RESEARCH ARTICLE

IMPACT OF COVID-19 ON CONSUMPTION PATTERN IN CHHATTISGARH – AN EXPLORATORY STUDY

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Abstract: The present study aims to examine the impact of COVID-19 on Consumption pattern of rural households. This research study was conducted in the periphery of Raipur city in the state of Chhattisgarh. Study is comparison of Consumption pattern of sampled household's 2 years in the form of pre and post covid-19 pandemic. Total 300 households were selected through random sampling methods. Study revealed that the percentage change total expenditure in the food items more increase reported in edible oils which was 22.55% and more decrease in cereals which were 4.11%. The percentage change of total expenditure in the non food item increased in medical & health care which was 35.37% and more decrease in education which was 0.31%. Also found that in marginal farm households reported that expenditure in food and non food item's percentage change was 4.40 % and 8.21% respectively and in small farm households 7.36% and 8.82% respectively, however landless household's expenditure in food and non food item's percentage change was 6.23% and 7.15 % respectively. Overall percentage change over pre COVID in food items and non food items expenditure were 6.04% and 8.12%. Study revealed that there were obvious disparities among pre COVID and post COVID in rural consumption expenditure regarding. Need to do more attention should be placed on study area in order to up-scale their living standards as more poor households dominate in this area. This can be done by generating more and attractive employment opportunities in the rural sector.

Keywords: Consumption Pattern, COVID-19, Food item, Non-food item, Pandemic

INTRODUCTION

The world is witnessing an unanticipated public health crisis because of the COVID-19 pandemic also known as 'severe acute respiratory syndrome coronavirus-2 (SARS-Cov-2)' (Arif and Sengupta 2020). COVID-19 pandemic is the contemporary element of worriment across the world. Its effects as we can see on every aspects of our life. While the crisis is global, the impacts are territorially different. It is the disease that is spread by Corona virus. COVID-19 pandemic has had significant psychological and social effects on the population (ILO 2020); The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. Pandemic has caused a massive economic shock across the world due to business interruptions and shutdowns from social-distancing measures. This Research will highlight the impact on economical and livelihood of vulnerable groups in rural households of the periphery in Raipur city. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty (Valeria *et al*. 2020).

Household consumption expenditure is the value of expenditure made by households to purchase various types of needs (food and non-food) within a certain period of time. Based on BPS's data of Medan City Year 2016, the biggest expenditure on non food. With the growing number of people every year, and the more diverse the tribe in Medan City, the more diverse consumption of households in the city of Medan. This research was conducted to analyze the expenditure of food and non-food household consumption in Medan City and the factors that influence it. Factors affecting consumption are behavior, economy, social environment as well as food and non-food stock. Factors influencing food consumption expenditure The Javanese is the income factor, while the factors that influence food consumption expenditure of Batak Tribe are consumptive lifestyle factors of food, income and age.

In the COVID-19 crisis food security, public health (Tomar, 2021), employment and labour issues, in particular workers' health and safety converge. Adhering to workplace safety and health practices and ensuring access to decent work and the protection of labour rights in all industries will be crucial in addressing the human dimension of the crisis. Immediate and purposeful action to save lives and livelihoods should include extending social protection towards universal health coverage and income support for those most affected (ILO *et al.* 2020). Millions of enterprises face an existential threat. Nearly half of the world's 3.3 billion global workforce are at risk of losing their livelihoods. Informal economy workers are particularly vulnerable because the majority lacks social protection and access to quality health care and have lost access to productive assets.

Research for Policy and Practice Report (2021) Studies of livelihoods and food systems since the start of the global pandemic in 2020 have shown a

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consistent pattern: the primary risks to food and livelihood security are at the household level. COVID-19 is having a major impact on households' production and access to quality, nutritious food, due to losses of income, combined with increasing food prices, and restrictions to movements of people, inputs and products.

LITERATURE REVIEW

Pallegedara (2019) examined the patterns and determinants of food consumption choice and demand in Sri Lanka. Using Household Income and Expenditure Survey 1990/1991, 2002 and 2012/2013 data, this study explores the relationship between food consumption patterns and the observed changes reported in per capita income, urbanization, structural transformations and demographics. This study demonstrates that per capita income, food prices, education level of the household heads, rural–urban affiliation and ethnic background significantly affect the consumption decision of the major food items. Sri Lankan households in general seem to consider that rice and dhal are necessary commodities, whereas bread and fish are luxury commodities.

