

## Gender Variation in Time Allocation of Unpaid Household Work

<sup>1</sup>Dr. Konita Basumatary; <sup>2</sup>Dr. Mridula Devi

<sup>1</sup>Associate Professor, Department of Economics, Bodoland University, Kokrajhar, BTAD, Assam, India

<sup>2</sup>Professor, Department of Economics, Bodoland University, Kokrajhar, BTAD, Assam, India

### Abstract

While there has been progress in achieving gender equality over the past few decades, there is still inequality related to gender norms, an unequal distribution of home duties, and unpaid childcare obligations. According to the study, there is a significant gender gap in participation and time use for tasks like providing unpaid domestic services to household members, helping to produce goods for personal consumption, and providing unpaid care for household members, where female participation and average time use are higher than those of their male counterparts. In this paper, the investigator tried to analyze time use patterns between paid and unpaid activities depending on gender, age, and educational level, among other factors.

**Keywords:** Unpaid work, time, gender

### 1 Introduction:

Early twentieth-century studies on time usage were the first to be utilized to comprehend people's lifestyles based on their time use patterns (Rubiano, E., and Viollaz, 2019). Feminist researchers started looking into time usage and the necessity to quantify "invisible" unpaid work done by both men and women in the 1930s (Reid, 1934). Additionally, in the 1960s, nations like Canada and the United Kingdom carried out time surveys, and in the 1970s and 1980s, Norway, Japan, Finland, and Austria did the same (Ironmonger, 1999). By the end of the 1990s, developing nations began conducting time usage surveys, and the instruments took on a new focus. Surveys on time utilization have been utilized and are required for a better understanding of individual decisions to work as well as decisions on how to devote time to different tasks. According to Rubiano, E. and Viollaz (2019), time use data could be efficiently used to identify the causes causing gender disparities in access to economic opportunities, well-being, and the consequences for policy decisions. There is evidence that women specialize in domestic work and caregiving while males concentrate on work in the market across all nations (Apps, 2004; Berniell and Sánchez-Páramo, 2011; Ferrant et al., 2014; Campa et al., 2015). When productive activities like market employment, household, and caregiving are taken into account

as a whole, women work more hours than males (Haddad et al., 1995; Ilahi, 1999; Berniell and Sánchez-Páramo, 2011). By examining gender variations in time allocation among several types of activities, this study updates and supports the findings of Time Use in India (2019) issued by the Ministry of Statistics and Programme Implementation, National Statistical Office. Three broad categories were the focus of this research paper. Time use patterns differ between paid and unpaid activities depending on gender, age, and educational level, among other factors.

#### 1.1 Definition of paid and unpaid work:

Unpaid services that are generated for immediate household consumption and for which there are available market equivalents are referred to as household work. For instance, replacing faulty faucets rather than employing plumbers, going grocery shopping rather than ordering groceries online, and cooking instead of eating out, etc. In contrast to work that is done for pay, unpaid home tasks are less regularly measured and do not have timely statistical measurements concerning the person employed, the hours worked, the income earned, and other factors (Kent, R. K., 2009). Caregiving for children, the sick, the elderly, and people with disabilities living in one's own home, producing services for one's own consumption, producing commodities for one's own consumption, and volunteering are all unpaid activities according to the 2019 Survey of Time Use in India. Voluntary work for the production of services in households, manufacturing of commodities in households, unpaid trainee work for the production of goods or services in market- or non-market-based units, unpaid trainee work for the production of services in market- or non-market-based units, other unpaid work for the production of goods or services, and other unpaid work.

#### 2 Data collection:

The National Statistical Office (NSO) performed the "Time Use Survey" (TUS), the first study of its sort, from January to December of 2019. Time use data can be used to learn more about the activities that the population engages in and how much time is spent on paid and unpaid activities. Information on time usage in both rural and urban areas with various levels of disaggregation, such as gender, age, education, etc., is provided by the time use survey and can be utilized for planning, formulation, and decision support. The 9,945 First Stage Units (villages/urban frame survey (UFS) blocks/sub-units (SUs) depending on the situation) used for the study on time use in India included 5,947 villages and 3,998 urban blocks. The 1,38,799 households that made up the ultimate stage units (USU) were split between the two sectors, with 82,897 living in rural areas and 55,902 in urban areas.

Every person in the chosen households who was at least 6 years old and over, or 4,47,250 people in total, was asked about their time utilization of age 6 years and above, 2,73,195 in rural areas and 1,74,055 in urban areas. With the exception of the villages in the Andaman and Nicobar Islands, the survey was conducted over the

whole Indian Union. A reference period of 24 hours, beginning at 4:00 AM on the day before the interview date and ending at 4:00 AM on the interview day, was used to collect information on activity specifics.

The percentage of people who participate in a given activity each day throughout the 24-hour reference period is what is referred to as the participation rate in the Time Use Survey (TUS). Participation rate in activity 'A' = (number of persons participating in activity 'A' / total number of persons) x 100. Average time spent in a day per participant is calculated by Average time spent in a day per participant in activity 'A' = Total time spent by the participant in activity 'A' / total number of persons participating in activity 'A'. This study also calculates the mean differences, and standard deviation for various activities based on gender, education level, age, and region.

