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| **Health impacts of domestic works on Women:****A Case Study in the Sundarban Region of West Bengal** | **Soma Majumder****The Researcher, Kolkata** |

**Health impacts of domestic works on women:**

**A Case Study in the Sundarban Region of West Bengal**

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**ABSTRACT**

**Introduction:** Women’s domestic works are numerous and usually not recognized. Women are engaged in verities of domestic tasks both inside and outside of their homes that cause severe hardship and affect their health in some ways. Particularly rural women of our country have to engage in cultivation works in their land and other’s farmland, apart from their strenuous domestic chores. This study aims to examine the health hazards of rural women in the Sundarban region of West Bengal caused by the hardship in course of performing their daily chores.

**Methodology**: This paper is based on a field study conducted among 100 women in four villages of Gosaba block of South 24 Parganas district. Data was collected using a semi-structured questionnaire. The paper examines the quantum of strenuous works and factors associated with it resulting in different kinds of health problems.

**Results:** The study reveals that most of the women respondents suffer from various kinds of musculoskeletal disorders (MSD) and a number of gynaecological problems resulting from their strenuous daily chores, like carrying water from a distance, working in bending position for a long time, collecting firewood from the forest and such other works. The study also found that a lack of primary health care facilities and the ensuing dependence on quack health practitioners often add to the woes of the suffering women.

**Inference:**Lack of access to modern amenities, lack of infrastructure, frequent natural calamities, lack of livelihood opportunity, and the resulting forced migration of men-folk of the families, have charted an entirely different course of life for the women of Sundarban. The sufferings of women are aggravated due to the typical geographical conditions that cause severe constraint in the way to income generation as well as to betterment of living conditions. Easy access to water and fuel along with income-generating micro-enterprises and proper health care facilities at their reach might help the women here to ameliorate the drudgery of their daily lives and improve their health conditions.

***Keywords:*** *Hardship in domestic chores, strenuous activity, Musculo-skeletal disorder, genito-urinary disorders, Sundarban.*

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**INTRODUCTION**

Health of women engaged in domestic activities has remained one of the neglected areas, both to the researchers and the policymakers, although their contribution to social and economic growth seems to be enormous and in real sense priceless as observed in a study, “housewives from the core that nurtures the society” (Bihari et al, 2013, p-1). While doing their daily chores, usually women undertake multifarious activities both inside and outside their household premises. The workload in most of these activities is demanding with telling effects on their health, particularly in the rural areas of our country.

Rural women in India have to perform multiple strenuous and hazardous tasks in their daily lives to meet their domestic responsibilities. Their work also includes participation in agricultural or other livelihood activities apart from child-bearing. “The multiple burdens of ‘production and reproduction’ borne from a position of disadvantage has telling consequences on women’s well-being” (Hariharn, 2006, p-111)*.* Most of these tasks are not only strenuous and burdening but also repetitive. These strenuous daily chores often cause Musculoskeletal Disorders (MSDs) and other diseases at the advanced age. Heavy physical work can cause MSDs, static work postures, frequent bending and twisting, lifting, pushing and pulling, repetitive work, vibration, and psychological and psychosocial stress (Andersson, 1997) Studies have shown that women are more likely to suffer from musculoskeletal illnesses in the upper limbs and lower back (Chakrabarty, 2016). Literature has shown that physically or psychologically demanding jobs be associated with higher prevalence of neck and back pain (Canjuga, 2010).

This study has been conducted on the status of women’s health in an island situated at the coastal belt of West Bengal, popularly known as Sundarban, comprising numerous islands on the estuary of the Bay of Bengal. Life in this area is entirely different from other areas of the state and the country at large.

 Being located in one of the remotest areas of West Bengal, women living in Sundarban have to face several difficulties in carrying out their daily chores. This Sundarban region was made habitable by clearing its forest during the British period around a hundred years back. However, the area has always posed a challenge to human habitations and remains vulnerable to nature’s vagaries. The situation in Sundarban may find a parallel with the lines of a famous English poem, The Rime of the Ancient Mariner, “… *Water, water, everywhere, / Nor any drop to drink.*” The water of the surrounding rivers, creeks, and canals being very close to the sea is highly saline and not suitable for human use. It is prone to frequent natural calamities like cyclone, seasonal floods during monsoon and river bank erosion (Danda, 2007, Karmakar et al, 2012).