McKibbin & Fernando (2020) found that pandemics can affect households, governments, and businesses through increased business costs, increased public healthcare expenditures, changes in labor supply due to mortality and morbidity, etc.

Kansiime *et al.* (2020) assessed implications of the COVID-19 pandemic for household income and food security in two East African countries, using online survey data from 442 respondents. They found that more than two-thirds of the respondents experienced income shocks due to the COVID-19 crisis. Food security and dietary quality worsened: the proportion of food-insecure1 respondents increased by 38% and 44% in Kenya and Uganda, respectively. Results from probit regressions show that the low-income households and those dependent on labor income were more vulnerable to income shocks and consumed less food during the COVID-19 pandemic compared to other respondent categories.

Harris *et al.* (2020) investigated effects of the COVID-19-induced shock on the production, sales, prices, incomes, and diets of vegetable farmers in India as both producers and consumers of nutrient-dense foods. They found that a majority of farmers reported negative impacts on production, sales, prices, and incomes. Over 80% of farmers reported some decline in sales, and over 20% reported very large declines (sold almost nothing). Price reductions were reported by over 80% of farmers, and reductions of more than half by 50% of them. Similarly, farm income reportedly dropped for 90% of farmers, and by more than half for 60% of them. The data also showed a higher level of vulnerability among female farmers in terms of both livelihoods and diet, and differential effects on smaller and larger farms, which suggests that different farms may require different types of support in order to continue to operate.

MATERIALS AND METHODS

The present study was conducted in Raipur city of Chhattisgarh. The study area was selected on the basis of stratified random sampling. The villages were selected purposively as a large proportion of population was dependent on agriculture and other households who did not have farm. Village from Raipur city was considered, 20 km around and 20 km above from the city. The rural households were categorized into two major groups, viz. farm households and landless households. The households were further categorized into three groups, viz. marginal (up to 1.0 ha), small (>1.0 to 2.0 ha) and landless households. 100 sample from each of the three categories of households, making a total of 300 respondents constituting 100 marginal, 100 small and 100 landless.

The selected households were interviewed using pre-structured questionnaire for collecting data on demographic characteristics, family member and size, consumption expenditures etc. in the year March 2019- March 2020 for pre COVID and April 2020- April 20211 for post COVID.

Mathematical Expressions and Symbols

Tabular analysis was employed including percentages and averages in respect of family member and size, consumption expenditures etc. For both the sample year's to facilitate better comparison percentage change formula was used.

$$\text{Percentage Change} = [(\text{Final Value} - \text{Initial Value}) \div \text{Initial Value}] \times 100$$

RESULTS AND DISCUSSION

Details and size of sampled household: In the Table 1 shows that details and size of sampled households. The total number of family members was 1489 it included with male and female members. The male and female family members in per cent were 50.30 and 49.70 per cent respectively. In total family size were 4.96. Landless family size was 4.78, whereas marginal and small family size was 4.96 and 5.15 respectively.

Food Consumption of Sampled Household (Rs./household/annum): The pattern of consumption expenditure on food items per households per annum have been shown in table 2. Overall per household per annum expenditure on various food items in pre COVID was Rs. 72506.37 and Rs. 76884.96 in post COVID. in pre COVID the highest amount of expenditure of the order of Rs. 17473.04 (24.10%) was incurred on cereals, like rice, maize, bajra, etc. followed by Rs. 10085.97 (13.91%) on pulses, like arhar, pea, moong, etc. then followed

by Rs.7950.56 (10.97%) on non veg items, like meat, fish, egg, etc. each of other food items expenditure was less than 10.00 per cent. the lowest expenditure was to the tune of Rs. 3247.34 (4.48%) on jaggery and sugar etc., Followed by Rs. 4590.19 (6.33%) on milk and milk products. In post COVID the amount of expenditure was differs from pre COVID, some items expenditure had been increase and some items expenditure had been decrease. In post COVID the order of expenditure of cereals was decreases Rs. 16754.27 (21.79%), in pulses its increase Rs. 11124.07 (14.47%). The major increment in item expenditure recoded in edible oils Rs. 8335.90 (10.84%), it is highest in percentage change over pre COVID expenditure which was 22.55%. The lowest percentage change in cereals which were 4.11%, followed by non-veg items were 4.38%. After analysis it revealed that the overall percentage change in food items was 6.04%.

