Cases where the sons and daughters-in-law lives outside city for job purpose is slightly higher amongst the rural participants (35%) than the urban ones (31.81%).

The type of housing determines space as well as the living condition and environment of the elderly. On the whole, the proportion of rural participants living in Kutcha and Semi pucca house is higher than urban participants. Contrarily, the proportion of urban participants living in RCC type houses is higher (57.25%) than rural (1.25%) participants.

Elderly women require close proximity to toilet facilities for a healthy life. Urban participants have more attached toilet facilities, while rural participants have less access. Rural participants have a higher proportion of government-subsidized toilets, while urban participants have a higher proportion of pucca toilets. The rural scenario reveals that 12.25% rural participants have kutcha toilets as against 35.5% who have pucca toilets. As against this, 89.5% of urban participants have pucca toilet. Thus the urban participants are better off than their rural counterparts in having higher proportion of pucca sanitary

Health status:

It is true that health does not only mean presence or absence of diseases. Nonetheless, for objectivity and analytical purpose the study focuses on chronic diseases (or ailments, or morbid conditions) among elderly Assamese Hindu women in rural and urban contexts of Kamrup and Kamrup (Metro)

districts of Assam. It excludes cases of cancer or terminal diseases and does not investigate the reasons or causes of their prevalence.

Only those self-reported morbid conditions that are diagnosed by a medical practitioner are taken into consideration in determining illness. The findings discusses (i) system-wise break up of self-reported and medically diagnosed chronic disease/ health problems;(ii) rural-urban and age-wise distribution of morbidity patterns; (iii) illness frequency in the past year; and (iv) participant's preference for different medicine systems like allopathy, homeopathy etc. Findings reveal that illness was observed to be chronic and most participants have reported having more than one ailment.

The most common system-wise morbidity breakdown is muscular-skeletal problems (93.5%), followed by nervous system (78.0%), eyes (74%), and gastro-intestine (71.62%). Oral cavity (67.12%), cardiovascular diseases (56.62%), and skin problems (54%) are the most common. Blood and respiratory systems problems are observed in 49.12% and 48.75% of participants, respectively. Urban participants, compared to their rural counterparts, have a higher proportion of diseases in all systems, except oral cavity and dermatology.

Age-wise variations in overall morbidity pattern shows that certain diseases are more frequent in certain age groups and are seen to follow different age-wise trends. Anaemia, cardiovascular shows a declining trend from youngest (60-69 years) to higher age groups. Marked fluctuating rural-urban variation was seen with regards to different diseases afflicting different body systems.

The rural urban variations show that in respect of diseases of all the systems except those related to oral cavity and dermatology (skin related) the proportion of urban respondents are comparatively more than the rural counterparts. Cardiovascular diseases also are more frequent in the youngest age group and gradually declines from youngest (56.52 % rural, 48.6 % urban) to as low as 2.48 % rural and 1.33% urban participants of 90+ years. In this way, all the diseases show a declining frequency from youngest to oldest age groups. However, different diseases show marked fluctuating rural-urban variation with respect to different diseases afflicting different body systems. For this reason, diseases falling under different human body systems are taken up separately one by one.

Cardiovascular diseases like blood pressure are higher among the urban (74.75%) than rural participants (40.25%). Due mainly to the lack of awareness, regularity of health checkups, economic hardship, problems of mobility they hardly visit the PHC or CHC to check their blood, blood pressure or to check their haemoglobin levels.

Hypertension is higher among the urban (67.36%) than rural participants (32.64%). The case is just opposite in respect of low blood pressure which is higher in rural (66.67 %) than urban (33.33 %). While 60.00% of hypertension cases occurs in the 60-69 years age group and 31.82% in the 70-79 years age group. Variations in these diseases may be due to sample fluctuations or chance.

The study found that 75.00% of participants are free from ear-related ailments, but 61.42% of rural participants reported hearing impairment. Many rural participants used home remedies like ear wax, ear pain, or itching, and applied mustard oil without sterilization. Urban participants had higher tinnitus (63.33%), but there was no significant impact on ear diseases between rural and urban areas.

Endocrine diseases, like diabetes and thyroid disorders are higher among the urban than rural participants. On the whole it appears that in case of endocrinal diseases, rural participants are still at better off position than the urban participants.