### 3 Discussions and Results:

#### 3.1 How do gender differences in time usage patterns for unpaid domestic tasks manifest themselves?

Focus is placed on the participation rate and average daily time spent by participants in unpaid home chores in both rural and urban areas in order to analyze gender disparities in time usage patterns according to gender.

Table 1 the participation rate and time spent on unpaid domestic duties.

	Participati on Rate (in rural areas)in percentag e	Participati on Rate (in urban areas) in percentag e	Average time spent in a day per participa nt in rural areas)in minutes	Average time spent in a day per participa nt in urban areas	India's participati on rate (in percentag e)	India Avera ge time spent in a day per(in minut e)
Participation in the production of goods for own final use and time spent per participant of age 6 and above in a day						
Male	19.10	3.40	203	134	17.10	151
Female	25.00	8.30	123	64		
Total	22.00	5.8.0	158	85		
Differences(m ale-female)	-5.90	-4.90	80	70		
Participation in unpaid domestic services for household members and time spent per participant of age 6 and above in a day						
Male	27.70	22.60	98	94		

Female	82.10	79.20	301	293	53.20	248
Total	54.60	50.10	249	247		
Differences (male-female)	-54.40	-56.60	-203	-199		
Participation in unpaid caregiving services for household members and time spent per participant of age 6 and above in a day						
Male	14.40	13.20	77	75	20.70	114
Female	28.20	26.30	132	138		
Total	21.20	19.50	113	116		
Differences (male-female)	-13.80	-13.10	-55	-63		
Participation in unpaid volunteer, trainee and other unpaid work and time spent per participant of age 6 and above in a day						
Male	2.80	2.50	99	111	2.40	101
Female	2.00	2.20	98	101		
Total	2.40	2.30	98	106		
Differences (male-female)	0.80	0.30	1	10		
Participation in socializing and communication, community participation and religious practice and time spent per participant of age 6 and above in a day						
Male	91.70	90.60	151	138	91.30	143
Female	91.20	91.40	139	138		
Total	91.50	91.00	145	138		
Differences (Male-female)	0.50	-0.80	12	0		
Participation in culture, leisure, mass-media and sports practices and time spent per participant of age 6 and above in a day						
Male	87.00	92.10	162	171	86.9	165
Female	82.20	92.70	157	181		
Total	84.60	92.40	159	176		
Differences (Male-female)	4.80	-0.60	5	-10		
Participation in self-care and maintenance and time spent per participant of age 6 and above in a day						
Male	100	100	737	711	100	726
Female	100	100	724	720		
Total	100	100	731	715		
Differences (Male -female)	0	0	13	-9		

Participation in learning and time spent per participant of age 6-14 years in learning activities in a day						
Male	86.4	85.1	427	441	85.9	430
Female	85.4	86.4	427	437		
Total	85.9	85.7	427	439		
Differences (Male-female)	1	-1.3	0	4		
Participation in learning and time spent per participant of age 15-29 years in learning activities in a day						
Male	31.2	36.6	425	448	29.2	430
Female	22.6	32.0	423	429		
Total	26.9	34.4	424	440		
	8.6	4.6	2	19		
Participation in unpaid and time spent per participant of age 6 years and above in these activities in a day						
Male	47.8	35.1	167	110	63.6	289
Female	85.0	81.7	373	337		
Total	66.4	58.4	270	223.5		
Differences (Male-female)	-37.2	-46.6	-206	-227		
Participation in paid and time spent per participant of age 6 years and above in these activities in a day						
Male	53.4	58.1	415	486	36.2	413
Female	17.7	15.5	313	367		
Total	35.55	36.8	364	426.5		
Differences(Male-female)	35.7	42.6	102	119		

Source: Compiled from survey "Time Use in India", 2019, Ministry of statistics and programme implementation, National statistical office

In both rural and urban areas, female participation in the creation of commodities for personal consumption is higher than that of males by 5.9 and 4.9 percent, respectively. However, male participants in both rural and urban locations spend 80 and 70 minutes more per participant for the identical activity, respectively. This is due to the fact that the production of goods for own use production of goods includes agriculture, forestry, fishing, and mining for own use, making and processing goods, construction activities for own use, travelling, moving, transporting, or accompanying goods or people related to own use production of goods.

Female engagement in unpaid domestic services for household members is 82.1 percent in rural areas, which is higher than male participation rate by 54.4 percent. In metropolitan areas as well, female engagement in the same is higher than male participation by 56.6%. Additionally, a significant gender discrepancy in the amount of time spent per participant providing unpaid domestic services for household members has been noted. Females are more likely than males to participate in unpaid caregiving activities for household members and spend more time doing so per participant. The data makes it evident that women participate at a higher rate than men do, and they spend more time engaging in unpaid activities. A substantial difference of 206 and 227 minutes separates the amount of time spent engaging in unpaid activities in rural and urban areas, respectively, when comparing participation rates in unpaid activities of 37.2% and 46.6%.

However, there is hardly any difference between the rates of participation and the amount of time spent by participants by gender when it comes to unpaid volunteers, trainees, socializing and communication, community involvement and religious practice, participation in cultural activities, leisure, mass media, and sports. The above table also shows that both men and women share equal responsibility for engaging in self-care, maintenance, and learning.