Non-Food Consumption of sampled Households (Rs./household/annum): The pattern of consumption expenditure on non food items per households per annum have been shown in Table 3. Overall per household per annum expenditure on various non food items in pre COVID was Rs. 44475.90 and Rs. 48086.90 in post COVID. In pre COVID the highest amount of expenditure of the order of Rs. 18467.40 (41.52%) was incurred on automobile like Fuel, Cycle, Bike, etc. followed by Rs. 5198.15 (11.69%) on Medical & Health Care. Each of other non food items expenditure was less than 10.00 per cent. The lowest expenditure was Rs. 515.20 (1.16%) on Utensil & plastic product etc., Followed by Rs. 736.87 (1.65%) on Furniture. In post COVID the amount of expenditure was also differs from pre COVID, in post COVID the order of expenditure of automobile was increases Rs. 20291.82 (42.20%). The major increment in item expenditure recoded in Medical & Health Care Rs. 7036.87 (14.63%), it is highest in percentage change over pre COVID expenditure which was 35.37%. And the lowest percentage change in education which was 0.31%. Followed by the expenditure percent change in Cosmetic & Soap which was 1.43%. Study revealed that the overall percentage change in non food items was 8.12%.

CONCLUSION

Rural household's consumption pattern has undergone tremendous changes after COVID-19. Changing consumption pattern is a natural process of choice, this times the prices of items and income of rural households was also the factors which affected the consumption expenditure patterns of food and non food items. Found that consumption expenditure on food items and non food items was higher in post COVID than that in pre COVID. The analysis showed that there were obvious disparities among pre COVID and post COVID in rural consumption expenditure regarding. Overall major employment percentage change recorded in non-farm activities. On the basis of the findings, need to do more attention should be placed on rural areas of Raipur in order to up-scale their living standards as more poor households dominate in this area. This can be done by generating more and attractive employment opportunities in the rural sector.

Declaration of no Conflict Interests

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Table 1. Details and size of sampled households

Particulars	Marginal (N)	Small (N)	Landless Households (N)	Total (N)
Total Family Member	**496 (100)**	**515 (100)**	**478 (100)**	**1489 (100)**
a. Male	249 (50.20)	259 (50.29)	241 (50.42)	749 (50.30)
b. Female	247 (49.80)	256 (49.71)	237 (49.58)	740 (49.70)
Family size	4.96	5.15	4.78	4.96

Note: Figures in the parentheses indicate the percentages to the total family member.

Table 2. Food Consumption of Sampled Households. (Rs./household/annum)