Of the eye diseases, rural participants experienced more conjunctivitis, watering, and night blindness Rural participants may have less awareness about eye-related hygiene, while night blindness may be due to a lower diet of vitamin A-rich foods. Urban participants suffer more from refractive error, cataract, and glaucoma may be due to their higher literacy, regular reading and writing habits, higher rates of hypertension and endocrinal issues like diabetes. However, rural urban lifestyles have no significant impact on eye diseases, with a χ^2 value of 63.88, exceeding the 0.05 probability level. Age-wise data shows a fluctuating trend among both rural and urban participants.

Of the gastro-intestinal diseases it appears that majority of the participants (31.75%) are suffering from constipation followed by 24.63% suffering from gall bladder, pancreatitis, Diarrhoea, Lactose intolerance, Fatty liver etc. Slightly more rural participants suffer from constipation, (52.76%) while prevalence of the disease like gall bladder, pancreatitis, diarrhoea, Lactose intolerance, Fatty liver etc. are more among the urban participants (54.31%) than the rural participants (45.69%). The rural

participants are more prone to Gastritis and Gastric Ulcers (51.58%) than the urban participants (48.42%).

Those who are suffering from constipation, maximum of them belong to rural areas (52.76%). On the other hand, the prevalence of the disease like gall bladder, pancreatitis, Diarrhoea, Lactose intolerance, Fatty liver etc. are more among the urban participants (54.31%) than the rural participants (45.69%).

Significantly, 36% of rural and 25.25% of urban participants do not suffer from gastro-intestinal diseases. Statistical analysis showed no significant impact of neither rural-urban lifestyle nor age-wise variation on gastro-intestinal diseases.

It may be noted that majority of the participants (68.62%) are free from **Genito-urinary diseases**. Of these 46.45% of participants are rural, while 53.55% are urban participants. On analysis of the data statistically we are to reject the null hypothesis that rural urban life style has no significant bearing on the participants suffering from various Genito-urinary diseases. Since the calculated value of χ^2 comes to 11.62 which is bigger than the $p=7.81$ for 3 df at .05 significance level, we can conclude that rural urban lifestyle has significant bearing on the participants suffering from various Genito-urinary diseases.

As high as 97.25 % urban participants as against 89.75% rural participants have reported having diseases of the musculoskeletal system are concerned. While more urban participants experience osteoarthritis (56.70%), rural participants experience back/ body pain (53.10%) more. The study found a significant impact of rural urban lifestyle on those suffering from these diseases.

Out of the total participants, 22.0% are free from nervous system diseases, of which 69.32% from rural areas and 30.68% from urban areas. Urban women have a higher stroke prevalence (4.5%), while rural women are more likely to experience tremor (19.5%) due to poor nutrition and delayed diagnosis. Urban participants (43%) are more prone to dementia, migraines, and seizures due to their stressful lifestyles. Statistical analysis reveals significant rural-urban impacts.

The diseases of the oral cavity are higher among the rural participants (70%) than the urban elderly women (64.25%). Those in rural areas have slightly more broken teeth/caries (27%), and stained teeth are also much more common among rural participants (52.14 %). Compared to 26.00 % rural participants, urban women are more likely to have psychiatric disorders (63.41%) like depression (39%) and anxiety disorders (14%), perhaps as a result of their busy lifestyles, decreased engagement with pleasant neighbours, and congenial family time due to everyone's busy schedules and growing individualism.

Urban participants have a greater percentage of respiratory disorders overall (55.75%) than rural areas (41.75%) This might be the result of exposure to air pollution from both indoor and outdoor sources, which eventually cause too much asthma and other respiratory issues as well as morbidity.

There are more skin problems in rural areas (60.5%) than in urban areas (47.5%). Patients might not seek therapy unless forced to do so by the intensity of their symptoms, which may be the result of a lack of awareness and education. Sharing of bed, each other's clothes in villages may be some of the reasons for such variation. There is no significant age group wise variation in respect of the skin diseases among rural and urban participants.

Age Group and Diseases: Certain diseases are more frequent in certain age groups. For example, Anaemia (blood related) disease is prominently figured in the age Group (I) of 60-69 years (55.69% rural and 48.78% urban) followed by participants of Group (II) 70-79 years (34.90% rural and 27.6% urban) participants. It is lowest among the oldest age group (2.72 % rural and 2.43 urban).

