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Unpaid Burden Among Women of Working Age Group Residing in Rural Areas of Mandya District: A Cross Sectional Analytical Study

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ABSTRACT

To determine the unpaid burden among women of working age group residing in rural areas of Mandya District and to determine the factors associated with the unpaid burden among women of working age group. Cross-sectional analytical study was conducted in rural areas of Mandya District using a pretested semi structured questionnaire. Women of working age group (≥16 years and ≤64 years) in selected PHC areas of Mandya District were recruited into the study. Total of 843 participants were recruited. Unpaid burden among rural women was found to be 61% (95% CI: 59.1-64.9). Unpaid burden among rural women was higher among age group 30-39 years (73.3%) and >60 years (73.0%). Among women who are <19 years, unpaid burden was found to be 7.1%. Unpaid burden was found to be higher among married women (73.9%). Unpaid burden was found to be lesser among rural women who have studied up to Graduate level (32.8%) and Post graduate level (20.0%). It was found that the Unpaid Burden among rural women of working age group is 61%. The age, marital status and level of education are factors that are found significantly associated with Unpaid Burden among rural women.

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INTRODUCTION

Women forms the integral part of Indian workforce. Yet, they are still working in jobs that pay less and provides no social benefits. Women shoulders enormous and economically essential burden of unpaid care and domestic work, however they earn less than males. Gender based discrimination and disparity keeps the women out of some jobs and pushes them to take up low pay employments. Unpaid care and domestic work such as cleaning, cooking and caring for elderly are largely provided by the women, which is unfair burden and unfair barrier to equal labour force participation and pay^[1].

Demographic dividend is the economic growth which is accelerated due to reduction in birth and death rates of a country and leading to change in age structure of the population where the ratio of people in working age group to that of number of people who are dependent on them will tend to increase. Gender dividend is increase in the contribution of female population towards economic growth and productivity. By narrowing the gender gaps in labour market, the economy of the country can become more productive and equitable in nature^[2].

"Unpaid burden" refers to women performing the bulk of unpaid dependent care and household work, which further prevents women from seeking better opportunities in the labour market^[2]. The total number of female workers in India is 149.8 million, of which 81.35% of them are from rural area. Nearly 23.9% of the total female workers are working as cultivators, 41% are working as agricultural labourers, 5.1% are in household industry and remaining 29% are classified as other workers. The Periodic Labour Force Survey (PLFS) by National Statistical Office, showed that the overall Labour Force Participation Rate (LFPR) for women in age group 15 and above was found to 30%, it was 33% in rural areas as compared to 23.3% in urban areas. The unemployment rate of women in the age group of 15 years and above is 4.2% at all India level, 2.6% in rural areas as compared to urban areas^[3]. As there is a paucity of data regarding unpaid burden and the factors associated with it among women of working age group in rural areas, this study was taken up.

Objective:

- To determine the unpaid burden among women of working age group residing in rural areas of Mandya district
- To determine the factors that are associated with the unpaid burden at household level among women of working age group

METHODS

Study design: Cross-sectional analytical study

Study setting: Rural areas of Mandya District

Study population: Women of working age group (≥15 years and ≤64 years) in selected Primary Health Care areas of Mandya District

Sample size: Minimum sample size required is 780, obtained using the formula

 $n = 4PQ d^2$

P = Labour Force Participation Rate in rural areas of India was used $(33\%)^{[3]}$.

Q = 100-P

d = allowable error (10%)

 $n = 779.96 \approx 780$

Additional samples from each village was collected to minimize the errors occurred during collection of data.

Sampling technique: Sampling technique used for this study is "Multistage systematic random sampling". In every Taluk of Mandya District, one PHC was randomly selected by lottery method. In selected PHC, one Sub-centre was randomly selected by Lottery method. In selected Sub-centre the sample data to be collected was found by calculating total participants required by 7 i.e. 780-7 = 111.4, hence 120 participants was covered from each sub-centre and all the villages in that sub-centre was surveyed by population proportional to size method to calculate number of participants required from each village i.e. number of participants required in each village will be calculated depending on its population size in relation to sub-center population. All the eligible participants from selected villages were included in the study, hence the total participants exceed the minimum sample size required.

