

An Assessment of Health and Nutritional Status of the Educated Reserved Category Women in University Studies in South 24 Parganas West Bengal ,India

Maitreyee Bardhan Roy

Corresponding Author: Maitreyee Bardhan Roy

Abstract:

The present Paper aims to report on the result of Assessment of health and nutritional status of the educated women community involved in University studies under adverse socio-economic condition of the families .Located in the semi- urban, semi-rural and rural areas of South 24 Parganas ,the health awareness program is expected to be carried out by the researcher in association with a consortium of experts like medical practitioner ,nutritionists and psycho analyst ,the overall health assessment program as such aims to include a three stair health scheme .1 The health evaluation of the respondent University students 2. The health awareness package based on the health evaluation report and .3. Nutritional awareness, through knowledge sharing on food habits, availability and the use of low cost community based nutritious food..The overall aim of the present article is to showcase the effect of health and nutrition on the education of the reserved category women communities absorbed in post graduate studies in Diamond Harbor Women University of South 24 Parganas of West Bengal, India.

Key Words:Health Assessment Nutritional status, Healthy women; Peer group interaction .Urban and Semi-Urban and Rural. College Students. Women, Nutrition,; Awareness;

Date of Submission: 27-07-2020

Date of Acceptance: 11-08-2020

I. INTRODUCTION

Based on Ethnographic/Anthropometric information associated with the Empirical studies, the present article refers to the health and the nutritional status of the educated women of South 24 Parganas District in West Bengal, India . The women group absorbed as respondents in the present project are in their post graduate studies, in the newly formed only Women University of the State named `Diamond Harbour Women University`. Demographically speaking, the women community involved in the field survey are located in the semi -urban, semi-rural or the rural areas of the coastal as well as the Delta region of South 24 Parganas District (See Map 1) . It is the biggest District of the State but the coastal and the delta region are the most underdeveloped parts of the district. As per 2011 census report, the pressing needs of the district is the dilatory health and nutritional condition of the women (Refer to NFHS 4) .While the encouraging part of the study is the intense tenacity of the younger women of the district towards higher studies .Hence their performance in the academic field , has encouraged the researcher to evaluate their health and nutritional status along with their University education .The Project was initiated under the ICSSR sponsored Senior Research Fellowship Scheme. Being surrounded by the conservative patriarchal social structure, the women of the district have been able to make a mark in the field of higher education by tactfully bypassing the male enrolment figure in the field The women enrolment in higher education has rose up to 15.87%, while the male visibility remained stagnant below 15% during 2018-2019 period (Ghara,T 2020) .

The Diamond Harbour Women University was set up by the Government of West Bengal as a mark of recognition to the excellent performance of the women community in their academic field irrespective of the adversities in their everyday life .The affiliation to the newly formed Women University was granted under the State Legislative Assembly Act XXXVII in 2012.The academic activities of the University was started from 2016-17 academic year. The author of the article as a researcher initiated the project with the expectation that the enormous academic pursuit of the women group will also be adopted to promote good health with standard nutritional strategies meant for them The health and nutritional survey on the educated women community of the University is adopted as two-step program ;1. health evaluation of the reserved category women students and 2, health awareness program based on health evaluation report .While the overall aim of the study is to spread up the good health and nutritional cue to the women community of the District with the ultimate aim to develop nutritional awareness among the women group through the active involvement of the women

students of the university in imbibing the good health strategies among them and to disseminate information about good health policies among the community peer group. On the whole the overall aim of the research is to involve in three steps health and nutritional awareness program among the respondents and to simultaneously spread up the good health message among the community peer group.

Field Survey:

The field survey of the present study is carried out within the University campus. Hence the respondents students for the survey belonged to the Scheduled Caste, Scheduled Tribe, Muslim religious group (Other Backward Class category A) and other Backward Classes among the Hindu Religious group too (Other Backward Class category B) and those belonged to Below Poverty Line (BPL) families, respondents with physical disability. The respondents are the first generation learners and their family earning with a few exception is mainly confined to the non-formal economic sector. The women dominated families are mostly landless and their sources of earning is confined to fish collection, Bidi binding (indigenous cigarette making) and offering domestic services to the Kolkata Metropolis. Majority male dominated families' income is accrued from the fragmented agricultural lands. The Muslim families are comparatively in a better off position because one or two members of almost all the families are working in Middle East. The reason for following caste character in the field survey is due to the Government of India's caste based reservation policies followed in student's enrolment, (For Reservation see Index I.).

The unique part of the research lies in its strategically designed information dissemination mode where the students respondents with the change of locational boundaries (from University campus to their own locality), are expected to be converted into the knowledge sharing tool and an instrument of the community peer group learning. Hence, the main aim of the project is three-fold 1) evaluation of health status of the respondents (The University students) 2) Awareness on the good health needs. 3) The tactics of adopting low-cost food chart available at their door step. The respondent women are picked up as a mode of knowledge sharing on the low cost nutritious food to the larger community.

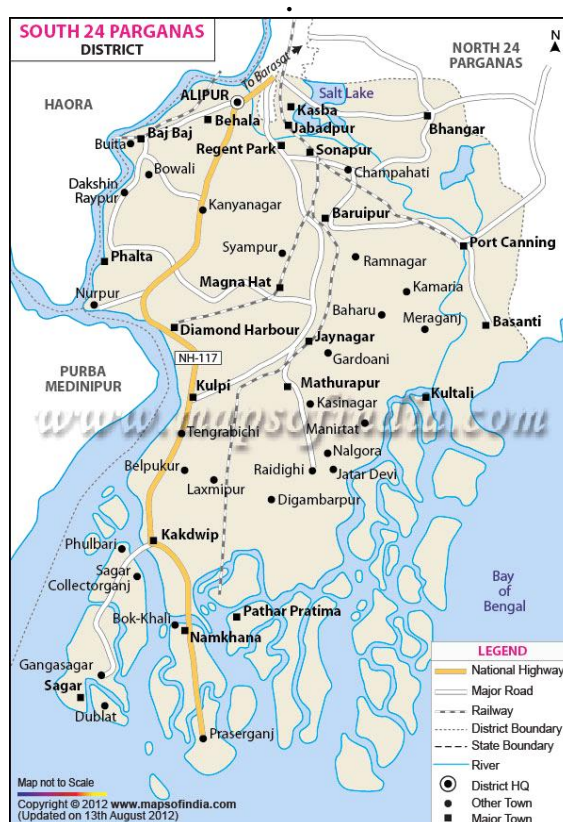
Demographic Profile of South 24 Parganas :