Particulars	Marginal Farm (N=100)		Difference and % Change over Pre COVID	Small Farm (N=100)		Difference and % Change over Pre COVID	Landless Households (N=100)		Difference and % Change over Pre COVID	Overall (N=300)		Difference and % Change over Pre COVID
	Pre COVID	Post COVID		Pre COVID	Post COVID		Pre COVID	Post COVID		Pre COVID	Post COVID	
Cereals	16862.92 (23.09)	15708.11 (20.60)	-1154.81 (-6.85)	16749.83 (20.60)	15866.05 (18.18)	-883.78 (-5.28)	18806.38 (29.76)	18688.65 (27.84)	-117.73 (-0.63)	17473.04 (24.10)	16754.27 (21.79)	-718.77 (-4.11)
Pulses	10456.18 (14.32)	11174.38 (14.66)	718.2 (6.87)	11871.17 (14.60)	13229.34 (15.15)	1358.17 (11.44)	7930.55 (12.55)	8968.49 (13.36)	1037.94 (13.09)	10085.97 (13.91)	11124.07 (14.47)	1038.1 (10.29)
Vegetable	6622.60 (9.07)	7180.81 (9.42)	558.21 (8.43)	7565.95 (9.31)	8380.35 (9.60)	814.40 (10.76)	5263.88 (8.33)	5796.64 (8.64)	532.76 (10.12)	6484.14 (8.94)	7119.27 (9.26)	635.13 (9.79)
Milk and Its Products	4684.00 (6.41)	5160.75 (6.77)	476.75 (10.18)	5244.53 (6.45)	6262.84 (7.17)	1018.31 (19.42)	3842.04 (6.08)	4272.77 (6.36)	430.73 (11.21)	4590.19 (6.33)	5232.12 (6.81)	641.93 (13.98)
Edible Oils	6984.00 (9.57)	8442.54 (11.08)	1458.54 (20.88)	8180.12 (10.06)	9751.51 (11.17)	1571.39 (19.21)	5241.78 (8.30)	6813.66 (10.15)	1571.88 (29.99)	6801.97 (9.38)	8335.90 (10.84)	1533.93 (22.55)
Meat, Fish & Eggs	8009.87 (10.97)	7699.16 (10.10)	-310.71 (-3.88)	9228.81 (11.35)	8890.91 (10.18)	-337.90 (-3.66)	6613.01 (10.46)	6216.26 (9.26)	-396.75 (-5.99)	7950.56 (10.97)	7602.11 (9.89)	-348.45 (-4.38)
Fruits	4917.60 (6.73)	5603.02 (7.35)	685.42 (13.94)	6102.37 (7.50)	7224.28 (8.28)	1121.91 (18.38)	3889.48 (6.15)	4729.16 (7.04)	839.68 (21.59)	4969.82 (6.85)	5852.15 (7.61)	882.33 (17.75)
Spices & Salt	4961.47 (6.80)	5282.66 (6.93)	321.19 (6.47)	5581.93 (6.86)	6097.55 (6.99)	515.62 (9.24)	3917.83 (6.20)	4373.55 (6.52)	455.72 (11.63)	4820.41 (6.65)	5251.25 (6.83)	430.84 (8.94)
Sugar & Jiggery	3300.36 (4.52)	3898.99 (5.11)	598.63 (18.14)	3740.25 (4.60)	4547.66 (5.21)	807.41 (21.59)	2701.40 (4.27)	2973.84 (4.43)	272.44 (10.08)	3247.34 (4.48)	3806.83 (4.95)	559.49 (17.23)
Alcohol, Tobacco etc.	6217.30 (8.52)	6079.78 (7.98)	-137.52 (-2.21)	7045.64 (8.67)	7044.81 (8.07)	-0.01 (-0.83)	4985.85 (7.90)	4296.38 (6.40)	-689.47 (-13.83)	6082.93 (8.39)	5806.99 (7.55)	-275.94 (-4.54)
Total	73016.30 (100.00)	76230.20 (100.00)	3213.9 (4.40)	81310.60 (100.00)	87295.30 (100.00)	5984.70 (7.36)	63192.20 (100.00)	67129.40 (100.00)	3937.20 (6.23)	72506.37 (100.00)	76884.96 (100.00)	4378.59 (6.04)

Source: Field survey

Note: Pre COVID Period - March 2019 - March 2020 and Post COVID Period - April 2020 - April 2021.

Note: Figures in parentheses indicate percentage to total food Expenditure.

Table 3. Non-Food Consumption of sampled Households. (Rs./household/annum)