Table 2 Percentage share of total time in different activities in a day per person of age 6 years and above (All India)

Description of the activity	Rural			urban			Rural+urban		
	Male	female	person	male	female	person	male	female	person
Employment and related Activities	16.90	4.20	10.60	21.3	4.30	13.10	18.30	4.20	11.40
Production of goods for own final use	2.70	2.20	2.40	0.30	0.30	0.30	1.90	1.60	1.80
Unpaid domestic services for household members	1.90	17.20	9.40	1.50	16.10	8.60	1.70	16.90	9.20
Unpaid caregiving services for household members	0.80	2.60	1.70	.70	2.50	1.60	0.80	2.60	1.70

Unpaid volunteer, trainee and other unpaid work	0.20	0.10	0.10	0.20	0.10	0.10	0.20	0.10	0.10
Learning	7.10	5.70	6.40	7.0	6.10	6.60	7.10	5.80	6.50
Socializing and communication, community participation and religious Practice	9.60	8.80	9.20	8.70	8.80	8.80	9.30	8.80	9.00
Culture, leisure, mass-media and sports practices	9.70	9.00	9.40	10.90	11.70	11.30	10.10	9.80	9.90
Self-care and maintenance	51.20	50.30	50.80	49.40	50.00	49.70	50.60	50.20	50.40
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: "Time Use in India", 2019, Ministry of statistics and programme implementation, National statistical office

When we looked at the percentage of total time spent in various activities in a day, we found that the majority of time in India (both rural and urban) was spent on self-care and maintenance (50.4%), followed by employment and related activities (11.4%), culture, leisure, mass media, and sport practises (9.9%), unpaid domestic services for household (9.2%), socialising and communication, and community involvement. Now, when we looked at the percentage shares of total time spent by gender, we saw that there was a difference of 12.7% (for rural areas) and 8.8% (for urban areas) in employment and related activities, 15.3% (for rural areas) in unpaid domestic services for household members, 1.8% in unpaid caregiving services for household, etc. However, while engaging in activities like creating items for one's own use, performing unpaid volunteer or trainee employment, or engaging in unpaid learning, socialising, and communication, Participation in community activities, religious observance, culture, leisure, mass media, and sport practises, self-care, and maintenance, there is very little evidence of a gap.

### 3.2 Unpaid caregiving services for household members and other unpaid domestic work

Unpaid caregiving services for household members are crucial for determining the level of care that each household requires. Care for dependent adults, assistance to non-dependent adult household members, other activities related to unpaid caregiving services for household members, accompanying goods or people related to unpaid caregiving, services for household members, and all care activities are among the various categories of unpaid caregiving services for household members.

Table 3 Percentage of persons participating in a day in different unpaid caregiving services for household members (All India )

Descriptive of unpaid caregiving services	Male	female	Person
Rural			
Child care and instruction	13.80	27.20	20.40
Care for dependent adults	0.20	0.50	0.30
Help to non-dependent adult household members	0.20	0.30	0.20
Travelling and accompanying goods or persons related to unpaid caregiving services for household members	0.40	0.40	0.40
Other activities related to unpaid caregiving services for household Members	0.20	0.40	0.30
All care activities	14.40	28.20	21.20
Urban			
Child care and instruction	12.30	25.20	18.5
Care for dependent adults	0.20	0.60	0.40
Help to non-dependent adult household members	0.20	0.40	0.30
Travelling and accompanying goods or persons related to unpaid caregiving services for household members	0.90	1.10	1.00
Other activities related to unpaid caregiving services for household Members	0.10	0.30	0.20
All care activities	13.20	26.30	19.50
Urban + rural			
Child care and instruction	13.30	26.60	19.80
Care for dependent adults	0.20	0.50	0.40
Help to non-dependent adult household members	0.20	0.30	0.20
Travelling and accompanying goods or persons related to	0.50	0.60	0.60



unpaid caregiving services for household members			
Other activities related to unpaid caregiving services for household Members	0.10	0.40	0.30
All care activities	14.00	27.60	20.70

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

When we looked at the percentage of people providing various types of uncompensated care for family members, we saw that rural areas had a total of 21.2 percent of people providing care, with 14.4 percent of men and 28.2 percent of women providing that care. The highest level of unpaid caregiving is found to be provided for child care and teaching, where 20.4% of people participate, with men making up 13.8% of the total and women making up 27.2%.

The similar situation is seen in metropolitan areas, where child care and instruction are the most common unpaid caregiving services. It is evident that the entire individual engaged in all caring activities. When we look at all of India (rural and urban), we see that there are 20.7% of people participating in all care activities, with men making up 14% of that total and women making up 17.6%.