The District of South 24 Parganas spreading over an area of 8165 sq km. with 819 people per sq.km covering almost 9% of the total population of the land mass of the state of West Bengal. Located in between 20.20° North and 88.60° East, the District is bounded by the Bay of Bengal. Being comprised of 30 Blocks with five subdivisions it is a complex district stretching from metropolitan Kolkata to the remote riverine villages in the south expanded to the mouth of Bay of Bengal. The administrative profile of south 24 Parganas includes five sub-divisions. Like Alipore (sadar) Baruipur, Diamond Harbour Kakdwip and Canning (See Map 1). The Sundarban Delta region of the District is ranked as the most backward portion of district (2006 Local Government record). The students commuting from all these subdivisions, based on their caste, religion and economic condition are included in the study. However the district has proved its enormous success in women's literacy rate as compared to the State records. The Gross Enrollment Ratio of women in higher education at the range of 17% in 2018-19, while for men it is less than 15% in 2018-19. (Mitra, D and Ghara T.K 2019)

The enormous urge for higher education among these women community has compelled the Government of West Bengal to establish the first Women's University of the State in the District of South 24 Parganas and followed with it some accompanied incentives like revitalizing Kanyashree Prokalpa Phase III (Plan to beautify Women through education). The project was originally meant for School girls to obstruct their early marriage, later on it was extended till the graduation level. However, the proposal for women University resulted in the extension of the Kanyashree to Phase III. The overall aim of the project is to encourage the girl students to stay away from early marriage trap. Hence the unwedded women are the exclusive beneficiary of Kanyashree Prakalpa. This accompanied incentive for women in University studies proposed one time financial support to the unwedded women students as a gift-pack to fulfil their urge for higher education at their own expenses and also at their door step. (Majority women students of the University bear their academic expenses by their own from their scholarship, while some of them also give private tuition to the locality school children as their regular source of income (In Indian society, the parents bear the expenditure of a studies for their ward so long he or she is involved in academic pursuit). The Government of West Bengal, thus made it easier to the women students to involve in higher studies instead of the family adversities like pressure for marriage as per family's choice, withdrawal of financial support to them to enroll in University studies and thereby to act as an obstruction for higher studies. The provisions for financial support to the women students pursuing M.Phil and P.Hd are also introduced by the Government of West Bengal consecutively with the Kanyashree Prakalpa. III. Since the students of the University are located mostly in the coastal as well as in the Delta region of the District, their financial constraint originally deprived them from better health condition. To explore the health condition of the women along with their higher education, the present research project has

been adopted exclusively for the women under the University studies under . Under the ICSSR Project the present research aimed to observe the nutritional status of the women students absorbed in Diamond Harbour Women University .

MAP 1 Map of South 24 Parganas



Map of South 24 Parganas indicating coastal and the Delta Region

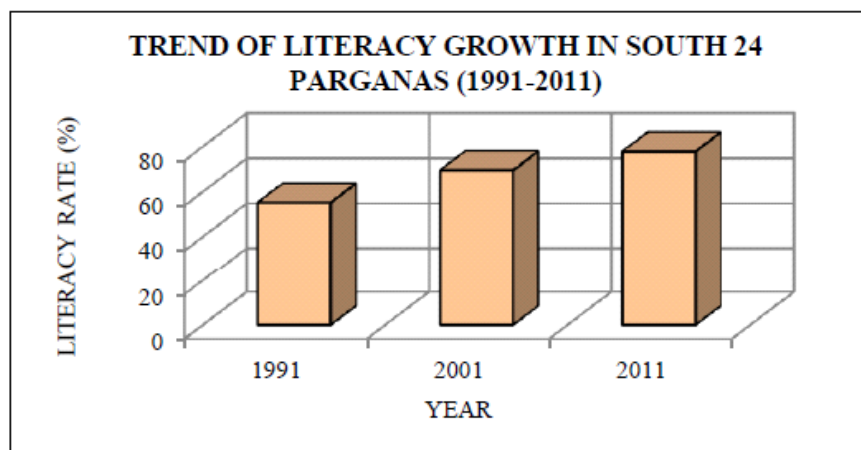
Literacy Status :

In terms of the literacy status ,South 24 Parganas holds 8th rank in West Bengal, according to the Census of 2011. During the last three decades a considerable increase of literacy rates in this areas have been observed As per the 2011 Census ,the literacy rate (excluding population in 0-6 age group) has been 55.10% in 1991, 70.61% in 2001 and 77.51% in 2011. The figures indicate a steady increase in the literacy rates in the area.

Table I Indicates upward mobility of the higher educational Profile of the District:-

State / District	Literacy rate (excluding 0-6 population) in percentage											
	1991			2001			2011			Change during 1991-2011		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
West Bengal	57.70	67.81	46.56	69.22	77.58	60.22	76.26	81.69	70.54	19.06	13.88	23.98
South 24 Parganas	55.10	68.45	40.57	70.16	79.89	59.73	77.51	83.35	71.40	22.41	14.90	30.83

Source: Census of India 1991, 2001, 2011 and Human Development Report, 2009



Source: Census of India 2011 and Human Development Report, 2009

Other than Kanyashree Prakalpal launched as an incentive for the unwedded women in the field of education, (also for higher education) the State government has also launched various schemes in the district like MNEGRA, IAY etc to improve the quality of the poor. These projects also benefit the educated women. In the upliftment of the economic condition of the women from poor backgrounds. Demographically speaking, the District is located in the periphery of Kolkata metropolis, but a large area of the same is extended towards the interior i.e. up to the Sundarban Delta with 70 per cent population residing in the rural areas. Though the male dominance is significantly visible in academic and in socio-cultural field, the percentage of educated women in the rural areas are noticeably high as compared to the other Districts of the state. As per National Family Health Survey (NFHS 4) report 2015-16, 72.9% women are literate in rural areas of South 24 Parganas, while the overall literacy rate of women in the district is as high as 74.6%. The families, though spend money for the education of the male, their literacy rate during the period was marginally higher than the rural women. The rural male literacy was 73.9% while in the overall District it was 76.9%. Women with 10 or more years of schooling was 18% in the rural areas. In overall District level it was 22.8%. Interestingly while 16.87% women have enrolled in higher studies during 18-19, the male visibility was below 15%. Since the progress in the health and nutritional status of women are not at par with their educational development status, the researcher aimed to work for the improvement of the health and nutritional status of the women community commuting to the University for higher studies.