Inclusion criteria: All the women of working age group (\geq 15 years and \leq 64 years) who are permanent residents of villages (>6 months) and who provided consent for the study.

Exclusion criteria: The selected households which were locked during the study period even after 2 visits.

Study tool: The study subjects were interviewed with a pretested semi-structure questionnaire which included demographic details and health status of the family. Study tool was translated to local language before administering it to the participants.

Operational definitions

Household: Individual or a group of individuals may or may not be biologically related, living together and eating from a common kitchen^[4].

Homemaker: A woman who spends their time looking after the home and doing housework rather than being employed outside the home nor seeking any other employment outside the home.

Age: Completed years of the person on the date of interview.

Not-literate: A person aged more than 7 years who cannot read and write with understanding in any language

Widow widower: Includes all persons who has lost his/her spouse by death and has not remarried.

Socio-economic status (SES): All individuals were classified in to various socio-economic classes according to Modified B G Prasad's classification. All India Consumer Price Index numbers for industrial workers CPI (IW) for the month of January 2022 was 125.1^[5].

Statistical analysis: Data was be entered in Microsoft excel sheet and analyzed using trial version of IBM-SPSS (Statistical Package for Social Sciences) version 20. The univariate analysis was carried out to describe the study outcomes and risk factors. Mean and Standard deviation was calculated for the variables which are normally distribute. The difference in the $distribution\ of\ variables\ according\ to\ outcome\ variable$ was studied at 5% alpha error using tests of significance like Chi-square, Fischer's Exact Test. The strength of association between the independent variable and the outcome variables was studied using Phi and Cramer's v-test. Unadjusted Odds Ratio (OR) with 95% confidence intervals was calculated for all the study variables. Binomial logistic regression was run to complete adjusted Odds Ratio (adjOR) for variables with significant association (p<0.05) in Bivariate analysis. Model fit was assessed using the Hosmer-Lemenshow test.

RESULTS

Sociodemographic characteristics: Table 1 a total of 843 eligible participants were included in the study. Sociodemographic characteristics of the study participants are described in table 1. The Mean±SD age of the study participants was 38.00 (14.17) years. About 68.1% of the participants were married women and more than one-fourth of the participants had no formal schooling (29.1%). It was found that 60.7% of the participants were home makers. Nearly 10% of the participants had one or more co-morbid conditions. Majority (58.9%) of the participants belong to Class III and Class IV Socioeconomic status of Modified B.G. Prasad classification. Nearly 12% of the participants

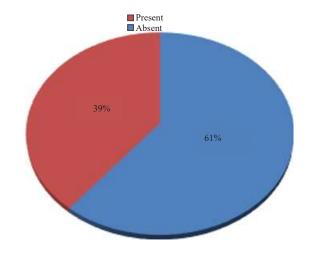


Fig. 1: Distribution of participants according to presence of unpaid burden (n = 843)

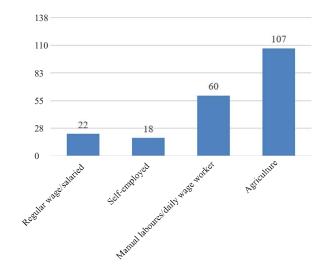


Fig. 2: Distribution of participants according to their nature of work (n = 207)

were living in household with more than 6 members. Agriculture constituted major occupation among the study participants, nearly 51% of the working women were involved in Agricultural labour. Unpaid burden among rural women was found to be 61% (95% CI: 57.4-64.0) as shown in Figure 1. It was also found that unpaid burden among rural women of age group 20-29 years, 20-39 years, 40-49 years, 50-59 years and >60 years was 63.2-73.7%, 63.7-61.3% and 73.0% respectively. Among women who are <19 years of age unpaid burden was found to be 7.1%. The observed difference was found to be statistically significant (p<0.05).