Table 4 Average time (in minutes) spent in a day per participant in unpaid caregiving services for household members

Descriptive of unpaid caregiving services	Male	female	Person
	Rural		
Child care and instruction	75	132	113
Care for dependent adults	96	85	88
Help to non-dependent adult household members	79	76	77
Travelling and accompanying goods or persons related to unpaid caregiving services for household members	86	77	82
Other activities related to unpaid caregiving services for household members	84	75	78
All care activities	77	132	113
Urban			
Child care and instruction	71	137	115
Care for dependent adults	119	97	104
Help to non-dependent adult household members	95	77	84
Travelling and accompanying goods or persons related	61	67	64

to unpaid caregiving services for household members			
Other activities related to unpaid caregiving services for household members	77	76	76
All care activities	75	138	116
Urban + rural			
Child care and instruction	74	134	113
Care for dependent adults	104	89	94
Help to non-dependent adult household members	85	76	79
Travelling and accompanying goods or persons related to unpaid caregiving services for household members	74	71	73
Other activities related to unpaid caregiving services for household Members	82	75	77
All care activities	76	134	114

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

When we looked at the average amount of time (in minutes) spent each day providing unpaid care for household members across all of India (rural and urban), we saw that women spent 134 minutes providing care, while men spent 76 minutes, leaving a 58-minute gap. When we looked at the gender differences in time spent on various activities, we found that women spend more time than men on child care and instruction—60 minutes more per day. However, males spent 15 minutes, 9 minutes, 3 minutes, and 7 minutes longer than females on tasks like caring for dependent adults, helping non-dependent adult household members, traveling, and accompanying goods or people related to providing unpaid care for household members.

Table 5 Means differences in participation rate and average time spent (in minutes) by gender and location for all unpaid caregiving activities

	Mean	Standard deviation	Standard error
Participation Rate			
male	4.71	6.925	2.826
female	9.35	13.792	5.630
Rural	6.65	9.575	3.909
Urban	7.13	10.589	4.323
Average time spent			
male	82.8182	15.689	4.73
female	97.4167	28.506	8.22
Rural	90.000	21.702	6.54

Urban	90.833	26.81	7.74
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Source: Author calculation

For all unpaid caregiving activities, the table above displays the mean differences in participation rate and average time spent (in minutes), broken down by gender and location. The table provides evidence that the participation rate for women is greater (4.64%) than men's, and that it is higher (0.48%) in urban areas. Again, the average amount of time women spend is more than that of men in all unpaid caregiving tasks by 14.6 minutes. However, there isn't enough of a difference between the means for rural and urban areas.

Table 6 Percentage of persons participating in different unpaid domestic service activities for household members

Descriptive of unpaid domestics services	Male	female	Person
	Rural		
Food and meals management and preparation	4.9	75.7	39.9
Cleaning and maintaining of own dwelling and surroundings	8.4	67.1	37.4
Do-it-yourself decoration, maintenance and repair	1.1	1.0	1.0
Care and maintenance of textiles and footwear	2.7	43.8	23.0
Household management for own final use	1.4	2.1	1.7
Pet care	6.1	5.7	5.9
shopping for own household members	9.1	3.4	6.2
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	3.4	1.3	2.3
Other unpaid domestic services for household members	2.1	5.1	3.6
All unpaid domestic services for household members	27.7	82.1	54.6
Urban			
Food and meals management and preparation	7.2	73.9	39.6
Cleaning and maintaining of own dwelling and surroundings	5.2	59.5	31.6
Do-it-yourself decoration, maintenance and repair	0.8	0.7	0.8

Care and maintenance of textiles and footwear	2.8	44.5	23.0
Household management for own final use	1.1	2.1	1.6
Pet care	0.7	0.8	0.8
shopping for own household members	10.6	9.3	10.0
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	3.7	2.7	3.2
Other unpaid domestic services for household members	1.2	3.7	2.4
All unpaid domestic services for household members	22.6	79.2	50.1
Urban + rural			
Food and meals management and preparation	5.6	75.2	39.8
Cleaning and maintaining of own dwelling and surroundings	7.4	64.8	35.6
Do-it-yourself decoration, maintenance and repair	1.0	0.9	0.9
Care and maintenance of textiles and footwear	2.7	44.0	23.0
Household management for own final use	1.3	2.1	1.7
Pet care	4.5	4.2	4.3
shopping for own household members	9.5	5.1	7.4
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	3.5	1.7	2.6
Other unpaid domestic services for household members	1.8	4.7	3.2
All unpaid domestic services for household members	26.1	81.2	53.2

Source: Time Use in India, 2019, Ministry of statistics and program implementation, National statistical office

The percentage of people who participate in various unpaid domestic activities for household members in both rural and urban areas is clearly shown in the table. The overall participation rate (rural and urban combined) for all unpaid domestic services performed by household members is 53.2%, with females making up 81.2% of participants and males making up 26.1%. There is a significant gender gap in participation in unpaid activities such as managing and preparing food and meals, cleaning and keeping one's home and surroundings, and caring for and maintaining clothing and footwear, with respective rates of 69.6%, 57.4%, and 41.3%.