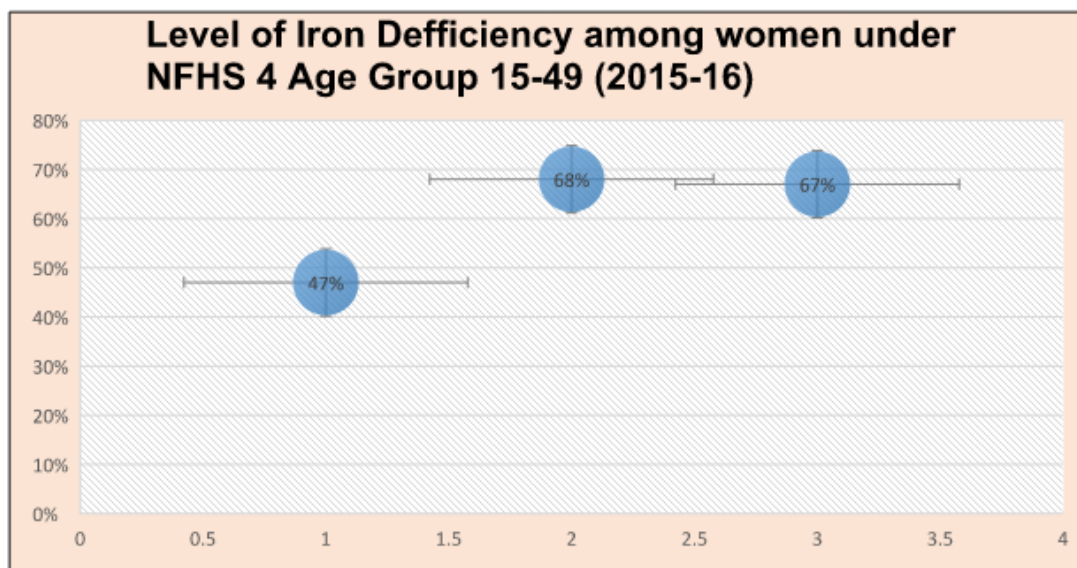
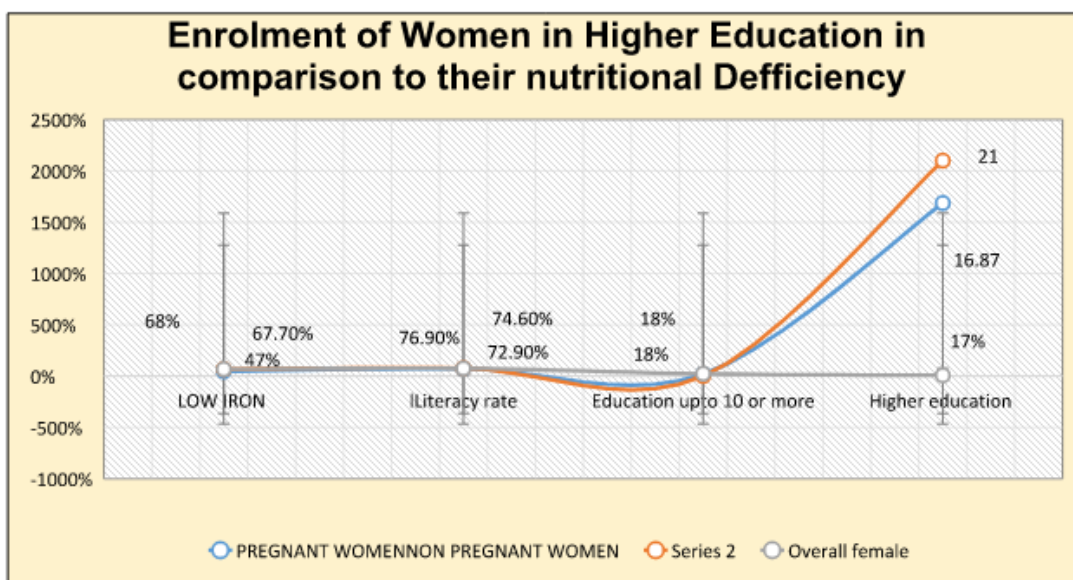
Health and Nutritional analysis:

South 24 Parganas (22°N and 88°E), is the largest District in West Bengal (Census 2011). The district comprises of 9960 sq.km area with 819 population per sq.km. The overall population of the age group of 18-23 years are 953,657 constituting 12.9% of the total population of West Bengal, while female population per 1000 men is 945. West Bengal, as one of the eastern states of India, constitutes 2.89% percent of India's geographical area with 8% of India's population residing in the State. The state has a rural population density of 676 people per sq km that constitute 70% of the total population. The NFHS-2 report revealed (44%) Chronic Energy Deficiency (CED) index in West Bengal as compared to Punjab, Haryana and few other states. (Radhakrishna et al. 2004). The state also registered in its record that 76% of the rural population fail to get 2400 kcal energy requirement and 63.3% are deficit of the 2200 kcal/day as the safety level of energy. (Meenakshi and Visuhwanthan, 2003). Rattan Chand (2004) also reported the existence of 10.4% hunger in West Bengal compared to 3.3% for the whole of India. Rice is the major source of calorie supply in rural and urban areas of West Bengal. A rational survey on pregnant women's anemia status in 2013 by agricultural scientist (Bardhan Roy S.K. 2013) has indicated that the majority of them are anemic.

The author of the article as the researcher while reviewing the overall nutritional status of the women of South 24 Parganas focused on three sources; like a) 2011 Census report. b) NFHS 4 report and c) National Monitoring Bureau Report. These sources while representing the socio-cultural data of the population of South 24 Parganas District, display a miserable picture of Women's Health. Realizing the need for special emphasis on the areas of health and nutritional status of women, the researcher sought proper guidelines to analyze documental evidences on the problems and to propose remedial measures to overcome the same. To guide the research towards the right direction, the researcher relied on the phenomenological approach rooted in Heidegger's, Husserl's and Ingarden's philosophies. To emphasize on the theoretical approach to the

study without hypothesis and perceptions, the observations and ideology laid down by Glaser's and Strauss (1967) through grounded theory has been adopted as an important ingredient of the present research. The NFHS 4 report (2015-16) conformed the Census report 2011 on the severity of nutritional condition of women in South 24 Parganas. The official records declared 47.0% of the pregnant and married women in the age group of 15-49 are anemic (<11.0g/dl)%. While 68% of the non-pregnant women of the same age group are anemic (<12.0 g/dl %). The overall anemia deficiency among the women from the rural areas of South 24 Parganas is 67.7%. Instead of the severity of health condition of the women community their high tenacity for education has encouraged the researcher to involve in health and nutritional studies of educated women of the district bounded by socio-economic adversities. The selection of the respondents are made by random sampling from among the Reserved categories students including those below poverty line families.