It was also found that unpaid burden among women who have studied up to pre-university level, High School level, Primary School level, Graduate level and Post graduate level was 69.2-64.7%, 62.2-31.8%

Table 1: SES classification according to modified B G prasad's classification

| SES class | Amount in INR (per capita/month) for 1961 | Amount in INR (Per capita/month) for May 2021 |
|-----------|---|---|
| Class I | <u>></u> 100 | >7863 |
| Class II | 50-99 | 3931-7862 |
| Class III | 30-49 | 2359-3930 |
| Class IV | 15-29 | 1179-2358 |
| Class V | <u><</u> 15 | <u><</u> 1179 |

Table 2: Factors associated with unpaid burden at household level among rural women

| Study variables | Frequency (n = 843) | Percentage | |
|---|---------------------|------------|--|
| Age group | | | |
| <19 | 84 | 10.0 | |
| 20-29 | 190 | 22.5 | |
| 30-39 | 176 | 20.9 | |
| 40-49 | 182 | 21.6 | |
| 50-59 | 111 | 13.2 | |
| >60 | 100 | 11.9 | |
| Marital status | | | |
| Married | 574 | 68.1 | |
| Unmarried | 168 | 19.9 | |
| Widowed/divorced/separated | 101 | 12.0 | |
| Educational status | | | |
| Not-literate | 245 | 29.1 | |
| Primary | 119 | 14.1 | |
| High school | 238 | 28.2 | |
| Pre-university | 133 | 15.8 | |
| Graduate | 88 | 10.4 | |
| Post graduate | 20 | 2.4 | |
| Occupation | | | |
| Regular wage/salaried | 22 | 2.6 | |
| Self-employed | 18 | 2.1 | |
| Manual labourer/daily wage labourer | 60 | 7.1 | |
| Home maker | 512 | 60.7 | |
| Agriculture | 107 | 12.7 | |
| Student | 124 | 147 | |
| Socio-economic class (modified b. g. prasad classification, | jan 2022) | | |
| Class I | 48 | 5.7 | |
| Class II | 135 | 16.0 | |
| Class III | 244 | 28.9 | |
| Class IV | 253 | 30.0 | |
| Class V | 163 | 19.3 | |
| Total Of members in household | | | |
| Less than 3 | 191 | 22.7 | |
| 3-6 | 546 | 64.8 | |
| More than 6 | 106 | 12.6 | |
| Co-morbidity | | | |
| No co-morbidity | 756 | 89.7 | |
| Single co-morbid condition | 58 | 6.9 | |
| Multiple co-morbid condition | 29 | 3.4 | |

and 20.0% respectively. Among those women who are not-literates or had no formal education unpaid burden was found to be 65.3%. The observed difference was found to be statistically significant.It was found that unpaid burden among married women, women who are widowed/divorced/ separated and unmarried women was 74.3-55.8% and 21.7% respectively. The observed difference was found to be statistically significant. It was found that the unpaid burden among participants who are living in a household with more than 6 members was 70.8%, between 3-6 members was 62.5% and those participants who are living in household with less than 3 members the unpaid burden was 50.3%. The observed difference was found to be statistically significant.

The unpaid burden among participants belonging to Class I-II, III-IV and Class V socioeconomic status (according to Modified B.G. Prasad Classification, January 2022) was 56.2-54.2%, 59.4-62.1% and 66.9%

respectively. However, the observed difference was not statistically significant. The unpaid burden among those participants who have more than one co-morbid conditions it was found to be 86.2 % and those who have only one co-morbid condition like Diabetes, Hypertension, Thyroid disorders it was 79.3%. Whereas it was 58.3% among women who does not have any co-morbid conditions. The observed difference was statistically significant.

It was found that the unpaid burden among participants who have one or more members in their household with co-morbidity was 63.8% and in those who did not have co-morbidity in any of the household members it was found to be 59.1%. However the observed difference was not statistically significant. The unpaid burden among participants who have no elderly members in their household was found to be 57.8%, whereas in those participants who have one or more elderly members in their household the unpaid burden was found to be 66.9%. However the observed