 This study has been conducted in the community development block Gosaba under Canning Subdivision in South 24 Parganas district, West Bengal, which is situated in one of the main deltaic islands in the Sundarbans region, bounded by the Bidyadhari and the Dutta rivers. This block consists of a number of islands, some having human habitations while dense forest covers the rest.

 Main options of livelihood for the local population are agriculture, honey collection from the forest, fishing, crab catching, fish-pin collection, apart from other manual jobs, most of which are seasonal. Both men and women are engaged in these livelihood practices. Since the devastation caused by saline water flood during the cyclone Aila, agriculture had to be abandoned and many people migrated from this region in search of better livelihood options.

Our study is intended to examine to what extent the laborious domestic chores affect the health of the women of this region principally through a quantitative survey of randomly selected households and interviewing married women of different age groups.

**METHODOLOGY**

In this cross-sectional community-based study, the survey was conducted in the above four villages using a structured questionnaire for data collection. Stratified random sampling was done in different parts or habitations (*para*) of the villages used as a stratum and from every *para* four to five women were randomly selected from different households. It was done with the intention of incorporating marginalized sections of the population in the sample. For this study four villages naming Amlamethy, Bali, Bijoynagar, and Birajnagar were selected in one of the inhabited islands in Sundarban, namely Bally, under the two Gram Panchayats, Bali-I & Bali-II. From these villages 100 women, 25 from each, were selected to examine the burden of their household chores and health impact of the same.

**Method of data collection**

A mobile-app based software version of the questionnaire was developed to save the time required for data entry. Educated local girls were trained for administering the same. Respondents were selected from married women with no professional or regular jobs, though most of them participate in agricultural works besides their households chores. Verbal permission for the interview was taken from the respondents and they were assured that the data which they will provide would be used only for the study purpose. The village profiles of the four villages were collected through a separate set of village questionnaire. The collected data were analysed using standard statistical methods. These questionnaires were pre-tested before finalization and administered to the respondents by visiting their houses.

**Map: Study Area Location in Sundarban, West Bengal**





**RESULTS AND FINDINGS**

1. **About the study villages**

This part of the Sundarban is probably the least developed with some parts of the Island still lacking basic amenities like pukka (concrete) road and electricity connection. This Island has no motorable road connection with even the block headquarters at Gosaba, leave alone other towns of the district. It has no primary health center although the ASHA health workers visit from door to door. Respondents told during the study that quack doctors are available on this island, but no qualified doctor or formal clinic is available. Nearest hospital is located in Gosaba Island, the block headquarter. In serious cases, the local people have to travel to the sub-divisional hospital at the nearest town Canning which is approximately 52 km from the island and only accessible by ferry service. There is a private clinic in Bali Market area, which is run by a quack doctor who even performs complicated surgery like a hysterectomy. Local people reported during the study, *“We do not know, who he is and from where he came. But, we have no other choice. We have to go there, and because his charges are moderate, we can afford it.”*

1. **About the respondents**

The age range of the respondents is from 18 to 70 years. Only married women were selected and interviewed. Instances of early marriage are found during the study. Mostly younger and middle-aged women are engaged in doing farm-work and strenuous work. Usually, they wake up at the earliest hour of the morning and start their work both inside and outside the house premises. After completing the morning chores, they undertake cooking for the whole family and then serving the food to all family members. If they have baby child/children, they have to feed them as well. After completion of their first round work inside the house premises, they go to the crop field and work for the rest of the day.

Among the respondents, 31 per cent have no schooling background, while 41% of them have secondary education and 20% have a primary level of education. Among them, 5 per cent have passed higher secondary, and only 3% have attended education above that level.

As a mark of poverty, the study found that 61 per cent of the respondents still live in *kaccha* houses, while 20 per cent yet to have toilet facilities in their family. Access to the bathroom is in a miserable condition, as only a mere 9% of the respondents reported to have a bathroom in their house, while the rest 91% have to take bath in the open.

Most of the households belong to the SC, ST and OBC categories and are living below poverty line (BPL). Among our respondents, 59 belong to households categorized as BPL (Below Poverty Line).

Majority of the sample belongs to the Hindu community. Only 4 out of 100 respondents are from Muslim community. 53% of the respondents are from Schedule Caste category, while 36% are from general category, 10% from OBC category, and only one respondent was from ST category. The following table shows the primary source of family income of the respondents.

