

CHAPTER – 6

STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES (SPSS) ANALYSIS

SPSS is a software application which analyses and edits data and it is considered to be the most comprehensive system for

data analysis and also a relevant and popular statistical package which can manipulate highly complex data and can analyse with simple instructions too. SPSS has the ability to take data from almost any type of file and then use the collected data to generate reports, descriptive statistics and complex statistical analysis.

Therefore, for the purpose of the study too this statistical tool(SPSS) has been used on the basis of which certain conclusions has been drawn in relation to the hypotheses.

Kamrup (Rural) district

Table1: Education qualification in accordance to three villages viz. Nadiapara(ST), Monpur(SC), and Sonapur(General) Villages

Educational Qualification Village	without access to formal education	upto class 5	upto class 10	HSLC	HS	above HS
Nadiapara	23.33%	6.66%	56.66%	3.33%	6.66%	3.33%
Monpur	23.33%	26.66%	50%	0%	0%	0%
Sonapur	7.50%	7.50%	52.5%	10%	17.50%	5%

Table2: Nutrition knowledge of women according to villages

Villages	Nutrition knowledge					
	Knowledge of proper diet for a woman (in %)		Knowledge of special food requirements of expecting mothers (in %)		Knowledge of nutrition fulfillment of cooked food items daily (in %)	
	Yes	No	Yes	No	Yes	No
Nadiapara	10	90	50	50	0	100
Monpur	3.33	96.66	56.66	43.33	0	100
Sonapur	15	85	62.5	37.5	10	90

Table3: Village wise percentage of women whether they eat last or not .

Village	Whether they eat last or not	
	Yes (in %)	No (in %)
Nadiapara	53.33	46.66
Monpur	56.66	43.33
Sonapur	60	40

Table4: Village wise distribution of women according to their consumption of sufficient food daily

Village	Whether get sufficient food	
	Yes (in %)	No (in %)
Nadiapara	43.33	56.66
Monpur	53.33	46.66
Sonapur	60	40

Table 5: Village wise distribution of women in accordance to their health problems

Village	Health Problems	
	Yes (in %)	No (in %)
Nadiapara	33.33	66.66
Monpur	66.66	63.33
Sonapur	80	20

Table 6: Monthly income of the households

Village	Monthly income of the households (in Rupees)			
	Less than 5,000	5,000-10,000	10,000-20,000	Above 20,000
Nadiapara	10%	43.33%	23.33%	23.33%
Monpur	23.33%	40%	26.66%	10%
Sonapur	10%	37.5%	20%	32.5%

Table 7: Mean expenditure on food with respect to monthly income in Kamrup (rural) district

Monthly income(in Rupees)	Mean expenditure on food (in Rupees)
Less than 5,000	2901
5,000- 10,000	5046
10,000-20,000	7368
Above 20,000	8621

Lakhimpur district

Table1: Education qualification in accordance to three villages viz. Salmora(ST), Gharmora(SC), and Dhenudhoria(General) Villages

Educational Qualification Village	without access to formal education	upto class 5	upto class 10	HSLC	HS	above HS
Salmora	40%	6.66%	26.66%	13.33%	10%	3.33%
Gharmora	0%	3.33%	40%	26.66%	13.33%	16.66%
Dhenudhoria	7.5%	2.5%	20%	32.5%	22.5%	15%

Table2: Nutrition knowledge of women according to villages

Villages	Nutrition knowledge					
	Knowledge of proper diet for a woman (in %)		Knowledge of special food requirements of expecting mothers (in %)		Knowledge of nutrition fulfillment of cooked food items daily (in %)	
	Yes	No	Yes	No	Yes	No
Salmora	10	90	13.33	86.66	6.66	93.33
Gharmora	10	90	30	70	10	90
Dhenudhoria	10	90	30	70	10	90

Table3: Village wise percentage of women whether they eat last or not .