Table 3: Factors associated with unpaid burden at household level among rural women (N = 843)

| Distribution of participants according to their age group | Unpaid burden | Total | Yes (%) | No (%) |
|--|----------------------------------|-------------------------|------------|--------|
| Age group | Less than 20 | 6 (07.1) | 78 (92.9) | 84 |
| | 20-29 | 120 (63.2) | 70 (36.8) | 190 |
| | 30-39 | 129 (73.3) | 47 (26.7) | 176 |
| | 40-49 | 116 (63.7) | 66 (36.3) | 182 |
| | 50-59 | 68 (61.3) | 43 (38.7) | 111 |
| | More than 59 | 73 (73.0) | 27 (27.0) | 100 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 172.1; df-5; | 10101 | 312 (00.7) | 332 (33.3) | 0.5 |
| p<0.01; Cramer' v-0.378 | | | | |
| Distribution of participants according to their educational level | | | | |
| Educational level | No formal education/not-literate | 160 (65.3) | 85 (34.7) | 245 |
| Educational level | Primary school | | | 119 |
| | | 74 (62.2) 154 (64.7) | 45 (37.8) | 238 |
| | High school | , , | 84 (35.3 | |
| | Pre-university | 92 (69.2) | 41 (30.8) | 133 |
| | Graduate | 28 (31.8) | 60 (68.2) | 88 |
| | Post-graduate | 4 (20.0) | 16 (80.0) | 20 |
| | Total | 512 (60.7) | 331 (80.0) | 843 |
| Chi-square value: 52.56; df-5; | | | | |
| p<0.01; Cramer's v-0.250 | | | | |
| Distribution of participants according to their marital status | | | | |
| Marital Status | Married | 424 (73.9) | 150 (26.1) | 574 |
| | Unmarried | 30 (17.9) | 138 (82.1) | 168 |
| | Widowed/divorced/separated | 58 (57.4) | 43 (42.6) | 101 |
| | Total | 513 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 171.49; df-2; | | | | |
| p<0.01; Cramer's v-0.451 | | | | |
| Distribution of participants according to their household size | | | | |
| Total number of members in household of the participants | Less than 3 | 96 (50.3) | 95 (49.7) | 191 |
| Total number of members in nousehold of the participants | 3-6 | 341 (62.5) | 205 (37.5) | 546 |
| | More than 6 | 75 (70.8) | 31 (29.2) | 106 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 13.924; df-2 | Total | 312 (00.7) | 331 (33.3) | 043 |
| | | | | |
| P- Value: 0.013; Cramer's V-0.129 | | | | |
| Distribution of participants according to their SES | | 27 (56.2) | 24 (42 0) | |
| Socio-economic status (according to modified B.G. prasad classification, January 2022) | Class I | 27 (56.2) | 21 (43.8) | 48 |
| | Class II | 74 (54.8) | 61 (45.2) | 135 |
| | Class III | 145 (59.4) | 99 (40.6) | 244 |
| | Class IV | 157 (62.1) | 96 (37.9) | 253 |
| | Class V | 109 (66.9) | 54 (33.1) | 163 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 5.323; df-4; | | | | |
| p-Value: 0.256; Cramer's V-0.07 | | | | |
| Distribution of participants according | | | | |
| to the presence of comorbid conditions | | | | |
| Presence of Co-morbidity in Participants | No Comorbidity | 441 (58.3) | 315 (41.7) | 756 |
| , , | Single Co-morbid condition | 46 (79.3) | 12 (20.7) | 51 |
| | Multiple Co-morbid condition | 25 (86.2) | 4 | |
| (13.8) | 25 | 25 (00:2) | • | |
| () | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 18.11; df-2; | Total | 312 (00.7) | 331 (33.3) | 043 |
| p-Value: <0.01; Cramer's V-0.147 | | | | |
| | | | | |
| Distribution of participants according | | | | |
| to presence of co-morbid condition in household members | | 225 (50.4) | 225 (40.0) | |
| Presence of Co-morbidity in household members | No | 325 (59.1) | 225 (40.9) | 550 |
| | Yes | 187 (63.8) | 106 (36.2) | 293 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 1.795; df-1; | | | | |
| p-Value: 0.18; Phi value: -0.046 | | | | |
| Distribution of participants according to | | | | |
| the presence of elderly members in their household | | | | |
| Presence of elderly members in the family | No | 332 (57.8) | 242 (42.2) | 574 |
| · | Yes | 180 (66.9) | 89 (33.1) | 269 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 6.325; df-1; | - / | (00) | (55.5) | 0 |
| p-Value: 0.012; Phi value: -0.087 | | | | |
| | | | | |
| Distribution of participants according to the presence | | | | |
| of Children less than 6 years in their household | N | 240 (55.5) | 270 (44 5) | 627 |
| Presence of Children less than 6 year in the household | No | 348 (55.5) | 279 (44.5) | 627 |
| | Yes | 164 (75.9) | 52 (24.1) | 216 |
| | Total | 512 (60.7) | 331 (39.3) | 843 |
| Chi-square value: 28.1; df-1; | | | | |
| p<0.01; Phi value: -0.183 | | | | |