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| **Table I: Primary income source of respondents households** |
| Total | Primary Income  |
| 100 | Agriculture | Business | Service | Manual Labour | Others |
| 65 | 2 | 1 | 16 | 16 |

Most of the sample households depend principally on agriculture and manual labor as their primary earning resource. The households surviving on manual labors usually depend upon variety types of activities like the fish-pin collection, honey collection, crab-catching, fishing apart from jobs and daily labors in the cities and towns. The average income of the respondent families is 77, 470 INR per annum. 33 out of 100 respondents reported that their households are yet to get an electricity connection. All these show the poor and backward socio-economic status of our respondents.

1. **Hardship in domestic chores**

Many women of this area used to go to the jungle to bring fire-wood and some even plunge in the rivers to catch fish-pin/fish-ling or fish to maintain their daily necessities. Women in this region on an average wake up at around 5 am in the morning. 18 out of 100 respondents said that after waking up, they go to the nearest canal or river to collect fish-pin, which they sell to the fish-pin collectors.

The respondents in this study spend on an average 1.5 hours for collecting firewood and around 1 hour on an average for water collection in their daily routine works. The chart below reveals the average hours spent by the respondent women while undertaking different daily chores.

The chart reveals that the respondent women spent average 3 hours or more time a day for activities like working in farms (which is a seasonal activity), working in bending position, working inside their house and house premises and in walking. Many of these activities are overlapping. Now let us see what kinds of activities they undertake inside the house premises and outside of it.

1. **Work inside house premises**

Most of the women have to perform a number of domestic works inside their house premises as well as outside of it.

The respondents sweep their rooms, wipe the whole house premises, cook for the family and undertake other works inside the house premises. If they have small children, they have to take care of them. All these spanning an average of 3 to 4 hours are usually done in the morning. The sweeping and wiping of the entire house, covering rooms, verandah and the premises, are done as a routine activity that involves long time working in the bending position.

1. **Work outside house premises**

Among the 100 respondents, 46 use only firewood as their cooking fuel, while the rest use both LPG and firewood combined, though their dependence on firewood is extremely high because of lack of transport facilities of LPG. 31 families have kitchens inside the house while 69 families are reported to cook in the outer side of house premises, i.e. in the open. This shows the limited use of LPG for cooking as normally cooking with LPG would be done inside the house. Hence collection of fuel remains one of the burdensome works outside the house premises.

Many of the households have their kitchen gardens that are also usually maintained by the women members. Watering and weeding of the kitchen gardens also form part of the regular jobs for many of the women.

Among the works that are performed outside the house premises include 1) washing utensils and clothes in the nearby ponds, 2) visiting village markets twice or thrice a week, 3) firewood collection from nearby jungles, 4) laboring in agricultural fields and 5) feeding livestock.

1. **Hardship in farm work**

43 respondents reported that they have to participate in farming activities as well. These respondents used to spend up to 10 to 12 hours in the field during the farming season. In the middle of the day, they get a break of 2 hours to take bath and have their lunch. Some respondents go home to complete cooking in the break hours and use to take lunch there. As most of the able males are working outside and many staying in faraway towns, only women and children are there to look after all works. That’s why most of them have to work in the fields for a full time.

Only 23 respondents reported that their families have agricultural land, while the rest have none. But many of them lease in land from others for cultivating a particular crop. Some also work as agricultural laborers seasonally. All these add to the family income and supplement their food requirement.

1. **Work related to domestic animals**

Among the respondents, 75 households have domestic animals, which the women members have to take care of in general. The domestic animals consist of cows, domestic fowls, and goats. For nourishing these animals the women have to fetch the additional amount of water and collect fodder either from the fields or the market. Further, they have to take extra burden for cleaning the cow and goat sheds regularly. The burden of carrying fodder either from the fields or the nearest market situated around a few kilometer away put extra load over and above their other daily domestic chores. It is needless to say that rearing cows involve more time and is much more strenuous for the women as they have to clean the cow-sheds, milk them and use the cow dung to prepare cow dung cakes to be used as fuel for cooking.

The following table reveals the numbers of livestock reared by the respondent households.

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| **Table II: No of households having livestock and the average number of possession** |
| Type of livestock | No of households having livestock | Average number of livestock |
| Cow | 70 | 3 |
| Goat | 30 | 4 |
| Domestic fowl | 41 | 8 |

1. **Most strenuous daily tasks**

All the respondents said that the most strenuous works involve working in a bending position, and carrying weight. During their work in the agriculture field, they have to spend most of the time in bending position. It causes a perpetual ache in the waist area and also causes a feeling of tiredness and dizziness.