Table 7 Average time (in minutes) spent in a day per participant in unpaid domestic services activities for a household member

Descriptive of unpaid domestic services	Male	female	Person
	Rural		
Food and meal management and preparation	97	207	200
Cleaning and maintaining of own dwelling and surroundings	53	72	70
Do-it-yourself decoration, maintenance and repair	80	80	80
Care and maintenance of textiles and footwear	40	63	61
Household management for own final use	54	66	61
Pet care	97	89	93
shopping for own household members	61	62	61
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	66	61	65
Other unpaid domestic services for household members	71	92	85
All unpaid domestic services for household members	98	301	249
Urban			
Food and meals management and preparation	88	199	188
Cleaning and maintaining of own dwelling and surroundings	54	71	69
Do-it-yourself decoration, maintenance and repair	62	63	63
Care and maintenance of textiles and footwear	44	67	66
Household management for own final use	58	70	66
Pet care	81	76	78
shopping for own household members	60	62	61
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	58	57	58
Other unpaid domestic services for household members	71	87	83
All unpaid domestic services for household members	94	293	247
Urban + rural			
Food and meals management and preparation	94	204	197

Cleaning and maintaining of own dwelling and surroundings	53	72	70
Do-it-yourself decoration, maintenance and repair	75	76	75
Care and maintenance of textiles and footwear	41	64	63
Household management for own final use	55	67	63
Pet care	97	88	93
shopping for own household members	61	62	61
Travelling, moving, transporting or accompanying goods or persons related to unpaid domestic services for household members	64	59	62
Other unpaid domestic services for household members	71	90	85
All unpaid domestic services for household members	97	299	248

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

When we looked at the average amount of time (rural + urban) spent each day performing unpaid domestic tasks for a household member, we saw that the total amount of time was 248 minutes, of which 299 minutes were spent by women and 97 minutes by men. Food and meal management and preparation take up the most time of all unpaid domestic service activities (197 minutes), followed by pet care (93 minutes), other unpaid domestic services for household members (85 minutes), and decoration, maintenance, and repair (75 minutes), in that order.

Now, when we looked at the gender gap in various activities (rural + urban), we saw a gap of 110 minutes in time spent managing and preparing food, 19 minutes in cleaning and maintaining one's own home and surroundings, 23 minutes in caring for one's clothing and footwear, and 12 minutes in managing one's own household for final use.

Table 8 Mean difference for participation and time use in different unpaid domestic service activities for household members

Gender/location	Mean	Standard deviation	Standard error	t	sig
<b>Participation rate</b>					
Male	4.3556	2.9640	.98800	2.207	0.41
Female	28.6364	32.734	9.86995		
Rural	17.2100	26.753	26.753	0.72	0.943
Urban	16.6150	25.724	25.274		
<b>Time use</b>					
Male	67.8500	17.845	3.990	2.296	0.27

Female	108.2	76.554	17.11		
Rural	90.5000	60.161	13.452	0.380	0.706
Urban	83.2500	60.516	13.531		

Source: Author calculation

The data clearly shows that the mean participation rate and time use between men and women differ significantly.

The mean participation rate and time spent on unpaid domestic service activities are, respectively, 24.3% and 40.35% greater for females than for males. However, the mean differences between urban and rural areas are statistically insignificant.

Table 9 Average time (in minutes) spent and participation rate in unpaid activities, paid activities in a day

Description of the activity	Percentage of persons participating in unpaid activities, paid activities in a day			
	male	female	Gap (male-female)	person
	Rural			
Unpaid activity	47.8	85.0	-37.2	66.2
Paid activity	53.4	17.7	35.7	35.7
Urban				
Unpaid activity	35.1	81.7	-46.6	57.8
Paid activity	58.1	15.5	42.6	37.4
Rural +Urban				
Unpaid activity	43.9	84.0	-40.1	63.6
Paid activity	54.8	17.1	37.7	36.2
Description of the activity	Average time (in minutes) spent in a day per participant in unpaid activities, paid activities			
	male	female		person
	Rural			

Unpaid activity	167	373	-206	298
Paid activity	415	313	102	390
Urban				
Unpaid activity	110	337	-227	266
Paid activity	486	367	119	462
Rural +Urban				
Unpaid activity	153	363	-210	289
Paid activity	438	328	110	413

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

Table 9 displays the average amount of time (in minutes) spent and the proportion of people who engage in paid and unpaid activities. Male participation in paid activities was 53.4% higher in rural areas than in unpaid activities, at 47.8%. However, 85.0% of women had engaged in unpaid activities, whereas just 17.7% had done so for pay. In metropolitan areas, 58.1% of men had engaged in paid activity and 33% in unpaid activity, compared to 81.7% of women who had engaged in paid activity and 15.5% in unpaid activity. When both rural and urban areas are considered, male engagement in paid activity is 54.8%, whereas female participation is only 17%. This demonstrates the gender gap in activity engagement, both paid and unpaid. The same pattern may be seen when comparing the average daily time (in minutes) spent by each participant on paid and unpaid activities. When the gap (male-female) both rural and urban in participation of paid and unpaid activity in a day is observed, it is seen that in unpaid activity the participation of female is higher than male counterpart by 40.1per cent but lower by 37.7 percent in case of paid activity. The gap is also observed in case of time use, where female time use in unpaid activity is more than their male counterpart by 210 minutes but lower by 110 minutes in case of paid activity.

### 3.3 Time use by Age groups

One of the key variables influencing involvement in the use of time for various activities is age. The table below shows participation rates in various activities as well as the average daily time spent in various activities by participants in the age groups



of 15 to 29 years, 15 to 59 years, and 60 years and over. It has been noted that the age group of 15 to 59 years has the highest participation rate and time use in employment and related activities.