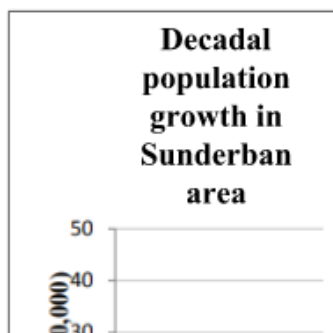
Table I & Table II nutritional status of women of South 24 parganas in comparison to their educational urge. Reference Census 2011 and NFHS 4 Report during 2015-16.



Rise in Population in South 24 Parganas:

It is also interesting to note this that the Sundarban Delta Region the worst effected part of the District from time to time effected by natural calamity ,but instead of the adverse circumstances prevalent in the region dominantly women population are observed in the areas and they became the main earners of the family . Thus instead of the increasing population figure in the areas ,majority male during natural disaster leave the area and go put of the state for the purpose of earning ,leaving back the women children and older people in the villages. As a result economy of the area is left under the control of the women (Sahana Ghosh 2018)

Table III: Population Growth in Sunderban Delta area of South 24 Parganas



In 1872 the population was just a mere 2.96 lakhs and in 2011 the population was about 44.26 lakhs. An exponential growth in population is observed in this area which suggests that population grows in geometric progression. There was a staggering 13.95% increase in the population from 1872 to 2011. A small area in South 24 Parganas i.e. Sunderbans area depicts a clear picture of the demography status in South 24 Parganas which shows a rising trend.

In India's Sunderbans region where 54 of the 104 islands support human settlements, one in five households now has at least one family member who has migrated, said Tuhin Ghosh, a scientist at Jadavpur University's School of Oceanographic Studies and DECCMA India, principal investigator. Thus the main earners of almost all the families are thriving on women earners. However the health status of the women of the region has been in a bad shape.

Action Plan

The research strategy under the project has been sketched out and adopted in to a three-step nutritional programs like a) Survey, b) Analysis and c) Evaluation. While involving in field survey, they are broken down into six steps for better result. 1. The evaluation of the immunity level of the women community enrolled in University studies (collected from attendance record of the students) (impression making). 2. Detection of the prospective respondents through verbal communication (Preliminary /Verbal consent). 3. Initiation of Field survey (through the formal consent of the respondents. Initially 450 students verbally agreed to participate as respondents hence the number came down to 400 under the action plan) 4. Distribution of the first set of questionnaire, (It include Name and age of the respondents, the listing of nutritional food chart, the family history, like family income structure, number of members in the family, the family occupational pattern and family academic history along with preliminary medical history of the family (Impersonal Survey). 5. The fifth step included the nutritional assessment in the form of blood hemoglobin test, height weight measurement (Close survey); 6. As a remedial action, the nutritional awareness among the respondents is done through the involvement of medical practitioner, nutritionist and psycho analysts as a team to analysis of the health report and to advise the future action plan.

Data Collection

Data collection in the present research is done in four phases, April-June 2018 August –September 2018, February-May 2019. July –September 2019. Time to time gap in between is observed in the survey work is due to the semester examination. Information gathered from the field survey is placed in a tabular form, (Table 4). The significant aspects of the data needed prior analysis through random verification of the information with the respondents. Confusion arising from the field survey are clarified for the convenience of coefficient analysis. Clarification of important information are done with the respondents as and when required. The average income of the families as per field survey varied from Rs3000-Rs5000/- with three to five family members. Though very few Scheduled Caste and Muslim families having household income from Rs6000-Rs 25,000 /with 5-8 family members. This group is mostly absorbed in service or in business associated with agricultural production or agricultural tools. (Since they belonged to the reserved category they are included in the survey)

A significant variation in the BMI Status of the respondents are recorded from the survey and differences in Body Mass Index from below normal to normal and overweight under the same income group has been cross checked in accordance to their diet chart (BMI <18.5 is below normal with energy deficiency

are observed among the respondents (BMI from 18.5-24.9 is average, while BMI 25 or higher than 25 is overweight).. Noticeable variation in the diet chart is also observed among the Hindu and the Muslim respondents. The Muslim respondents claim of taking meat, three times in day. As such a few of the respondents from the Muslim families fall under the highest BMI category(overweight) .This may be due to the consumption of three times meat in their diet. However the mixed group under the income range of Rs6000-Rs25000, with the number of members in the family consisted of 4-8 persons . This higher income of the family members is not reflected in the family health because increased or under the joint family structure no significant variation in their nutritional status as well as their style of living seems to be feasible . (Table 4)

.A cross verification of the data sheet indicated that among the above mentioned income group there are two categories of families, first group possessing agricultural land , the second group belonged to landless families . The families with agricultural land holding enjoy a hidden income which is never calculated under the regular income of the family. In this regard, the respondent's opinion is also varies .To them ,the variation in their income during the cropping and non-cropping season are the same with the family expenses too .In the cropping season they spend money (rice production is expensive) after the field .While in production season they earn money by selling the products. As a result the variation in the family earning pattern is so negligible that it does not add much to the family income structure. Also the majority land holders are possessing fragmented lands as a result production becomes expensive .Of course the agricultural land holder families possess their produce for their family use throughout the year, As a result ,the families do not suffer from food scarcity .Thus the women in the families fall under the normal BMI level instead of being placed under low income families.

Respondents also refer to the prevalence of water-borne diseases in their locality and to them majority family members suffer from fever for reasons not known. While some respondents are of opinion that families in the villages are though provided with 100 per cent toilet facilities by the Government, they do not use them because they are not ready to spend money for cleaning toilets as such toilets are left unused and the families go to the field or sit in the road side for their morning activities. Hence the students complained of their inconveniences in walking on the road. Because of human excreta .Continuous exposure to the unhygienic environment may be the cause of dominance of waterborne diseases in them.