Cardiovascular diseases also are more frequent in the youngest age group and gradually declines from youngest (56.52 % rural, 48.6 % urban) to as low as 2.48 % rural and

1.33% urban participants of 90+ years. In this way, all the diseases show a declining frequency from youngest to oldest age groups. Frequency of illness:

The overall picture related to illness shows a mixed trend both in terms of rural -urban and age-wise variation. It appears that the age group of 60-69 years seem to have fallen ill more frequently as compared to the senior age groups. This may be due to the fact that the total number of participants gradually decreases along with the increase in their age-group. The calculated value of $\chi^2 = 4.966$ with $df = (c - 1)(r - 1) = (3 - 1)(3 - 1) = 4df$ at 0.05 level where p_{05} is 9.488. Thus, the H_0 : that the illness is distributed equally among all age groups is accepted.

Frequency of any illness of 1-3 times in past 1 year of the age group 60-69 is found to be highest among the urban elderly women (53.8%) than the rural participants (44%). On the other hand, more rural participants 33.6% have fallen ill as compared to 25.54% urban participants in the same age group of 60-69 years. In the age group of 70-79 years comparatively higher proportion of rural participants (56.6%) than urban participants. Thus, there is a fluctuating trend across all the age groups.

It appears that the age group of 60-69 years seem to have fallen ill more frequently as compared to the senior age groups. This may be due to the fact that the total number of participants gradually decreases along with the increase in their age-group. The calculated value of $\chi^2 = 4.966$ with $df = (c - 1)(r - 1) = (3 - 1)(3 - 1) = 4df$ at 0.05 level where p_{05} is 9.488. Thus, the H_0 : that the illness is distributed equally among all age groups is accepted.

Urban participants are more frequent in visiting the doctors/hospitals compared to their rural counterparts. It is seen that the proportion of urban women who had to consult doctors or visit the hospitals/PHE for at least 3 times during past one year is higher (84.5 %) than the rural participants (78.5%).

It may be observed that among all the age groups the proportion of participants who had to visit the doctors for consultation/ treatment for at least 3 times or more are higher as compared to those who had visited twice or only once in the part one year prior to data collection. It may be mentioned that in many cases, the decisio

consultation was taken up by other than the participants themselves, particularly more older ones.

Participant's perception about one's overall own health: Coming to the rural-urban variation in respect of participant's perception about one's overall own health shows that those the proportion of rural participants who expressed that their health condition is good (*Bhaal*), is higher (56.41%) than the urban participants (37.13). Conversely, higher proportion of urban (64.86 %) than rural participants (35.14 %) said that their health condition is worse.

Healthcare support: Sons play a crucial role in providing healthcare support for elderly women, particularly in rural areas (22%). Daughters-in-law play a higher role (14.5%) in rural areas, as they often live with their mothers-in-law in the same house. The loss of income during old age and increasing medical expenses burdens siblings, with 75% of siblings accompanying elderly women to the doctor and only 3% of siblings from urban areas.

Preference of medicine system: In the rural scenario, preference for allopathy and ayurvedic medicine is highest among the participants within 60–69-year age group and tend to fall gradually in the next successive older age groups. It may also be observed that among the rural elderly women between 60-69 years of age, preference for allopathy is highest (69.50 %), followed by Ayurvedic (68.33%), local healers (15%) and homeopathy (7.59%). The null hypothesis H_0 stating that “there is no relationship between age group and choice of medicine system” was tested and the X^2 results reveals that H_0 is rejected. This suggests that there is a relationship between age- group and preference of medicine system.

Nutritional status:

For fulfilling the second objective, the nutritional status of elderly Assamese Hindu women in rural and urban contexts was assessed by using anthropometric measurements (like height and weight to calculate the BMI; mid-upper arm circumference) were supplemented by the general assessment and self-assessed aspects as per (MNA-SF). part of the Mini Nutritional Assessment (MNA-SF).

The majority of rural participants fall within the **height** range of 146-150cm (28.5%), followed by the 151-155 cm category (24.75%). The mean height is 151.16 ± 6.88 , with

the highest mean height in age groups 80-89 and the highest variation in age groups 60-69. The null hypothesis is accepted, indicating no significant rural-urban impact of age on heights.

Both rural and urban participants had similar mean heights. The standard variation of urban participants was more (± 7.12) than rural participants (± 6.88), with the highest standard variation in the 80-89 age group. The data was statistically treated against the null hypothesis, indicating that age has no significant impact on heights, and no definite trend could be observed in heights based on age groups.

There was not much difference between the weights of rural and urban participants. Results of chi square test also corroborate that there is no proof that the rural/urban lifestyle has any impact on the weight of the participants. However, weights of rural participants showed a declining trend from lower to higher age groups.