difference was not statistically significant. The unpaid burden among participants who have children less than 6 years of age in their household was found to be 75.9%, whereas in those participants who have no children in their household the unpaid burden was found to be 55.5%. However the observed difference was not statistically significant.

The strength of association between the factors associated with unpaid burden among rural women

was measured using Phi and Cramer's V. In this study, it was found that the strength of association is strong between factors such as age group, educational level and their marital status with unpaid burden among rural women. However the strength of association is weak/small between factors such as size of the household, presence of co-morbid conditions among the participants, presence of co-morbid conditions among the household members and Socio-economic

Table 4: Unadjusted Odd ratio and adjusted Odds ratios for the factors affecting the unpaid burden among rural women at household level (n = 843)

| Study variable | Odds ratio | 95% C.I | p-value | Adjusted odds ratio | 95% C.I. | p-value |
|---|------------|---------------|---------|---------------------|--------------|---------|
| Age group of the participants | | | | | | |
| <19 years | 1 | | | | | |
| 20-29 | 22.286 | 9.233-53.789 | < 0.01 | 13.047 | 4.746-35.866 | < 0.01 |
| 30-39 | 35.681 | 14.580-87.322 | < 0.01 | 8.925 | 2.949-27.016 | < 0.01 |
| 40-49 | 22.848 | 9.443-55.286 | < 0.01 | 7.223 | 2.315-22.536 | 0.001 |
| 50-59 | 20.558 | 8.242-51.276 | < 0.01 | 6.618 | 1.993-21.971 | 0.002 |
| More than 59 years | 35.148 | 13.724-90.016 | < 0.01 | 9.863 | 2.751-35.357 | < 0.01 |
| Educational level of the participant | | | | | | |
| Post-graduate | 1 | | | | | |
| Graduate | 1.867 | 0.571-6.099 | 0.301 | 2.65 | 0.687-10.218 | 0.157 |
| Pre-university level | 8.976 | 2.826-28.512 | < 0.01 | 16.291 | 4.161-63.789 | < 0.01 |
| High school | 7.333 | 2.375-22.644 | 0.001 | 5.204 | 1.398-19.377 | 0.014 |
| Primary school | 6.578 | 2.069-20.912 | 0.001 | 3.835 | 0.977-15.058 | 0.054 |
| No formal education | 7.529 | 2.440-23.234 | < 0.01 | 4.432 | 1.125-17.462 | 0.033 |
| Marital status of the participant | | | | | | |
| Unmarried | 1 | | | | | |
| Married | 13.059 | 8.438-20.211 | < 0.01 | 8.28 | 4.098-16.730 | < 0.01 |
| Widowed/divorced/separated | 6.205 | 3.551-10.841 | < 0.01 | 4.789 | 2.009-11.418 | < 0.01 |
| Size of the household of the participant | | | | | | |
| Less than 3 | 1 | | | | | |
| 3-6 | 1.646 | 1.181-2.295 | 0.003 | 1.993 | 1.305-3.045 | 0.001 |
| More than 6 | 2.394 | 1.444-3.969 | 0.001 | 1.661 | 0.875-3.151 | 0.121 |
| Socio-economic status of the family mer | mber | | | | | |
| Class I | 1 | | | - | - | - |
| Class II | 0.944 | 0.486-1.832 | 0.864 | - | - | - |
| Class III | 1.139 | 0.610-2.128 | 0.683 | - | - | - |
| Class IV | 1.272 | 0.681-2.375 | 0.45 | - | - | - |
| Class V | 1.57 | 0.814-3.028 | 0.178 | - | - | - |
| Presence of co-morbidity in the participation | ants | | | | | |
| No Co-morbid condition | 1 | | | | | |
| Single co-morbid condition | 2.738 | 1.427-5.253 | 0.002 | 3.122 | 1.377-7.077 | 0.006 |
| Multiple co-morbid condition | 4.464 | 1.538-12.954 | 0.006 | 4.462 | 1.343-14.286 | 0.015 |
| Presence of co-morbidity in the family | | | | | | |
| No | 1 | | | | | |
| Yes | 1.221 | 0.911-1.637 | 0.181 | 0.902 | 0.553-1.472 | 0.681 |
| Presence of elderly member in the famil | у | | | | | |
| No | 1 | | | | | |
| Yes | 1.474 | 1.089-1.996 | 0.012 | 1.088 | 0.702-1.685 | 0.707 |
| Presence of children member in the fam | ily | | | | | |
| No | 1 | | | | | |
| Yes | 2.529 | 1.783-3.586 | < 0.01 | 1.328 | 0.835-2.111` | 0.231 |