The gender disparity in this age group is 49.7 and 127 minutes, respectively, with male participation for the same activity at 70.9% and time consumption of 470 minutes, and female participation at 21.8% and time use of 343 minutes. Male participation rates and time usage for the production of goods for personal use are highest for age groups 60 and older (21.4% and 213 minutes, respectively), whereas female participation rates for the same activity are highest for age groups 15 to 59 years (22.7%) and 60 and older (20.8%). For male household members who provide unpaid domestic services, the age group 60 and beyond has the highest involvement rate (16.2%), whereas for female household members, the age range 15-59 has the highest participation rate (92.3%). Female participation in the age groups of 15-29, 15-59, and 60 years and beyond for unpaid caregiving services for household members is 39.8%, 32.8%, and 17.1%, respectively. In terms of males, the age range of 15 to 59 has the greatest involvement percentage, at 16.2%. The age range of 15 to 59 years old has the highest participation rate and time utilisation in learning activities for both males and females. The age group 60 years and above has the highest participation rate for socialising, communicating, and engaging in religious activity for both men and women.

Table 10 Participation rates and time use in the activities by persons in different age groups (All India, rural+urban)

Description of the activity	15-29 years		15-59 years		60 years and above	
	Participation rate	Time use	Participation rate	Time use	Participation rate	Time use
Employment and related activities	53.9	463	70.9	470	43.5	397
Production of goods for own final use	11	176	15.6	198	21.4	213
Unpaid domestic services for household members	24.2	94	28.9	95	34.7	112
Unpaid caregiving services for household members	11.5	75	16.2	73	11.1	90
Unpaid volunteer, trainee and	2.6	116	2.9	103	3.2	109

other unpaid work						
Learning	32.9	433	14.3	421	0.6	102
Socializing and communication, community participation and religious practice	91.9	145	93.4	146	96.7	202
Culture, leisure, mass-media and sports practices	88.3	163	86.9	144	88	211
Self-care and maintenance	100	717	100	711	100	788
Female						
Employment and related activities	14.2	328	21.8	343	13.8	304
Production of goods for own final use	18.1	97	22.7	115	20.8	127
Unpaid domestic services for household members	85.8	291	92.3	315	78.3	245
Unpaid caregiving services for household members	39.8	154	32.8	137	17.1	1181
Unpaid volunteer, trainee and other unpaid work	2.1	94	2.2	100	2	106
Learning	25.4	425	10.9	414	0.3	149
Socializing and communication, community participation and religious practice	91.3	129	92.6	136	96.2	192
Culture, leisure, mass-media and sports practices	84.2	153	83.8	151	84.9	207
Self-care and maintenance	100	709	100	704	100	797
Person						
Employment and related Activities	34.1	435	46.4	440	29	375
Production of goods for own final use	14.6	127	19.2	149	21.1	172
Unpaid domestic services for household members	55	247	60.6	262	56.0	202
Unpaid caregiving services for household members	25.6	136	24.5	116	14.1	107
Unpaid volunteer, trainee and other unpaid work	2.4	106	2.5	102	2.6	108
Learning	29.2	430	12.6	418	0.5	118

Socializing and communication, community participation and religious practice	91.6	137	93	141	96.6	197
Culture, leisure, mass-media and sports practices	86.3	158	85.3	147	86.6	209
Self-care and maintenance	100	713	100	707	100	792

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

Table 11 Mean difference in participation rates and time use in the activities by persons in different age groups (All India, rural+urban)

	Mean	Standard deviation	Standard error
<b>Participation rates</b>			
15-29 years	48.7222	37.453	8.827
15-59 years	49.3444	38.604	9.099
60 years above	45.1389	40.3055	9.500
<b>Time use</b>			
15-29 years	2.645	205.82	48.513
15-59 years	2.652	204.38	48.173
60 years above	3.073	303.263	71.479

Source: Author calculation

Table 11 shows the average differences in time spent and rates of engagement in various activities by people in various age groups.

Because the differences are too close together, the mean of different age groups participating in different activities does not demonstrate statistical significance. However, we did find that the rate of engagement in various activities is highest for people aged 15 to 59 and lowest for people aged 60 and more. No statistically significant mean difference is seen for different age groups when it comes to time use. But for the age group of 60 and above, the means are the highest.

Table 12 Percentage of persons of different age groups participating in a day in unpaid activities, paid activities

Description of the activity	Percentage of persons and average time (in minutes) spent in a day of different age groups participating in a day in unpaid activities, paid activities								
	15-29 years			15-59 years			60 years and above		
	Male	femal	perso	Male	femal	perso	Male	fem	pers