Village	Whether they eat last or not	
	Yes (in %)	No (in %)
Salmora	26.66	73.33
Gharmora	86.66	13.33
Dhenudhoria	67.5	32.5

Table4: Village wise distribution of women according to their consumption of sufficient food daily

Village	Whether get sufficient food	
	Yes (in %)	No (in %)
Salmora	70	30
Gharmora	46.66	53.33
Dhenudhoria	50	50

Table 5: Village wise distribution of women in accordance to their health problems

Village	Health Problems	
	Yes (in %)	No (in %)
Salmora	33.33	66.66
Gharmora	53.33	46.66
Dhenudhoria	70	30

Table 6: Monthly income of the households

Village	Monthly income of the households (in Rupees)			
	Less than 5,000	5,000-10,000	10,000-20,000	Above 20,000
Salmora	13.33%	46.66%	33.33%	6.66%
Gharmora	3.33%	36.66%	26.66%	33.33%
Dhenudhoria	2.5%	42.5%	20%	35%

Table 7: Mean expenditure on food with respect to monthly income in Lakhimpur district

Monthly income(in Rupees)	Mean expenditure on food (in Rupees)
Less than 5,000	2901
5,000- 10,000	5046
10,000-20,000	7368
Above 20,000	8621

Cachar district

Table1: Education qualification in accordance to three villages viz. Kalabori(ST), Debipur(SC), and Shivpur(General) Villages

Educational Qualification Village	without access to formal education	upto class 5	upto class 10	HSLC	HS	above HS
Kalabori	20%	20%	13.33%	23.33%	6.66%	16.66%
Debipur	20%	40%	40%	0%	0%	0%
Shivpur	5%	20%	50%	10%	10%	5%

Table2: Nutrition knowledge of women according to villages

Villages	Nutrition knowledge					
	Knowledge of proper diet for a woman (in %)		Knowledge of special food requirements of expecting mothers (in %)		Knowledge of nutrition fulfillment of cooked food items daily (in %)	
	Yes	No	Yes	No	Yes	No
Kalabori	10	90	13.33	86.66	3.33	96.66
Debipur	0	100	6.66	93.33	0	100
Shivpur	5	95	17.5	82.5	2.5	97.5

Table3: Village wise percentage of women whether they eat last or not .

Village	Whether they eat last or not	
	Yes (in %)	No (in %)
Kalabori	36.66	63.33
Debipur	90	10
Shivpur	85	15

Table4: Village wise distribution of women according to their consumption of sufficient food daily

Village	Whether get sufficient food	
	Yes (in %)	No (in %)
Kalabori	100	0
Debipur	40	60
Shivpur	75	25

Table 5: Village wise distribution of women in accordance to their health problems

Village	Health Problems	
	Yes (in %)	No (in %)
Kalabori	40	60
Debipur	30	70
Shivpur	50	50

Table 6: Monthly income of the households

Village	Monthly income of the households (in Rupees)			
	Less than 5,000	5,000- 10,000	10,000-20,000	Above 20,000
Kalabori	0%	16.66%	40%	43.33%
Debipur	53.33%	36.66%	10%	0%
Shivpur	20%	45%	22.5%	12.5%

Table 7: Mean expenditure on food with respect to monthly income in Cachar district

Monthly income(in Rupees)	Mean expenditure on food (in Rupees)
Less than 5,000	2901
5,000-10,000	5046
10,000-20,000	7368
Above 20,000	8621

Hypothesis:

1. Economic factor is major determinant of food security status of women

Food security status of women in the test is measured by the expenditure on food in the households. Getting sufficient amount of food to eat daily by women is considered to be an indicator of food security status of women and monthly food expenditure is considered to be the economic factor. A cross tabulation is also shown between monthly income and monthly food expenditure of households.

The null hypothesis to be tested here is

H_0 : Monthly food expenditure of the households and food security status of women are independent of each other.

Against the alternative that

H_1 : Food security status of women depends on monthly food expenditure of the households.

Expenditure on Food(in Rs.) Monthly Income (in Rs.)	Less than 2,000	2,000-3,000	3,000-5,000	Above 5,000
Less than 5,000	30	0	0	0
5,000- 10,000	0	60	10	0
10,000-20,000	0	0	50	40
Above 20,000	0	0	60	50

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.749	147	.058
Likelihood Ratio	227.666	147	.000
N of Valid Cases	300		

Since the tabulated value of $p(=0.05)$ is less than the calculated value of $p(=.058)$, hence we can accept the null hypothesis and reject the alternative one at the level of significance.

Conclusion: The chi-square test result has come not significant and hence we can conclude that the food security status of women is independent of expenditure on food in the households which indicates economic factor is not a major determinant of food security status of women.

2. Gender factor and lack of nutritional knowledge of women are the main sources of food insecurity of women in the rural households.