Cox and snell r-square 0.277 Nagelkerke r-square 0.376 by binomial logistic regression

level of the household of the participant with unpaid burden among rural women. It was also found that there was a little or no association between factors such as presence of elderly members and presence of children in the household with the unpaid burden.

DISCUSSION

This cross-sectional analytical study conducted in rural areas of Mandya district, observed that unpaid burden was 60.7% among women of working age group.

Socio-demographic characteristics of study subjects:

In this study, the Mean±SD age of participants was 38.00±14.17 years. It was observed that majority of the study participants i.e., 64.1% belong to economically more productive age group of 20-50 years. This is consistent with the study done in the year 2018 in rural areas of Mandya district^[6]. Nearly 68% of the participants were married and 19.9% were unmarried. In a study conducted in state of Karnataka in the year 2015-16, it was found that 72.8% of the participants were married, 20.9% of the participants were unmarried^[7].

The literacy rate among the participants was 70.9% and participants with 10 or more years of schooling was 51.0%. This is consistent with the

findings of NFHS-5 data for state of Karnataka, where literacy rate among women in rural areas was found to be 67.7% and women with 10 or more years of schooling was 42%^[8]. Among the participants who are involved in any occupation (excluding home makers and students) nearly 60% of them were self-employed (including agriculture and non-agricultural activities) 10.6% were in regular wage/salaried, 29.0% were involved in Casual labour/Daily wage worker as shown in Figure 2. Excluding participants who are homemakers and students. This is consistent with the findings of Periodic Labour Force Survey report 2021, where share of self-employed among workers in rural female is 64.8%, regular wage/salaried employee is 9.1% and those who are involved in casual labour constituted 26.2%^[3].

Majority (58.9%) of the participants belong to Class III and Class IV, with similar proportion among Class III (28.9%) and Class IV (30.0%). This was consistent with studies done among rural women in state of Karnataka, where 53.4% of the study subjects belong to middle and poor wealth quintiles^[7]. Nearly 64.8% of study participants were living in household with 3-6 members and 23% of the participants had family size less than 3 members. Only 12.6% of the participants belong to households with family members more than 6. The recent trend of nuclear

family is the reason for smaller families. Only 10.3% of the participants had co-morbid conditions like diabetes, hypertension, thyroid disorder etc. of which nearly 3.4% of the population had more than one co-morbid conditions ranging from Diabetes, Hypertension, Thyroid disorder, stroke, cancer, coronary artery disease and parkinsonism etc. This was consistent with study done in 2015 in women in rural areas of Mandya District, where only 9.8% of the study participants had co-morbid conditions^[9]. Factors associated with unpaid burden at household level among rural women. It was observed that unpaid burden among rural women was higher in age group of 30-39 years of age this may be due to patriarchal society that has strong hold in rural area and majority of the women in this age group are married and living with their husband and it was also observed to be higher in women more than 59 years of age group this may be due to more number of women in this age develop chronic diseases post menopause and can lead to debilitating disorders like Severe osteoarthritis, Cardiovascular and Cerebrovascular However there is a fall in the unpaid burden among women of age group between 40-59 years as this may be attributed to number of women becoming widowed/divorced/separated is seen in this age group which compels them to take up semi-skilled activities like agriculture and casual labour etc. in order to sustain the daily needs of the household.

