**Measuring the rural drudgery- a study from Rajasthan**

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**Abstract-**

**Introduction**-

Women’s hard-work towards family responsibility is often recognized but never examined from a health perspective. Access to most of the basic amenities is compromised in rural areas which get translated into the women’s hard work to meet the ends at the household level. Many of these physical activities are strenuous and doing those daily, for years, may have deleterious effects on the body. Understanding the physical activities, quantifying them for further studies and measuring its health impacts is important.

**Methodology**-

It was a cross-sectional study in 13 villages around Udaipur city. In total 565 women were interviewed. Data was collected by IIM- Udaipur Post-graduate program women student. Information collected was the details related to their various physical activities, durations, and health complaints. Data were analyzed with the help of SPSS.

**Results**-

The self-reported duration of various physical activities are measured and the mean durations give a fairly comprehensive picture of all the major physical activities of rural women. 53.4% (n=302) participants had the chronic Musculo-skeletal disorder (MSD) and 16.99 % (n=96) took medication for MSDs in last one year. Point prevalence of Low Back Pain (LBP) was 29.2. Among the participants, 10.09 % (n=57) participants had a chronic pain in the lower extremity and 4.25 % (n=24) had that of the upper extremity. Among these women 12.39% (n=70) visited a doctor in last one year for MSD, 7.43 % (n=42) for gynaecological problems 3.19% (n=18) for obstetric reasons. In total 29.91 % (n=169) of these women were admitted in a hospital at least once in a lifetime, of which 2.83 % (n=16) were admitted for MSD and 4.24% (n=24) for hysterectomy.

**Discussion & conclusion**-

The burden of MSDs, as well as uterine prolapse, is higher in rural women and it is likely to be contributed by continuous strenuous physical work. At least 2.9 hours of strenuous physical activity per women per day can be reduced with the provision of the basic facility of LPG and water at the doorstep. If electricity and animal forage is provided, at least two hours’ drudgery can be reduced further. This study indicates that this burden is very high and there is a scope to reduce it considerably. This will also make the lives of women less burdensome and will create a scope to utilize it for the individual as well as social development and improving livelihoods. However, the disability burden due to domestic work on rural women needs to be further studied in order to have effective measures to reduce it.

**Main paper-**

**Introduction-**

From the times, when we were hunters and gatherers, women have been given domestic responsibilities as those were relatively safe at the time. But with change in human life and modernization, work and physical activities in the domestic domain kept on increasing. With agricultural development, more grain came into the kitchen for processing. With increasing family size water need increased; dependency on fire and firewood increased. Ability to domesticate animals also increased domestic work towards that. Women were also sucked in the seasonal labor-work in agriculture due to the sudden need to mass food production. Eventually, modernization also reduced this workload on women as various appliances and amenities increased in domestic domain. This saved women’s time and energy and their representation in other social roles is showing increasing trend. But a section of society, especially the rural women, is still devoid of such solutions or amenities and remained burdened with huge workload towards their domestic responsibilities. This drudgery not only consumes time and energy but also affects health of these women. For years if they are working hard daily there might be the cumulative stress and higher wear and tear. This is super-imposed by mal-nutrition and various deficiencies like iron in the diet, especially in rural India. [1- 6] this is also true for adolescent girls. [7] In rural India the birth order is also higher [8] and health care delivery system is not that good. [] There is likely to be some effect of all of this cumulatively on health. There is human cry towards this to some extent but there are very few systemic or scientific inquiries made. And there is a reason to that.

It is very difficult to attribute the causation certain health problem towards domestic work due to multiple and overlapping causality. Also, it is difficult to hold anyone responsible for this drudgery. And another problem is defining and measuring domestic work. This has to be a complex application of ergonomics to the various physical activities and results will have to be

Women work a lot towards their family responsibility. But it is very difficult to measure that work. If we look at it from ergonomics perspective there is no much data in the specific context of domestic work among rural women. For example, the prevalence of low back pain (LBP) is very high in this [9, 10] and women take a higher burden of this health problem, especially in the age group of 40 to 80 years. [10]

**Methodology-**

This is a cross-sectional study done in 13 villages around Udaipur city. These villages are mostly from Udaipur District but two villages are from Rajasmand district and one from Banswara district. Trained female students of first year of Post-graduate program from IIM-Udaipur helped in the study through data collection. These students were posted in these villages in the group of five to six per village for 10 days working on various thematic areas and preparing related report. This exercise was towards their better understanding of rural India under the subject Indian Social Political Environment. Each girl student was supposed to collect data from at least 10 women from her village and each student was allotted different areas of village.