	e			n			ale			on
	Rural									
Unpaid activity	43.4	90.2	67.2	53.7	95.1	74.6	57.3	84.8	70.6	
Paid activity	50.9	12.3	31.3	67.1	21.3	44.0	44.0	14.8	29.9	
	Urban									
Unpaid activity	30.8	81.0	55.0	37.8	90.9	63.7	44.6	81.3	62.8	
Paid activity	51.2	13.5	33.1	71.5	18.9	45.8	34.1	8.0	21.2	
	Rural+Urban									
Unpaid activity	39.4	87.5	63.4	48.6	93.8	71.2	53.6	83.8	68.3	
Paid activity	51.0	12.7	31.9	68.5	20.6	44.6	41.1	12.8	27.3	
Description of the activity	average time (in minutes) spent in a day of different age groups participating in a day in unpaid activities, paid activities									
	15-29 years			15-59 years			60 years and above			
	Male	femal e	perso n	Male	female	perso n	Male	fem ale	pers on	
	Rural									
Unpaid activity	147	394	316	166	400	317	200	299	257	
Paid activity	424	306	400	422	317	397	364	293	347	
	Urban									
Unpaid activity	105	333	267	108	357	282	130	259	213	
Paid activity	491	394	472	490	371	466	442	327	420	
	Rural+Urban									
Unpaid activity	137	378	303	151	388	307	183	287	245	
Paid activity	445	333	423	445	332	419	383	300	364	

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

When we looked at the participation rate in paid activities by age group for males (rural + urban), we saw that it was 51 percent, 68.5 percent, and 41.1% respectively for the age groups of 15 to 29, 15 to 59, and 60 years and older. And female involvement rates, we found that they were 12.7%, 20.6%, and 12.8%, respectively, with a 38.3%, 47.9%, and 28.3% discrepancy between them. When it comes to the participation rate in unpaid work, it can be noted that for the age groups of 15 to 29, 15 to 59, and 60 years and over, the rates are 39.4%, 48.6%, and 53.6% for men and 53.64% for women, respectively.

### 3.4 Time use by educational level

The amount of education also affects how people participate in various activities. For each level of education, percentages of people engaged in various activities are shown.

The highest level of education a person has successfully finished is considered their level of education, according to a time-use survey.

Table 13 Percentage of persons participating in different activities in a day for different levels of education (rural + urban, all India)

Description of the activity	not literate	literate and level of education				all
		below primar y	primar y	upper primary/ middle	second ary and above	
<b>Male</b>						
Employment and related activities	66.6	33.6	52.1	59.3	62.7	57.3
Production of goods for own final use	23.1	10.2	14.4	15.7	11.3	14.3
Unpaid domestic services for household members	31.7	17.5	24.9	27.0	26.9	26.1
Unpaid caregiving services for household members	14.3	11.7	13.0	14.1	15.2	14.0
Unpaid volunteer, trainee and other unpaid work	2.7	1.9	2.2	2.9	3.0	2.7
Learning	3.5	50.3	30.9	23.1	20.6	23.9
Socializing and communication, community participation and religious practice	94.7	83.7	90.1	91.7	93.0	91.4
Culture, leisure, mass-media and sports practices	80.4	91.2	88.0	88.1	91.3	88.5
Self-care and maintenance	100.0	100.0	100.0	100.0	100.0	100.0
<b>Female</b>						
Employment and related activities	24.6	12.2	16.1	15.9	17.3	18.4
Production of goods for own final use	28.9	15.1	19.3	19.8	13.5	20.0
Unpaid domestic services for household members	88.9	52.6	75.3	83.0	87.7	81.2
Unpaid caregiving services for household members	25.9 20.8	20.8	26.7	29.2	31.9	27.6 0
Unpaid volunteer, trainee and other unpaid work	2.1	1.6	2.1	2.0	2.2	2.0
Learning	1.7	44.5	28.0	24.0	21.0	19.8
Socializing and communication, community participation and religious practice	93.7	85.0	90.0	91.7	92.0	91.3
Culture, leisure, mass-media and	77.9	88.3	85.4	86.0	91.1	85.3

sports practices						
Self-care and maintenance	100.0	100.0	100.0	100.0	100.0	100.0
<b>Person</b>						
Employment and related activities	39.5	23.4	34.9	39.9	43.5	38.2
Production of goods for own final use	26.9	12.6	16.7	17.6	12.3	17.1
Unpaid domestic services for household members	68.6	34.3	48.9	52.1	52.7	53.2
Unpaid caregiving services for household members	21.7	16.0	19.5	20.8	22.3	20.7
Unpaid volunteer, trainee and other unpaid work	2.3	1.8	2.2	2.5	2.6	2.4
Learning	2.3	47.6	29.5	23.6	20.8	21.9
Socializing and communication, community participation and religious practice	94.1	84.3	90.1	91.7	92.6	91.3
Culture, leisure, mass-media and sports practices	78.8	89.8	86.8	87.1	91.2	86.9
Self-care and maintenance	100.0	100.0	100.0	100.0	100.0	100.0

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

When we take into account the amount of education of each participant in India as a whole, we find that the overall participation rate for employment and related activities is 38.2%. When education level is taken into consideration, the participation percentage for the same is highest for secondary and above educational levels with 43.5 percent. 17.1% of people participate in the creation of commodities for their personal consumption in total, with non-illiterates making up the biggest percentage (26.7%). The overall participation percentage for unpaid domestic services for household members is 53.2%, with the lowest participation rate coming from those who lack literacy (68.6%).

A total of 91.3 percent of people participated in socialising, communication, community involvement, and religious activity; 86.9 percent participated in cultural, leisure, mass media, and sports activities.

The participation percentage for self-care and maintenance is 100% across all activities.