Among the women communities of the Delta region gynecological diseases are very common. Specifically among the female family members because they are involved in fishing as a profession. Their profession compelled them to spend 8-10 hours in a day into water and mud in the river to catch prawns, snail and other small fishes. Standing on waist level water throughout the day leads to gynecological diseases. The existence of the disease sometimes hamper the academic activities as the respondents too. Sickness of a female family member indirectly affect their education because of their involvement in family care .and partial involvement to the family occupation as the replace of family head

Survey:

The statistical analysis of the mean value of the result involving 400 respondents .The quantitative research reveal that the majority of the respondents (60.5%) fall under low BMI status (<18.5.) .Hence 29.5 % came under normal category i.e. 18.6-24.9 and rest 10% are overweight .i.e. BMI >25 ..The overall scenario indicate that out of 400 respondents 243 respondents are below normal in BMI Status 118 fall under normal category and 39 overweight. However , the effective welfare policies of the Government like mid-day meal ,low cost ration facilities and low cost medical facilities have been consistently helping the people of the locality and the expression of the same is evident from the information chart where normal BMI range of 110 respondents (29.5%) of the respondents belonged to low income families .Hence among the respondents severely low BMI range is notdetected so far .The existence of Government welfare policies survival became easier among the low income families too. The (10%) overweight respondents belonged to the families where beef is consumed three times a day.

In Table 4 gives a detailed information about the basic food habit, income structure .number of family members, occupation of the family earners. in which the respondent belonged to (distance from home to the University),hemoglobin level of the respondents ,height weight and BMI status ere mentioned by grouping the respondents depending on same range .Thalassemia .test. Report of 154 randomly selected respondents are Group Wise made available for the convenience of uniform evaluation (All the 400 are grouped into three ranges based on their report).

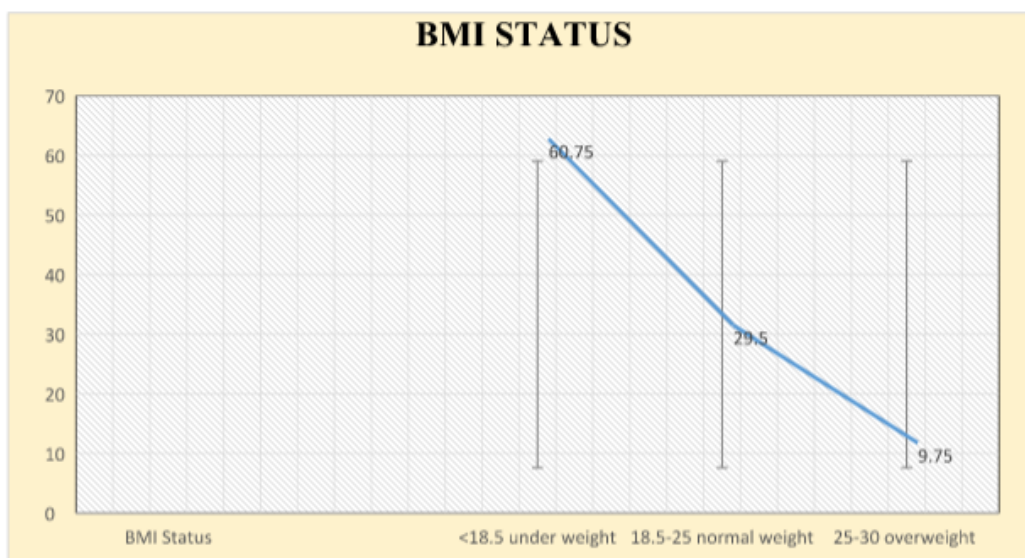
The long term effect of the survey is expected to find its expression of good health strategy among the respondent women with the likings for good living. However ,the unique part of the research is its methodology because the health evaluation strategy of the researcher aimed at involving the respondents to rotationally involve in group –wise nutritional evaluation of the peer group ,it also offered an opportunity to the respondents to act as a health analyst and also a spontaneous source of knowledge dissemination among the community women (the beneficiary and the beneficial are interchangeably involved in the group as

respondents and information provider) .Thus under the present research ,the respondent and the peer group have worked hand in hand in data collection , in information dissemination and in imbibing awareness among the larger communities .Since the peer group interaction and peer group learning methods are combined together the respondent group and the data collection group are found to be involved in collecting and compiling the data through phase wise involvement in data collection and in evaluation .Since , the research aims to develop long term awareness on the good health needs among the new generation women folk, the research aims to imbibe in them the habit of good living in everyday life and to propagate the good living practices among the locality women group too. Tables below gives a detailed information about the health and nutritional status of women respondents from Diamond Harbor University .

Table IV show-cases on the BMI status of the students involved as health assessment respondents.

Age group	22-25	22-25
BMI Status	no	%
<18.5 under weight	243	60.75
18.5-25 normal weight	118	29.5
25-30 overweight	39	9.75
Total	400	100

Chart IV Graphical analysis of the BMI Status of the Women as Respondent



It became evident from the information that the health status of the women are still in a bad state . It is an indication of the fact that poverty though failed to obstruct the educational tenacity of Young women of the locality. Their health condition is still facing the same consequences as it was as per 2011 census and other Government Reports.

Table No 4 displays the correlation in between the basic food habits of the respondents in comparison to their family income, number of members in the family, occupation of the family head, the distance from home to the University (for daily commuters). Many of them are daily commuting from a long distance place involving 6 hours travel. To them, staying out in PG is expensive .Also the separate stay and food expenses cost much higher than train fair (monthly train tickets with student’s concession involve less fare rate). (The University Hostel within the campus has started operating from mid-2019.) The status of their hemoglobin (done at the initiative of the super specialty hospital Doctors) height, weight measurement and the BMI status are grouped into three parts. The variation in their food habits in between the Muslim and the Hindu community (many Muslim respondents informed that they consume meat three times a day) Due to sharp differences in the protein intake level respondents are categorized according to their food habits). Variation in income and occupation. Their stay in the PG and Stay in SC Hostel. Though their height weight measurement, Hemoglobin count, BMI pattern have been place I the priority position the family income and Family food habits became the determining factor in the evaluation process .Over and above this a decision have been made to go for the Thalassemia test of 154 interested respondents are done . Hence, the report. of the Thalassemia test of the randomly selected respondents indicated that 8% are HbE carrier and 4% fall under the