This was a community-based survey. Sample selection was stratified random with village areas as strata. From each of the five strata (areas of a village) at least 10 participates were chosen randomly for the study. The inclusion criteria were- age above 18 years, not doing any formal job or any regular paid work, permanent resident of the village and willing to participate in the survey. Tool was a structured, pre-tested questionnaire to be filled by these trained students. They ask questions to the participants and responses were noted-down in the response sheet. From each of the 13 villages, 40 to 60 participants were taken making a total of 565 women participants. Verbal consent was taken after explaining everything related to the study.

The data primarily

**Results-**

Social and Demographic details of the sample-

In total 656 women were interviewed from 13 villages. Table 1 gives all the numerical details of the sample location.

Table 1 Study Villages and number of participants

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. no** | **Village name**  | **District (block)**  | **Number of participants**  |
|  | Budhiya | Udaipur (Kotra) | 60 |
|  | Vali | Udaipur (Girwa)  | 53 |
|  | Dhoya | Udaipur (Gonenda) | 51 |
|  | Sultanji ka Khera | Udaipur (Jhadol)  | 50 |
|  | Sathpur Meenan | Udaipur (Girwa) | 50  |
|  | Samiter  | Udaipur (Kherwara)  | 60 |
|  | Magrawali Thori  | Udaipur (Sarada) | 50 |
|  | Bhilwara  | Udaipur (Girwa) | 04 |
|  | Amiwada  | Udaipur (Jhadol) | 45 |
|  | Gejvi  | Udaipur (Jhadol) | 40 |
|  | Jardaya | Rajasmand (Kumbhalgarh) | 42 |
|  | Jardaya Khaas | Rajasmand (Kumbhalgarh) | 10 |
|  | Galdhar | Banswara (Khushalgarh) | 50 |
|  | **Total**  | **565** |

Mean age of the participants was 38.07 years. Among the participants 551 were Hindus, 10 were Muslim, 3 were Jains and one was Sikh. In this sample 121 were general cast, 63 were OBCs, 34 were SCs and 347 were STs; 506 were married 38 were widows, two were divorced and seven were separated and 12 were not married ever.

Education-

In this region, there is no much emphasis on women education and there is huge scope for improvement in female literacy. Here, 361 women did not attend school ever, 94 were in the group of 1st to 5th standard, 87 were in the group of 6th to 10th standard, 18 were in the group of 11th to 12th standard and only five could complete their graduation. This means graduation rate is less than one percent.

Income and livelihood

In the sample, 326 women belonged to BPL families and 71 were from marginally poor families and 168 people were above poverty line. In this rural area, there are limited livelihood options and very few people have promising income sources in hand. Most of the options are related to agriculture. Around 67% (379) households had agriculture as primary source of income. Majority (521) of the households have land with average land holding of 2.48 acres among household with agri-land whereas 44 reported no land.

404 (71.5 %) people live in kachha house and only 161 (28.5 %) had pakka house. Average numbers of room for all were 1.9 per household. 387 (68.5 %) had electricity connection and 323 (57.17 %) had toilets and 271 (47.43%) had bathrooms. Only 141 (24.96 %) had drainage facility connected to their house.

Water-

In the sample, only 95 (16.81%) women had a water tab in-house. This did not assure daily water supply and even these women needed to come out of their houses and fetch water. None of the household was completely relied on tap water. Average distance to fetch water in regular days is 570 meters and in dry season it is 780 meters for every ferry. 198 (35.04 %) rely on well, 92 (16.28 %) on tube-well, 182 (32.21 %) on hand-pump, 29 (5.13 %) on tap.

Durations of various physical activities

Table 2 gives average duration of the respective physical activity for the whole sample

Table 2 Duration of Various physical activities

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. no.**  | **Physical activity**  | **Average duration- in hrs (S.D.)** | **Range**  |
|  | Work inside of your house  | 3.90 (2.81)  | 0- 15 |
|  | Work in house premises  | 3.05 (2.56) | 0- 13 |
|  | Work outside of house premises  | 4.02 (2.58)  | 0- 14 |
|  | Total duration of walking  | 3.15 (2.50) | 0- 14 |
|  | Total duration of carrying any sort of weight  | 2.07 (1.69) | 0- 12 |
|  | Total duration you work in bending position  | 2.61 (2.62) | 0- 12 |
|  | Fetching water  | 1.10 (1.16) | 0- 10 |
|  | Bringing fodder/ preparing forage  | 1.17 (1.14) | 0- 11 |
|  | Bringing firewood  | 1.70 (1.33) | 0- 8 |
|  | Working in your farm  | 2.64 (2.18)  | 0- 14 |
|  | Watching TV  | 0.23 (0.65) | 0- 4 |
|  | Talking with friends/ neighbours  | 0.76 (0.87) | 0-8 |
|  | Taking rest in day time  | 0.80 (1.18) | 0- 7 |

When women were asked “Which is the most strenuous task in your daily work?” only 29 said none. 255 said that it is agriculture related work in their own farm. 110 said bringing fire wood, 48 said fetching water, 23 said animal husbandry related work, 15 said carrying any weight, and 14 said washing clothes. Rest gave nonspecific or multiple tasks.