Higher the educational level among women was found to be associated with decrease in unpaid burden The unpaid burden was found to be 65.3% among women who were not literate/those who had no formal education and 62.2% among women who had education only up to primary school, whereas unpaid burden was found to be 31.8% among who had education up to graduate level and it was 20.0% among those who had education up to post graduate level. In a study, conducted in South India, it was found that educational qualification play significant role in women empowerment^[10].

This is consistent with our studies that higher educational level offers more employment opportunities for women than having no formal education, as it was evident in this study that women with no formal education were only confined to Agricultural and casual labour and as the educational level increases, more number of women is found to be working as regular wage/salaried and self-employed. It was noted that only those participants who had studied up to pre-university level (adjOR: 16.291, 95% CI: 4.161-63.789) have 16 times higher odds of having unpaid labour, this may be due to lack of work opportunities for that educational level in rural areas

as well as accessibility to nearby towns. However the participants who had studied/studying at graduate and post-graduate level were either still unmarried and pursuing their course or employed in regular wage/salaried employment. The unpaid burden was found to be highest among married women (73.9%) and was least among unmarried women (17.9%). Among married women, none of the participant are found pursuing/continuing their education, more specifically in those who are aged less than 30, they might have stopped education either before marriage or post marriage. This is clearly evident in those women who are married and are still aged less than 20 years, are neither pursuing education nor employed in any type occupation, it was found that all these women are home makers. In a study, done in Jamnagar district of Gujarat in 2009, it was found that the women had limited access to education. Due to family circumstances they were made to take the responsibility at the early age, which leads to low level of education which further leads to decrease employment opportunities. Lower educational level also leads to early age of marriage^[11].

The unpaid burden among the participants who are living in household with more than 6 members was found to be 70.8% and unpaid burden was found to be decreasing with decrease in the size of household i.e. in participants who are living in household with 3-6 member, unpaid burden was 62.5% and in those who are living in household with less than 3 member it was found to be 50.3%. Even though the observed difference in the values were found to be significant, however the strength of association was found to be weak/low.

The participants who are having no co-morbid conditions the unpaid burden among them was 58.3%, and it was found to be increasing with increasing number of co-morbid conditions and severity of the conditions i.e. in participants who have multiple co-morbid conditions like combination Diabetes Mellitus, Hypertension, Thyroid disorder, Chronic heart disease and Cerebrovascular diseases etc. the unpaid burden was found to be 86.2%, in those who are have single co-morbid condition it was found to be 79.3% Even though the observed difference in the values were found to be significant, however the strength of association was found to be weak/low.

The unpaid burden among the participants who are living in household having one or more elderly member was found to be 66.9% and in those who do not have elderly member in their household the unpaid burden was found to be 57.8%. Even though the observed difference in these values were found to be significant, however the strength of association was

found to be little/no association. The unpaid burden among the participants who are living in household having one or more children was found to be 75.9% and in those who do not have children in their household the unpaid burden was found to be 55.5%. Even though the observed difference in these values were found to be significant, however the strength of association was found to be little/no association.

Strengths: As the study was conducted in villages under select PHC areas covering all the talukas of Mandya district, this study can be generalized to rural areas.

Limitations: As the objective of the study was only to determine the factors associated with unpaid burden at the household level the factors that are associated with unpaid burden involving the problems that are faced by the women at workplace was not covered. Due to cross-sectional nature of the study the factors which are quantifiable like age, marital status, educational status was analyzed but there are certain factors which are not quantifiable and are subjective in nature, such as support from the family members, work opportunities near her place of residence etc. could not be analyzed, which can be done by including a qualitative study design.

CONCLUSION

It was found that the Unpaid Burden among rural women of working age group is 60.7%. The age, marital status and level of education are factors that are found significantly associated with Unpaid Burden at household level among rural women with greater strength of association. However the size of the household, presence of elderly members and children in the household, presence of co-morbid condition in the participant was found to be weakly associated with unpaid burden. Hence, Investments in reproductive health, education and women empowerment and increasing the age of marriage for women can reduce the unpaid burden and lead to increased economic growth, thus achieving the value contributions to household production and achieving gender equality.

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