Analysis on BMI of the total participants, only 38.75% are normal others are at various stages of malnutrition such as underweight (39.88%), overweight ((18.75) or obese (02.63). While the proportion of underweight rural participants are higher but in all other categories they fall behind the urban participants. However, statistical test of significance (chi-square) found that there is no significant impact of rural and urban lifestyles on the BMI. With $\chi^2 = 9.412$ and $p = .05$ for $3df=07.815$ we rejected the null hypothesis to conclude that, there is significant difference between rural and urban life styles on the BMI. Statistical analysis shows no significant impact of the age groups on the change in BMI could be detected with respect to both rural and urban participants. Fluctuations whatever occurs either due to chance or fluctuation in the sample.

The study found that mid upper arm circumference (MUAC) has a marginally better nutritional status than BMI. The majority of participants (52.0%) have normal MUAC, regardless of their location. Statistical analysis shows no significant differences between rural and urban participants in respect of their nutritional status measured in terms of MUAC ($\chi^2 = 0.374$ which is way below the table value at $p = .05$ for $2df=5.99$). The highest number of participants with normal MUAC was found in the age group 60-69 years, (63.20%), with a mean of 22.73 which is well within the moderate category.

It is observed that highest numbers of participants having normal MUAC is within the age group 60-69 (63.20%) Mean MUAC is calculated at 22.73cm which is well within the moderate category.

Data on **Nutritional status on the basis of data from general and self-assessment** as per MNA Scale Data on food intake decline, weight loss, mobility, psychological stress, and neuro-psychological problems was collected through self-assessment by participants without or without attendant support. No reference was made to medical prescriptions or reports. The study reveals that total (rural and urban) participants experience a moderate decrease in food intake (51.75%), followed by no decrease (38.7%), with 18.75% reporting severe decreases. However, there is wide variation between rural (62.25%) and urban (41.25%) participants, with regards to participants in case of moderate decrease.

Similar is the case with cases of no decrease- where the proportion of urban participants (51.75%) is almost twice that of the rural participants (26.00%). As the statistical χ^2 tests of the hypothesis that rural and urban lifestyle have equal impact on the participants' declining food intake have failed we may conclude that rural and urban lifestyles have significantly varied impact on the declining food intake of the participants. At rural and urban lifestyles significantly impact participants' declining food intake, with a calculated value of 55.8, exceeding the table value. The coefficient of association Q indicates a positive relation between declining and not declining food intake to the rural and urban context. The study also examined the impact of ages on rural participants' food intake fluctuations. The Chi square test conducted for the purpose showed a significant relationship between ages and food intake.

The study found that ages of the rural participants are significantly related to their fluctuating food intake. The Chi-square test showed a significant relationship between ages and food intake. Ages of the urban participants are also significantly related to their fluctuating food intake.

Rural participants have a significantly varied impact on weight loss status, with 14.75% reporting weight loss, while urban participants have a higher percentage of participants (25.50%) who have not lost weight in the last 3 months. Urban participants are more conscious about their weight loss, while rural participants are comparatively less aware. The data shows that rural and urban lifestyles have significantly varied impact on the weight loss status of the participants.

The Chi square test results showed a significant difference in weight loss status, with age playing a significant role. The study also observed that urban women's weight loss status is significantly influenced by age. Urban participants aged 60-69 reported the highest loss, while those aged 80-89 experienced the highest nutritional deficiency. Statistical analysis showed that age plays a significant role in weight loss status.

On the whole, the mobility status of urban participants is reported to be better than the rural elderly participants as only 35.57 % rural participant have disclosed that they can move out of home as against 64.42 % urban participants. Chi square test results led one to conclude that rural and urban lifestyles have significantly varied impact on the mobility status of the participants.

The study found a perfect positive association between stress status of rural and urban participants. Statistical rural and urban lifestyles equally affect the participants in so far as their psychological stress is concerned. Statistical analysis of Chi-square test shows two varied results. On the one hand we see that age on the psychological stress of rural participants, on the other hand, age significantly impacts psychological stress on urban participants, with the presence of stress declining from lower to higher age groups.