Sleep and related activities, eating, drinking, providing personal care and medical attention to others, travelling for self-care and maintenance-related reasons, and other self-care and maintenance activities are all considered self-care and maintenance.

Table 14 Average time (in minutes) spent in a day per participant by different levels of education (rural + urban, all India)

Description of the activity	not literate	literate and level of education				All
		below primary	primary	upper primary/middle	secondary and above	
<b>Male</b>						
Employment and related activities	447	430	449	464	471	459
Production of goods for own final use	217	196	197	198	184	198
Unpaid domestic services for household members	108	93	95	94	95	97
Unpaid caregiving services for household members	77	84	75	73	76	76
Unpaid volunteer, trainee and other unpaid work	92	87	94	102	111	102
Learning	366	416	438	450	417	426
Socializing and communication, community participation and religious practice	169	125	140	91.7	149	147
Culture, leisure, mass-media and sports practices	150	190	166	88.1	164	164
Self-care and maintenance	751	760	734	100.0	710	729
<b>Female</b>						
Employment and related Activities	342	303	315	305	349	333
Production of goods for own final use	140	107	108	98	89	116
Unpaid domestic services for household members	296	301	304	308	295	299
Unpaid caregiving services for household members	126	126	131	131	146	134
Unpaid volunteer, trainee and other unpaid work	103	90	98	91	102	99
Learning	355	411	440	453	410	423
Socializing and communication, community participation and	159	122	130	131	132	139

religious practice						
Culture, leisure, mass-media and sports practices	159	186	165	157	165	165
Self-care and maintenance	738	749	721	713	702	723
<b>Person</b>						
Employment and related Activities	405	398	420	435	450	429
Production of goods for own final use	163	144	148	148	139	151
Unpaid domestic services for household members	265	245	248	247	236	248
Unpaid caregiving services for household members	114	110	112	109	119	114
Unpaid volunteer, trainee and other unpaid work	99	88	96	98	108	101
Learning	361	414	439	452	414	424
Socializing and communication, community participation and religious practice	163	124	135	137	142	143
Culture, leisure, mass-media and sports practices	156	189	166	157	164	165
Self-care and maintenance	743	755	728	718	706	726

Source: Time Use in India, 2019, Ministry of statistics and programme implementation, National statistical office

The time spent on average (in minutes) each participant per day, broken down by educational level, is shown in the table above. The average amount of time (per person) spent on job and related activities is 429 minutes, with secondary and higher education students using the most of this time. The average amount of time (per person) spent producing things for personal consumption is 151 minutes, with those who lack literacy spending the most time on average. The household members who are not illiterate spend the most time—an average of 248 minutes—on unpaid domestic activities. The average amount of time spent providing unpaid care for family members is 114 minutes per day, with secondary and higher education students spending the most time in this area. The average amount of time spent on learning activities is 424 minutes, with upper primary levels spending the most time. Once more, 143 minutes on average are spent on socialising, communication, community involvement, and religious practise, with non-illiterates spending the most time in these activities. The majority of a day's time has been spent on self-care and maintenance tasks out of all the activities.



Table 15 Means difference in participation rates and time use in different activities by level of education

	Mean	Standard deviation	Standard error
<b>Participation rates</b>			
Not literate	41.77	34.99	12.37
Below primary	38.72	32.90	11.63
Primary	41.07	32.28	11.41
Upper primary/ middle	35.45	29.49	11.14
Secondary and above	42.25	34.57	12.22
<b>Average time spent</b>			
Not literate	2.98	114.92	40.63
Below primary	1.91	225.51	79.73
Primary	3.00	225.46	79.71
upper primary/ middle	2.81	226.01	85.42
Secondary and above	2.98	219.78	77.70

Source: Author calculation

The mean for engagement in various activities is determined to be highest for secondary and above and lowest for upper primary, but statistically, we have not seen any changes in the mean by different levels of schooling that are statistically significant. Although the mean differences for different levels of education are seen to be largest for primary level and lowest for below primary, they are statistically insignificant.

#### 1.4 Conclusion

It is evident from the discussion above that there is a significant gender gap in participation and time use in activities like unpaid domestic services for household members, participation in the production of goods for one's own final use, and participation in unpaid caregiving for household members, where female participation and average time use are higher in these activities.

However, there is hardly any difference between the rates of participation and the amount of time spent by participants by gender when it comes to unpaid volunteer work, traineeships, socialising and communication, community involvement and religious practice, participation in cultural activities, leisure, mass media, and sports. Additionally, the discussion above shows that both men and women share equal responsibility for engaging in self-care, maintenance, and learning.

Additionally, it can be observed that while female engagement in paid activity is lower than that of male participation in unpaid activity by 37.7%, it is higher by 40.1%

for females. The difference is also seen in average time spent, with females spending 210 minutes longer on unpaid activity than males do, but just 110 minutes less on paid activity.

Because the differences are too close together, the mean of different age groups participating in different activities does not demonstrate statistical significance. However, we do find that the rate of engagement in various activities is highest for people aged 15 to 59 and lowest for people aged 60 and more. The mean for engagement in various activities is found to be highest for secondary and above and lowest for upper elementary, but statistically speaking, we have not seen any variances in the mean by different levels of schooling that are statistically significant.

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