Health-

302 (53.45%) had some or the other musculoskeletal disorder of chronic (duration more than three months) in nature. Table 3 gives details of the MSKs. Apart from this 41 (7.26 %) women complaint of chronic gynaecological problems/ pain and 13 (2.30%) mentioned about recurrent anaemia.

Table 3 Prevalence of Musculo-Skeletal problems

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No | Musculo-skeletal problem  | Number or people reporting (Total no- 302)  | Percentage  |
|  | Low Back Pain (LBP) | 165 | 29.20 |
|  | Shoulder/ upper arm pain  | 24 | 04.25 |
|  | Leg/ knee pain  | 57 | 10.09 |
|  | Other musculo-skeletal problem  | 56 | 09.91 |

In last one year, 353 (62.48 %) women reported to visit a doctor. 70 (12.40 %) visited for MSKs and 42 (7.43 %) for gynaecological problems and 18 (3.19 %) visited for obstetrics related reasons.

Table 4 Causes for health seeking

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No | Reason/ type of health compliant for visiting a doctor  | Visited doctor in last one year n (%)  | Taken medication in last one yearn (%)  |
|  | Musculo-skeletal problem | 70 (12.39)  | 96 (16.99) |
|  | Gynaecological problem  | 42 (07.43)  | 30 (05.31)  |
|  | Obstetrics reasons | 18 (03.19) | 14 (02.48) |
|  | Other  | 223 (39.47) | 215 (38.05) |
|  | None  | 212 (37.52) | 210 (37.17) |
|  | Total  | 565 (100 ) | 565 (100)  |

Hospitalization-

Total 169 (29.91%) women were ever admitted in a hospital. The details of the are given in the table 5.

Table 5 Reasons of last hospitalization

|  |  |  |  |
| --- | --- | --- | --- |
| Reason for last hospitalization  | Frequency  | Percentage (out of total)  | Percentage (out of hospitalized)  |
| Obstetrics  | 42 | 7.43 | 24.85 |
| MSK | 16 | 2.83 | 09.47 |
| Infective causes  | 35 | 6.19 | 20.71 |
| Trivial causes  | 48 | 8.50 | 28.40 |
| Hysterectomy  | 24 | 4.25 | 14.20 |
| Worst outcomes of pregnancy  | 4 | 0.71 | 02.37 |
| Total  | 169 | 29.91 | 100 |

**Discussion-**

It is evident that women are working for long hours towards their familial responsibilities. This work is spread not only inside the house but even outside. Most of the hardship is contribute largely by two factors. One is poverty and the other lack of basic amenities. By large people are poor in rural areas and they cannot afford many essential things. This also translate into the unavailability of certain things in rural areas, making access further difficult even for families who can barely afford it. To meet the ends women have to solely work while their husbands away from home to earn money. This adds to the drudgery and physical labour. It is evident from the results that women are working in excess to any work-related norm in occupational set-ups. This hardship over a years is affecting the health of these women. Many women are having various chronic health problems. Social neglect towards women’s health is also evident. This is also adding to the disability among rural women, especially in older age. On one hand, there is no proper provision of health care in rural areas and on the other, there is lack of health education. This escalates the health problems to the irreversible level.

The opportunity cost of women’s labor also affect activities of rural women and mere availability of certain basic amenities does not mean their adaptation by rural community. This aspect was explored in an article by Dev Nathan et al in the context of firewood and LPG use. Even though huge subsidy was given for LPG, especially to the rural poor, its complete adaptation is lacking. The authors argue that women do not have anything monetarily important or better to do hence they continue fetching firewood which is free of cost. This will also have very positive effect on health outcomes. At least 2.9 hours of strenuous physical activity per women per day can be reduced with the provision of the basic facility of LPG and water at the doorstep. If electricity and animal forage is provided, at least two hours’ drudgery can be reduced further. It is very obvious from the study that improving access of vary basic facilities will reduce the duration of the drudgery by four hours or so on daily basis and it will give the women time and energy to engage in other productive or development activities.

Thus this drudgery of rural women is contributed lack of- basic amenities, employment and access to health care. In order to deal with this sensitive problem, a multi-pronged intervention is needed.

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