The gender biasness here will be perceived by observing food consumption of the men and women. Whether men are given privilege to have their meal prior to women or there is no gender biasness is to be considered here as gender factor. Lack of nutritional knowledge is categorized into three. They are

- i. Knowledge of proper diet for a woman.
- ii. Knowledge of special food requirements of expecting mothers
- iii. Knowledge of nutrition fulfillment of cooked food items daily

The null hypothesis to be tested here is

H_0 : Knowledge of proper diet for women and timing of food consumption by women is independent of each other

Against the alternative that

H_1 : Timing of food consumption by women depends on knowledge of proper diet of women

Crosstab				
Count				
		Do you know about the proper diet for a woman		Total
		Yes	no	
Do you eat last in your family	yes	19	170	189
	no	9	102	111
Total		28	272	300

Chi-Square Tests	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.313	1	.011
Continuity Correction	.125	1	.724
Likelihood Ratio	.318	1	.573
Fisher's Exact Test			
N of Valid Cases	300		

Since the tabulated value of $p(=0.05)$ is greater than the calculated value of $p(=.011)$ hence it permits to reject the null hypothesis at 5% level of significance.

Conclusion: The above finding is sufficient enough to reject the null hypothesis and simultaneously accept the alternative one which draws the conclusion that the women since don't have proper knowledge about proper diet for a woman and also about the timing of having meals, therefore, they prefer to have their food after serving other members of the family. At this point gender biasness arises and from the test it has become transparent that most of the women prefer to have meal at last. In this case males are given privilege to consume their food prior to the women of the households.

The null hypothesis to be tested here is

H_0 : Food consuming time of women and knowledge of special food requirements of the expecting mothers are independent of each other

Against the alternative that

H₁: Timing of food consumption by women and knowledge of special food requirements of the expecting mothers are dependent on each other

Crosstab				
Count				
		Do you know about the special food requirements of the expecting mothers		Total
		yes	no	
Do you eat last in your family	yes	59	130	189
	no	37	74	111
Total		96	204	300

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.144 ^a	1	.021
Continuity Correction	.063	1	.802
Likelihood Ratio	.144	1	.705
Fisher's Exact Test			
N of Valid Cases	300		

Since the tabulated value of $p(=0.05)$ is greater than the calculated value of $p(=.021)$ hence it allows to reject the null hypothesis at 5% level of significance.

Conclusion: The above result clearly shows that null hypothesis is significant which supports to adopt the alternative one. This crystalline that the expecting mothers are also not bestowed the benefit of having their food on time.

The null hypothesis to be tested here is

H_0 : Nutritional knowledge of food cooked by the women is independent of food consuming time of the women

Against the alternative that

H_1 : Nutritional knowledge of women of food cooked by the women and food consuming time of the women are dependent on each other

Crosstab				
Count		When you cook do you have an idea of the fact that whatever you are cooking will fulfill the required nutrition		Total
		Yes	no	
Do you eat last in your family	yes	10	179	189
	no	9	102	111
Total		19	281	300

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.936	1	.033
Continuity Correction ^a	.521	1	.470
Likelihood Ratio	.910	1	.340
Fisher's Exact Test			
N of Valid Cases ^b	300		

Since the tabulated value of $p (=0.05)$ is greater than the calculated value of $p(=.033)$ hence it allows to reject the null hypothesis at 5% level of significance.

Conclusion: The above result provides sufficient evidence to reject the null hypothesis and simultaneously accept the alternative one.

The null hypothesis to be tested here is

H_0 : Women who eat last get sufficient amount of food to eat daily

Against the alternative that

H_1 : Women who eat last do not get sufficient amount of food to eat

Crosstabulation				
Count		Do you always get the sufficient amount of food to eat		
		Yes	No	Total
Do you eat last in your family	Yes	98	91	189
Total	No	93	18	111
		191	109	300

Chi-square test					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	30.825 ^a	1	.000	.000	.000
Continuity Correction ^b	29.460	1	.000		
Likelihood Ratio	33.038	1	.000		
Fisher's Exact Test	300				
N of Valid Cases ^b					

Since the tabulated value of p (= 0.05) is greater than the calculated value of p (= .000), hence it allows to reject the null hypothesis at 5% level of significance.

Conclusion: The above result provides sufficient evidence to reject the null hypothesis and accept the alternative one.