Particulars	Marginal Farm (N=100)		Difference and % Change over Pre COVID	Small Farm (N=100)		Difference and % Change over Pre COVID	Landless Households (N=100)		Difference and % Change over Pre COVID	Overall (N=300)		Difference and % Change over Pre COVID
	Pre COVID	Post COVID		Pre COVID	Post COVID		Pre COVID	Post COVID		Pre COVID	Post COVID	
Fuel/ Cycle/ Bike	18271.34 (41.19)	19887.51 (41.43)	1616.17 (8.84)	20721.18 (42.24)	23095.68 (43.27)	2374.50 (11.46)	16409.57 (41.01)	17892.28 (41.73)	1482.71 (9.04)	18467.40 (41.52)	20291.82 (42.20)	1824.42 (9.88)
Cosmetic & Soap	3968.28 (8.94)	3899.51 (8.12)	-68.77 (-1.73)	4538.38 (9.25)	4537.34 (8.50)	-1.04 (-0.02)	3670.04 (9.17)	3565.63 (8.32)	-104.41 (-2.84)	4058.90 (9.13)	4000.83 (8.32)	-58.07 (-1.43)
Clothing & Footwear	4023.23 (9.07)	4236.10 (8.82)	212.87 (5.29)	4652.50 (9.48)	4915.78 (9.21)	263.28 (5.66)	3609.17 (9.02)	3829.75 (8.93)	220.58 (6.11)	4094.97 (9.21)	4327.21 (9.00)	232.24 (5.67)
Medical & Health Care	5191.11 (11.70)	7318.20 (15.25)	2127.09 (40.97)	5145.07 (10.49)	6970.21 (13.06)	1825.14 (35.47)	5258.28 (13.14)	6822.20 (15.91)	1563.92 (29.74)	5198.15 (11.69)	7036.87 (14.63)	1838.72 (35.37)
Marriage & Social Ceremony	3575.77 (8.06)	3741.97 (7.80)	166.20 (4.65)	4125.80 (8.41)	4343.11 (8.14)	217.31 (5.27)	3276.18 (8.19)	3475.07 (8.10)	198.89 (6.07)	3659.57 (8.23)	3853.38 (8.01)	193.81 (5.29)
Education	4119.55 (9.29)	4150.95 (8.65)	31.40 (0.76)	4392.09 (8.96)	4320.20 (8.09)	-71.89 (-1.64)	3037.07 (7.59)	3041.31 (7.09)	4.24 (0.14)	3849.57 (8.65)	3837.49 (7.98)	-12.08 (-0.31)
Furniture	767.27 (1.73)	600.78 (1.25)	-166.49 (-21.70)	788.37 (1.61)	627.36 (1.18)	-161.01 (-20.42)	654.98 (1.64)	533.91 (1.25)	-121.07 (-18.48)	736.87 (1.65)	587.35 (1.22)	-149.52 (-20.29)
Tv & electricity	2256.03 (5.09)	2125.83 (4.43)	-130.20 (-5.77)	2413.31 (4.92)	2335.00 (4.37)	-78.31 (-3.24)	2120.71 (5.30)	2088.54 (4.87)	-32.17 (-1.52)	2263.35 (5.09)	2183.12 (4.54)	-80.23 (-3.54)
Ornamental	1691.72 (3.81)	1572.12 (3.27)	-119.60 (-7.07)	1694.21 (3.45)	1671.55 (3.13)	-22.66 (-1.34)	1510.98 (3.78)	1207.41 (2.82)	-303.57 (-20.09)	1632.30 (3.67)	1483.69 (3.09)	-148.61 (-9.10)
Utensil & plastic product	496.70 (1.12)	471.52 (0.98)	-25.18 (-5.07)	580.59 (1.18)	561.50 (1.05)	-19.09 (-3.29)	468.32 (1.17)	422.40 (0.98)	-45.92 (-9.80)	515.20 (1.16)	485.14 (1.01)	-30.06 (-5.83)
Total	44361.00 (100.00)	48004.49 (100.00)	3643.49 (8.21)	49051.50 (100.00)	53377.73 (100.00)	4326.23 (8.82)	40015.30 (100.00)	42878.50 (100.00)	2863.20 (7.15)	44475.90 (100.00)	48086.90 (100.00)	3611 (8.12)

Source: Field Survey

Note: Pre COVID Period - March 2019 - March 2020 and Post COVID Period - April 2020 - April 2021.

Note: Figures in parentheses indicate percentage to total non-food Expenditure.

REFERENCES

Brett, M., Christopher, B. M. and Hugh, M. (2022). The impact of changing consumer expenditure patterns at the onset of the COVID-19 pandemic on measures of consumer inflation, Monthly Labor Review, U.S. *Bureau of Labor Statistics, April 2022.*

Google Scholar

Gupta, S. and Singh, K. (2016). An Analysis of Changing Rural-Urban Consumption Pattern in India. Journal of Humanities and Social Sciences, **21** (9), pp. 56-71.

Google Scholar

Harris, J., Depenbusch, L., Pal, A.A., Nair, R.M. and Ramasamy, S. (2020). 'Food system disruption: initial livelihood and dietary effects of COVID-19 on vegetable producers in India', article *Food Secur*., **12**(4): 841-851.

Google Scholar

McKibbin, W.J. and Fernando, R. (2020). 'The global macroeconomic impacts of COVID-19: Seven scenarios'. abstract id=3547729.

Google Scholar

Research for Policy and Practice Report (2021). The Impact of Covid-19 on Livelihoods and Food Security, Institute of development studies.

Google Scholar

Tomar, A. (2021). Covid-19 infection inhibition by *Nimbu* (*Citrus limon* Linn.) infusion, decoction and tincture. *International Journal of Plant and Environment*, **7**(2):179-181.

Google Scholar

Valeria, S., Algeri, D. and Auriemma, V. (2020). The Psychological and Social Impact of Covid-19: New Perspectives of Well-Being Perspective Article Front. *Psychol.*, 02 October 2020.

Google Scholar