The following chart shows the most strenuous working conditions and the number of respondents for each category.

The second most strenuous work is fetching water and carrying the same from a distance. The respondents walk on an average 436 meters distance with buckets or pots full of water. The chart below shows the percentage of respondents traveling the average distances with buckets or pots filled with water.

They usually carry two pots or buckets at a time and 89 percent of respondents have to undertake this journey more than once a day. As shown above, only 10 percent of respondents have access to a water source within 100 meters from their household. 35 percent of respondents collect water from 101 to 250 meters. 28 percent of them have to go 251 to 500 meters to collect water. 10 of them walks 501 to 750 meters, 15 of them walks 751 to 1000 meters, and 2 of them have to go more than 1000 meters to collect water. Sometimes when the primary water collection point becomes defunct, the respondents have to face more plights and the average distance covered becomes 935.5 meters or nearly one kilometer. As shown in the figure, 43 percent of respondents have to go to a secondary water source when their primary water source become defunct.

Then if we tabulate the average quantity of water carried against the number of trips and average distance covered in each case, the following table would emerge.

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| --- | --- | --- | --- |
| **Trips Per Day** | **Number of Respondents** | **Average volume of water Carried Per Trip** | **Average Distance from Primary Water Source** |
| 0 | 1 | - | - |
| 1 | 10 | 19 | 625 |
| 2 | 27 | 21 | 483 |
| 3 | 31 | 21 | 398 |
| 4 | 22 | 21 | 375 |
| 5 | 6 | 17 | 483 |
| 6 | 3 | 17 | 217 |

The above table shows that around 90% of the respondents undertake multiple trips (2-6) to carry water from a distance. Those undertaking multiple trips carry an average of 20 litres of water per trip and cover an average distance of around 400 meters per trip.

“*While carrying water, one of the water pots rests in my waist while the other one is carried by hand. It is a hard work for me”,* many of the respondents told during the interview. Undertaking such strenuous works several times a day without proper rest and nutrition cause several health problems.

1. **Chronic diseases and hospitalization**

The number of strenuous works that the women in this region undertake in the whole day causes several problems to their health. 59 percent of the respondents suffer from one or more chronic diseases, among whom 51 percent have some kinds of musculoskeletal disorders (MSDs). The number of respondents suffering from various types of musculoskeletal pains is given in the table below. Many have multiple MSDs.

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| **Table IV: Percentage of respondents affected by different symptoms of MSDs.** |
| Neck Pain | Shoulder Pain | Elbows pain | Wrist pain | Upper back pain | Lower back pain | Thigh pain | Knee Pain |
| 19 | 21 | 11 | 19 | 15 | 19 | 40 | 47 |

Many respondents are suffering from other chronic diseases apart from MSDs, most of which are caused by their strenuous domestic chores.

The respondents reported being suffering from the following chronic diseases, many of them more than one.

Out of 100 respondents, 57 were admitted to the hospital at some point of time for various health problems and seven reported to have undergone hysterectomy operation. Average expenditure during hospitalization has been more than 10,000 INR in the life span of the hospitalized respondents.

1. **The relation between diseases and strenuous domestic chores**

 Hence it is necessary to relate the number of women suffering from different ailments with the strenuous domestic chores they are undertaking in their daily lives. The following table reveals the number of respondents suffering from different ailments corresponding to the total average time they usually spend while working in a bending position and carrying weight.

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| **Table V: Respondents suffering from different ailments and hours of strenuous works they are performing** |
| Kind of disease | Total persons affected (the numbers include multiple responses) | Avg. hours of work in bending position (in hours) | Avg. hours of weight carrying (in hours) |
| Musculoskeletal disorders | 51 | 3.3 | 4.1 |
| Gynaecological problems | 15 | 2.5 | 4.3 |
| Other problems | 36 | 2.8 | 3.7 |

It is evident from the above table that women working in a bending position for a longer time and carrying greater weight tend to suffer from MSD related diseases and gynaecological problems more than others. Though there may be other reasons aggravating the above sufferings, the basic factors responsible for these ailments are the strenuous daily chores undertaken by the rural women, especially working in bending position for a long period and carrying weight several times a day. Hence, it can be inferred that rural women from backward socio-economic backgrounds are more prone to suffer from the diseases mentioned above mainly because of their involvement in strenuous domestic chores.