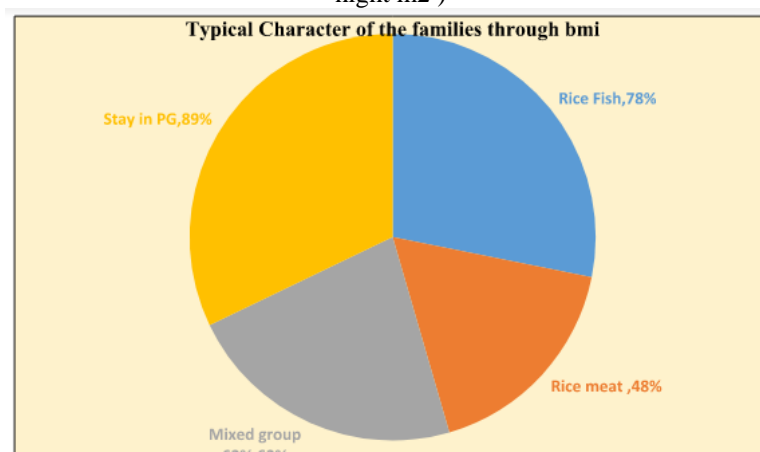
category Beta Thalassemia carrier. The respondents confessed that they are totally unaware of the same. Categorization of the families are made following certain set norms like a) Group based on similar income structure. b) Groups based exclusively on their food habit .c) Merged group on the basis of income only. The merged group with higher family income are brought under the survey because they belonged to SC and OBC (A &B) category.

Table V: Typical Character of the families, their food habits compared to BMI (BMI = Weight per kg/ height m2)

No of respondents	Basic food habit	income	Number of family members	Occupation	Distance from the University	Hemoglobin level	Height (Average)	Weight (Average) (kg)	BMI	Remarks
180	Rice & fish and vegetable	3000-5000	3-5	Farmer/ labourer/Biribinding (male and Female)	20-110km	11-12	4.9-5.00	40-48 63%	<18.5= 63%	Thalassemia Test report The test was conducted to 154 randomly selected students of the University And detected two types of symptoms
						< 13.	63%	49-55 37%	18.5-24.9 37%*	
						> 13	5.1-5.5	25-30		
						22%	47%	overweight nil		
										among them Preventive measures proposed under health awareness camp.
110	Rice Meat	3000-5000	4-6	Farmer (only male worker	20-50	<13 48%	4.9-5.0 47%	40-48 47%	<18.5 47%	8% of them are detected as HbE carries and 4 % are beta Thalassemia carrier.
							47%	49 -55 30%	18.5-24.9 30%*	
							53%	56-65 23%	25and above 23%	

5 6	Rice & Meat at fish	3000-10,000 (SC or OBC A & B category)	4-8	Service /Teacher /Business	150-255 km	<13 62% >13 48%	4.9-5.4 55% 4.9-5.4 30% 4.9-5.4 15%	40-48 55% 49-55 30% 56-65 15%	<18.5 55% 18.5-24.9 30% Over weight 15%
	Stay out in PG	Own earning from S cholarshi	4-8	Farm /Business	150-255 km	<13 89% >13 11%	4.9-5.2 100%	40-48 100%	<18.5 100%
1 5	Stay in SC Host el or Univ ersity Host el	Own scholarsh ip and funding from the Governm ent SC Fund	4-8	Farmer	3km	< 13- 53.33 % >13 46..66 %	4.9-5.2 63% 5.2-5.5 46.6 6%	40-48 53.33 %. 59-55 46.66 %	<18.5 53.33% 18.5-24.9 46.66%

Diagram VI: Typical Character of the families, their food habits compared to BMI (BMI = Weight per kg/ height m²)



Data collected from the student's response sheet include Height weight measurement, BMI status, Blood test and Thalassemia test report collected through medical camp. Interestingly, none of the respondents fall under the category severe thinness or moderate thinness, instead of having low income structure of the families. The reason behind this is the existence of strong support system offered by the Government of West Bengal to the BPL, SC ST and OBC families, from birth to the growing age and also during the pregnancy period of the women through the distribution of tablet and nutritional food packet and mid-day meal average health status is maintained among the locality people. Anyadaya Ration Card and active involvement of Asha Workers offer exemplary role in the health sector. As such death due to hunger or due to severe nutritional deficiency is almost non-existence in the District.

Survey:

The most complicated part of the study is the statistical analysis of the mean value of the result involving 400 respondents. The quantitative research reveal that the majority of the respondents (60.5%) fall under low BMI status (<18.5). Hence 29.5% came under normal category i.e. 18.6-24.9 and rest 10% are overweight i.e. BMI >25. The overall scenario indicate that out of 400 respondents 243 respondents are below normal in BMI Status 118 fall under normal category and 39 overweight. However, the effective welfare policies of the Government like mid-day meal, low cost ration facilities and low cost medical facilities came as an enormous help to the people of the locality and the expression of the same is evident from the information chart where normal BMI range of 110 respondents (29.5%) of the respondents belonged to low income families. Hence among the respondents severely low BMI range is not detected so far. The (10%) overweight respondents are mainly seen in the families where meat is consumed three times a day.

In Table 5 gives a detailed information about the basic food habit, income structure, number of family members, occupation of the family earners. In which the respondent belonged to (distance from home to the University), hemoglobin level of the respondents, height weight and BMI status are mentioned by grouping the respondents depending on same range. Thalassemia Test report of 154 randomly selected respondents are group wise made available for the convenience of uniform evaluation (All the 400 are grouped into three ranges based on their report).

The long term effect of the survey is expected to find its expression of good health strategy among the respondent women with the likings for good living standard. However, the unique part of the research is its methodology because the health evaluation strategy of the researcher aimed at involving the respondents to rotationally involve in group-wise nutritional evaluation of the peer group, it also offered an opportunity to the respondents to act as a health analyst and also a spontaneous source of knowledge dissemination among the community women (the beneficiary and the beneficial are interchangeable in the group). Thus under the present research, the respondent and the peer group have worked hand in hand in data collection, in information dissemination and in imbuing awareness among the larger communities. Since the peer group interaction and peer group learning methods are combined together the respondent group and the data collection group are found to be involved in collecting and compiling the data through phase wise involvement in data collection and in evaluation. Since, the research aims to develop long term awareness on the good health needs among the new generation women folk, the research aims to imbibe in them the habit of good living in everyday life and to propagate the good living practices among the locality women group too. Tables below gives a detailed information about the health and nutritional status of women respondents from Diamond Harbor University.

Result of Three Phased field survey:

The above evaluation revealed that the majority students attending the University are first generation learner. They hail from rural, semi-rural and semi urban background, they belonged to the lower income or from caste based families (SC OBC A&B). Initially the research project aimed to involve the SC and OBC categories of students in the survey (no students admitted from ST category) but discontent among the students for caste based survey compelled the researcher to include BPL students and also the students from low income families into the survey.