On the whole, more than half (55.37%) of the total participants are living with some types of neuro-psychological problems. It may be seen that urban elderly women suffering from severe dementia/depressions is much higher than the rural women while the picture is more or less opposite where the proportion of rural participants having mild dementia is higher than urban participant. Slightly higher proportion of rural participants (47%) have no psychological problems as compared to urban (42%) participants. Outcome of Chi square test reveals that rural-urban lifestyle has significant bearing on the neuro-psychological problems of the participants. Statistically, it was observed that age has significant impact on neuro-psychological problems psychological stress of the rural and urban participants.

The overall assessment derived using MNA clearly reveals that in the comparative analysis, the urban participants are in a better off position than their rural counterpart. However, it is seen that only one out of every four participants are well nourished. But what is alarming the is the fact that three out of every

four participants are malnourished with variable degrees. In the rural- urban context, it may be observed that of the total well-nourished participants 61.08% are from urban, while of those who are at risk of malnutrition majority i.e.,51.95% is from rural participants. Finally, within the malnourished category majority i.e., 58.75% belong to rural sample. Statistical analysis shows that there is reason to believe that rural -urban lifestyle has significant impact on the participant's nutritional status. So far as the relationship between ages the rural and urban participants with their overall nutritional status is concerned statistical analysis reveals that there is reason to believe that ages of the rural participants have significant relationship with their nutritional status. On the other hand, statistical examination of urban data lead one to conclude that ages of the participants have no significant impact on their nutritional status.

Conclusion:

Finally, it may be concluded that the health status of Assamese Hindu elderly women shows remarkable rural-urban and age-wise variation in terms of frequency of different morbid conditions or diseases under different bodily systems. Of these diseases, those related to muscular-skeletal problems are reported by as high as 93.5%participants followed by diseases of nervous system (78.0%). Statistical analysis also shows that different diseases involving different body systems affects or are affected differently with respect to rural-urban contexts as well as in terms of age-groups of the participants. Socio-cultural milieu, economic conditions, presence or absence of hygienic living and toilet facilities may also affect the rural urban variation of certain diseases.

This is reflected in the statistical analysis and treatment of data. Age-group-wise fluctuations are also quite noticeable. Although, the BMI status in urban participants is marginally satisfactory compared to rural areas, age-wise variation is marked and variable.

REFERENCES:

- Eleventh Five Year Plan Document 2007-2012. New Delhi: Government of India; 2008. [Last accessed on 2021May 14]. Ministry of Planning. Available from: <http://www.planningcommission.nic.in/plan/planer/fiveyr/11th/11/v1> .
2. Central Statistics Office. Situation Analysis of the Elderly in India 2011. Ministry of Statistics & Programme Implementation, Government of India. [Last accessed on 2021May 14]. Available from: <http://www.scribd.com/document/102693341/Situation-Analysis-of-Elderly-in-India> .
3. Laxmi Devi S, Roopa KS. Quality of life elderly men & women in Institutional and Non-Institutional settings in urban Bangalore district. Res J Fam Community Consum Sci. 2013;1:7–13.
4. Dey AB. WHO, Ministry of Health and Family Welfare, editors. Introduction: Hand Book on Health Care of Elderly. 1st ed. Paras Medical Publisher: Hyderabad, India: AIIMS; 2005. A manual for trainers of physicians in primary and secondary health care facilities; pp. 11–6.
5. Hogstel MO. Geropsychiatric Nursing. St. Louis: Mosby; 1990
6. Lueckenotte AG. Gerontologic Nursing. 2nd ed. St. Louis: Mosby; 2000
7. Power M, Quinn K, Schmidt S. WHOQOL-OLD Group. Development of the WHOQOL-old module. Qual Life Res. 2005;14:2197–214.
8. The World Health Organization quality of life assessment (WHOQOL): Development and general psychometric properties. SocSci Med. 1998;46:1569–85.

9. Anu Luisa GC, Gomez Benito J. Quality of life in the elderly: Psychometric properties of the WHOQOL-OLD module in Mexico. *Health*. 2013;5:110–6.
10. Tsai SY, Chi LY, Lee LS, Chou P. Health-related quality of life among urban, rural, and island community elderly in Taiwan. *J Formos Med Assoc* 2004;103:196-204.
11. Barua A, Mangesh R, Kumar HN, Saajan M. Assessment of the domains of quality of life in the geriatric population. *Indian J Psychiatry* 2005;47:157-9.

Title of the Article: NUTRITIONAL STATUS OF THE ELDERLY ASSAMESE HINDU WOMEN

Author: Dr. Bhagyashree Baruah

Email id: baruahbhagyashri@gmail.com

Phone number: 7002558183

Institution: COTTON UNIVERSITY