**DISCUSSION**

Our study findings are similar to an earlier study that concluded that “they (housewives) perform a multitude of tasks that cause ergonomic stress as well as exhaustion of muscle groups that result in MSP” (masculo-skeletal pains) (Bihari et al, 2013, p-1). As livelihood options in the Sundarbans are very limited, men in substantial numbers have migrated to distant towns and cities, women have to bear almost the whole burden of the household works including agricultural works.

This study reveals that strenuous domestic works have serious impacts on the general health of women belonging to low-income group families and residing in remote rural areas. As mentioned earlier, the women respondents in our study belong to households that have an average annual income of 77,470 INR, indicating that they belong to one of the most impoverished and disadvantaged sections of the country. Recently some households have got gas connections. But no gas distributing center is available on this island. Hence, purchasing LPG cylinder and carrying the same across the river makes it a very costly, time-consuming, and labor demanding commodity.

Women from this background have to undertake many strenuous physical activities from early morning till night with little scope of rest in between. In the long run, this kind of uninterrupted monotonous drudgery of daily work poses a risk of Musculo-skeletal and genito-urinary disorders. However, they can hardly communicate their health problems due to shyness and cultural limitations. Their reliance on quack practitioners for faith healers is primarily shaped by poverty, lack of education and non-availability of modern health services.

Many of the women even at the middle age cannot walk normally. Some of them complained that their knees have become stiff, and they cannot stand up or sit down with ease. Many feel the breathing problem while undertaking strenuous works. A report prepared by WHO that says, “Women’s health may also be at risk as a result of their traditional family respon­sibilities. For instance, women prepare most of the family food and, where solid fuels are used for cooking, girls and women often suffer as a result of exposure to indoor air pollution” (WHO, 2009, p-10)*.*

There may be several reasons apart from the burden of domestic work that are responsible for the above diseases, but the strenuous domestic works might be construed as the principal factor in causing or aggravating most of the above diseases. Lack of nutrition resulting into anaemia and underweight is quite common phenomena in this part of the country. It might be relevant to mention here that in West Bengal more than 60 percent of all women in the age group of 15-49 suffer from mild to severe anaemia, while in the South 24 Parganas district the figure is 66.8 percent (WHO, 2009; NFHS IV, 2015-16) The study area in the remotest part of the district is supposed to have more significant number of anaemic women.

Hence it is natural that their nutritional food intake would be much less than required. Further, there may be other factors having negative impacts on the women’s health like indoor air pollution which need to be considered.

The WHO report also mentioned that women are disproportionately responsible for collecting household fuel and water (64% in developing countries). The time spent on collecting household fuel and water could otherwise be spent on income-generation, education, or care for family members, all of which are related to the health status of women and of their families. In this remote rural area of Sundarbans, the sufferings of women are aggravated due to the typical geographical conditions that cause severe constraint in the way to income generation as well as to betterment of living conditions.

The other neglected aspect is the healthcare infrastructure in this area. It is rightly said that although “women provide the bulk of healthcare worldwide, both in the formal healthcare setting as well as in the informal sector and in the home, yet women’s own needs for healthcare are poorly addressed, especially among rural and poor communities (WHO, 2009, p-13). “Making people aware of early signs of the MSDs and Improving health care facilities is a crucial and needed step” (Jadhav, 2018).

**CONCLUSION**

Particularly in the poor and marginalized families in these remote villages of Sundarbans, women form the backbone of the families, as they maintain the families in particular and the village economy in general even in the absence of male members. This study reveals that women of this area suffer from multiple diseases because of their strenuous domestic responsibilities, and they do not have access to the modern healthcare system. The chronic diseases are crippling their regular movements and working capabilities, but their services and health are not receiving proper recognition and care.

So for the inclusive development of our society, the health concerns of the rural women from more impoverished families must be addressed by taking appropriate measures. Our study finds that the accessibility of basic amenities like clean water sources, electricity connections and supply of cooking gas might ameliorate the sufferings of these women to a great extent. Such measures combined with new livelihood opportunities in the form of micro-enterprises that could engage the working women of these poor families in income generation would go a long way to bring prosperity in the rural society in such remote areas.

Hence, advancement of healthcare system needs to be emphasized even in the remote corners of rural India to help women recover from their ailments and gain in general health.

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