Majority of the respondents do not have agricultural land. Hence they not enjoy any other extra facilities other than the family income as show in the questionnaire. Rice is their staple food (three times a day), the side dish mainly included either prawn or vegetable for the Hindu families for the Muslim Families, meat takes a dominant place. However, the symptoms of overweight is common among the meat eaters. Occurrence of fever, skin diseases and gynecological complications are common to them. None of the groups have the conception of balanced diet. Though South 24 Parganas is famous for nutritious fruits and vegetables, the respondents rarely consume them (no one mentioned fruit as a part of their diet). Though the fish is the staple food of the Hindu families, they mostly take Prawn as mentioned in their food chart. Though the Hindu respondents mentioned of taking vegetables as an alternative dish, the Muslim respondents mainly survive on

meat and Lentils . As per the survey sheet ,(other than those who are in service), the income of the families vary from Rs3, 000-Rs5,000 the cases of normal BMI status is not unusual .The researcher while cross checking the causes came to know that those belonging to agricultural families, enjoy some seasonal income While vegetables, rice are produced in the field .Also they accrue some extra income from the sale of the products .Hence gulf of difference is observed in the standard of living in between the respondents from agricultural land owners families and the landless families. The families residing in the Delta Region are always susceptible in health and nutritional status , because the food production is depended upon the environmental condition For example after 2009 Ayla no crop was produced in their field for long four years because of the deposition of salt on the agricultural land and the families survived on non-agricultural earning Hence the living became tough to the families. Thus the family indefiniteness in living compelled the young males to leave the state for earning. However the daily expenditures of the families are met up from the income of the women. Similar consequences are also observed after Amphan 2020, many respondents complained of becoming homeless and are surviving under the sky. However in the opinion of the respondents, the families in South 24 Parganas have a tendency to spend money for the education of their son .In the opinion of one respondent, their families has sold out a plot of land for the education of her brother. Hence, the same trend is nothing special for the families. However, the daughters are expected to continue with their studies either from the Government funding is made available for their studies or from their own income.

Awareness Camp:

Based on the research findings , the researcher organized a separate awareness camp to conform the ill-effect of low tone health status of women to the society. Women`s ill health or nutritional deficiency syndromes are not only reflected on their physical stature,it affects highly on their reproductive rights too .Her nutritional deficiency causes ill health to the children born to her. Looking to the generational effect of nutritional deficiency on women, the present research took up the nutritional awareness program for the educated women of the coastal and the Delta region of South 24 Pargnas ,the most susceptible zone of the State. Since the basic aim of the research is to imbibe awareness on low cost nutrition, discussion initiated at the stage included ;1) the good effect of healthy living .2.) to the use of low cost nutritional food, including fruits, vegetables and protein food available in the locality .3) to use of medicinal plants as natural resources and 4). To learn about their nutritional value for healthy living and also their use as nutritious food and medicine (Bharater Nari Indian women) .

The Workshop on the environmental awareness is initiated a) to make the respondents aware of the effective use of Environmental and b) nutritional value of indigenous food products .c) Optimum use of the available natural resources with high food value. The overall aim of the awareness camp is to make the respondents aware of their health condition and through them to inculcate health awareness among the community at large. The ultimate project is to cease a well-informed society where women`s good health needs are considered as the asset of the society.

The overall aim of the present research is not only to look into the nutritional status of the educated women community of the District of South 24 Parganas.Its aim is to imbibe awareness in them about the need for healthy living in the society and this can be easily achieved at a low cost and with the utmost utilization of the welfare policies of the Government available at their door step. Hence the job of the researcher at this stage is to evaluate the level of deficiency present in them and to indicate them the right direction so that they can avail off the local resources for their own benefit. Since the women community of the same age group are also expected to be benefitted by the same inputs the awareness program organized **by the researcher from time to time extended the news of spreading up their living among the rest of the women community so that the overall effect of the nutritional project is capable of including all women group either directly or indirectly** into the nutritional package program proposed by the researcher under the present study .

Majority respondents are the victims of nutritional deficiencies (Low BMI and Low Hemoglobin) Some of them are also affected by genetically impounded disease like Thalassaemia (HbE carrier or Beta Thalassaemia carrier) about which they are unaware of the same till the test is conducted .The Medical professional supporting the researcher advised the students to go for fresh Blood Hemoglobin test associated with blood group detection. Those detected as Beta Thalassaemia carrier , are asked to take medicine on regular basis with the advice of the physician and also they have been asked to go for Blood test of the prospective bridegroom before negotiating the marriage. Mainly as per medical practitioner, marriage relation in between two (the male and female) positive Thalassaemia carrier should be prohibited. This preventive measures need to be adopted is essential to stop the birth of the future progeny as a patient of Thalassaemia. Also those detected Thalassaemia are advised to take the membership of Thalassaemia Society, because it is difficult to involve in blood transfusion in individual capacity. Hence the support from the Thalassaemia Society is required for instant arrangement for blood (By advise Medical Practitioner).

Concluding Remarks:

Through cheap mode of nutritious food available in the locality . Since the respondents showed equal enthusiasm on the awareness of good health and nutritional needs, the basic tenets of the research is to carry the positive message on the need for good health strategy on women by referring to the impact of food value on their health. by putting stress on the food habits, protein intake and common diseases prevalent among the respondent women students commuting the University from the lower income families with some specific caste, class and culture residing in the coastal as well as delta region of South 24 parganas.

From the socio-cultural point of view, low family income pattern of the families hit the female child to the utmost because spending money for the male child and offering more attention for their better upbringing and better nutrition are practiced equally in all the families . As a result the daughters are neglected in all spheres of life . The daughters opting for higher education has to bear the expenses of education by them from their scholarship or by offering private tuition to the locality children.. Sometimes, they also involve in part-time job. As a result they are compelled to reduce their expenses on food to meet up their academic expenses . The Government of West Bengal at this outset may display low cost nutritional diet chart for women and try to evolve nutritional awareness program universally for all women of the state The West Bengal Government's Kanyashree project 3, though expected to evolve some solution to the problem. Considering the study as an important landmark to the nutritional status of women , the present research aims to explore the reality scenario and thereby proposes means to bring the issue under the umbrella of policy stances. The overall impact of the survey is expected to offer a unique opportunity to the consortium of research group to explore the reality scenario and thereby propose means for the effective solution to the problem .The overall aim of the research is to disseminate information on the need for the development of awareness in women about the nutritional value in their life s the future mothers of the country .

REFERENCES

- [1]. Agar, M. H. *The Professional Stranger and Informal Introduction to Ethnography*. New York Academic Press. 1986.
- [2]. Agric. J. *Econs. Bangladesh in the Asian Context and the Prospect for Introducing Biofortified Rice*. 25(2), 1-13. 2002
- [3]. Angus, D., & J, Dreze, *Food and Nutrition in India: Facts and Interpretations*. Economic and Political Weekly, 44(7), 42-48. 2009.
- [4]. Babbie, E. & A Rubin. *Research Methods for Social Work*. Belmont, CA: Thomson Wadsworth. 2005
- [5]. Bagchi, Jasodhara and, Sarmistha Dutta Gupta . *The Changing Status of Women in West Bengal, 1970-2000: the Challenge Ahead*. New Delhi: Sage Publications India Pvt Ltd. 2005
- [6]. Bandopadhyay , Upendrachandra Bharater Nari (Bengali) .18th Edition collection Digital Library Texts. 1960.
- [7]. Bardhan Roy , Maitreyee, *A College Reaching Out to Society, A Practical Model of Knowledge Dissemination*, Narasingharao, Panduranga B et al (ed) *Hand book of Research on Science Education and University Outreach As Tool For Regional Development*. IGI Global USA 2017.
- [8]. Bardhan Roy, S. K. *Adoption Potential and Consumer Acceptance of Biofortified Rice in West Bengal: A Project*. Paper Presented in International Sociological Association Conference. Presented in Gothenburg University 2006.
- [9]. Chand, R. *Inequality in Expenditure in Indian States*. Ministry of Statistics and Program Implementation National Seminar on NSS 61 round Consumption Expenditure Government of India. 2007
- [10]. Chatterjee, R and Basu P (ed.) *West Bengal Under the left 1977-2011* Routledge NY 2020
- [11]. David S and L Wendy *Marketing: A Brief Introduction*. Jennifer Pegg: United Kingdom. 2008.
- [12]. Dominick, J.R., & R.D .Wimmer *Mass Media Research: An Introduction*. Belmont, CA: Thomson Wadsworth. 2005.
- [13]. Glaser, B., & S A. L. Truss, *The discovery of Grounded Theory Strategies for Qualitative Research* Aldine Publishing Company. 1967.
- [14]. Grochowski, J.R. (2016) *Social Determinant and Family Health* pp377-385 in Susan J Ferguson (ed) *Race Gender and Sexuality and Social Class Dimensions of Inequity and Identity* Sage USA 2016.
- [15]. Grondin, J. *Introduction to Philosophical Hermeneutics*. New Haven, CT: Yale University Press. 1994
- [16]. Gubrium, J. F., & Holstein. (2001). *Handbook of Interview Research: Context and Methodology*. Thousand Oaks, CA. Sage (Atlanta, Ga.).
- [17]. Harris, Bernard . "Height and Nutrition" in K.F. Kiple and K.C. Ornelas (ed) *Cambridge World History of Food Vol-2* Cambridge, Cambridge University Press. 2000
- [18]. Harshad. (Ed.). *A Study of Awareness of Nutrition and Anemia Among College Going Students of Mahila College in Bhavnagar*. Retrieved from www.njmindia.org. 2000
- [19]. Jamin, W. M. H. *Poverty and nutritional in India, Facts and Interpretations* . Academic Press.

- [20]. Kent, G. (n.d.). The Human Rights Approach to Reducing Malnutrition .Encyclopedia of Life Support System. 2002
- [21]. Krippendorff, K. Content Analysis: An Introduction to Its Methodology. London, UK: Sage Publications. 2004
- [22]. Madhubala & Katara .Study of Nutritional Status in Relation to Physical Activity of College Going Adolescent Girls .Indian Journal of Applied Research, 4(7), 99-100. 2014.
- [23]. Mallikharjuna Rao.K Balakrishna .N ,Arlappa N and Brahmam ,GNV (2010) Die and Nutritional Status of Women in India. Journal of Human Ecology NewDelhi India
- [24]. McNabb, D. Research Methods in Public Administration and Nonprofit Management: Quantitative and Qualitative. Armonk, NY: M.E. Sharpe. 2002.
- [25]. Mitra Debjani and Ghara T.K.(2019) Gross enrollment ratio in Higher Education : District Level Analysis of the State of West Bengal; Asian Review of Social Sciences ISSN :2249-6319 pp27-41.www.trp.org.in
- [26]. National Nutrition Monitoring Bureau. 25 years of National Nutrition Monitoring Bureau, Hyderabad National Institute on Nutrition 1997
- [27]. Odrowaz-Coates, A. A gated community as a `soft` and gendered total institution, International Sociology, 30(3). 2015.
- [28]. Radhakrishnan, A., L. P Sun., H. J., Kwon, M. S., Brown, & J. L. Goldstein, Direct binding of cholesterol to the purified membrane region of SCAP: Mechanism for a sterol-sensing domain. MolecularCell, 15(2), 259–268. 2004.
- [29]. Ramachandran, K Nutrition, Monitoring and Surveillance available at <http://nutritionfoundationofindia.res.in>. 2006.
- [30]. Saramma. (1989). An ecology of high altitude infancy: A Bio-cultural perspective. Cambridge University Press.
- [31]. Tarozzi Alessandro and Aprajit Mahajan Child Nutrition in India in the Nineties ,Economic Development and cultural change 55(3) . 2007

End Note :

Index I

Reservation Policies in the Colleges of the Government of West Bengal :Current Quota Scheduled Caste 22% Scheduled Tribes 6% OBC AB and Physically Handicapped 17 % .Economically Weaker Section Upto 10% Bengal set to implement 10% poor quota in edu institutes Somdutta Basu Times of India July 29.2020\

¹ Those under reserved category include Scheduled Caste ,Scheduled Tribe, Other Backward class A&B ,Disable

Author`s Biography : Maitreyee Bardhan Roy, UGC Emeritus Professor, and the Senior Research Fellow ICSSR was the former Principal of Basanti Devi College Kolkata . The present paper is sponsored by ICSSR Senior Research Fellowship Project. Conducted under Institute of Development Studies Kolkata. The Author of the article has more than 50 papers in her account. Author`s present address is AE 697 Salt Lake City ,Kolkata - 700064. Mobile -919433060084.

Maitreyee Bardhan Roy. “An Assessment of Health and Nutritional Status of the Educated Reserved Category Women in University Studies in South 24 Parganas West Bengal ,India.” *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 25(8), 2020, pp. 43-56.