SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE (AUTONOMOUS)UJIRE-574240

(RE-ACCREDITED 'A' GRADE WITH 3.61 CGPA BY NAAC)

A STUDENT RESEARCH PROJECT ON

"IMPACT OF FOOD PATTERN OF STUDENTS BEFORE & AFTER COVID LOCKDOWN"

Submitted by

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Submitted to

Department of Statistics

SDM College (Autonomous), Ujire

Under the Guidance of

Prof. Shanthi Prakash

HOD, Department of Statistics

SDM College (Autonomous), Ujire 2020-2021

SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE (AUTONOMOUS)UJIRE-574240

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CERTIFICATE

This is to certify that the following 3^{rd} B.sc 'A' students have completed the student research project titled "**IMPACT OF FOOD PATTERN OF STUDENTS BEFORE & AFTER COVID LOCKDOWN**" in statistics as a co-curricular activity under the guidance of Prof. Shanthi Prakash, HOD, Dept of Statistics, SDM College Ujire during the year 2020-21.

TEAM MEMBERS

NAME	CLASS	ROLL NO
Ashitha Shetty	3^{rd}BSC 'A'	180267
Ashwin M Nayak	3^{rd} BSC 'A'	180268
Dayana	3^{rd} BSC 'A'	180269

Prof. Shanthi Prakash, HOD

Dept. Of Statistics.

SDM College Ujire

DECLERATION

We hereby declared that this student project entitled "**IMPACT OF FOOD PATTERN OF STUDENTS BEFORE & AFTER COVID LOCKDOWN**" has been prepared by us during the year 2020-21 under the guidance of Prof. Shanthi Prakash, HOD, Dept. of Statistics, SDM College, Ujire.

We also declare that this by us is the result of our own efforts.

Date:

Place:

TEAM MEMBERS

NAME	CLASS	ROLL NO	SIGNATURE
Ashitha Shetty	3^{rd} BSC 'A'	180267	
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ACKNOWLEDGEMENT

Acknowledgement is a valuable feeling expressed to valuable people.

We are extremely thankful to our beloved Principal Prof. Satheeshchandra S for giving us an opportunity to conduct a student research project in the college. We solicit our heartily thanks to the “Student research committee” for making us to work for the project.

We extend our sincere thanks to our guide Prof. Shanthi Prakash, HOD, Dept. of Statistics for her valuable guidance and constant support which has helped us to complete the project successfully.

Our special thanks to our parents ‘who constant support and guidance has helped us to rise to this level. Finally, we thank all our friends for this constant support.

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PREAMBLE

To promote the statistical interest at undergraduate level, SDM College, Ujire has introduced "Student research Project" for all degree students. A team of 3 students of 3rd B.sc has chosen to do research on Statistics. The Topic chosen is "**IMPACT OF FOOD PATTERN OF STUDENTS BEFORE & AFTER COVID LOCKDOWN"**.

TEAM MEMBERS

Ashitha Shetty
Ashwin M Nayak
Dayana

INTRODUCTION

Since the beginning of the COVID-19 pandemic, access to fresh food has been restricted and people are spending more time inside and have limited their physical activity. However, more time at home may have resulted in some positive habits as well as negative. The aim of this research is to assess dietary changes during the lockdown like a slight increased physical activity especially for bodyweight.

The study comprised of a structured questionnaire packet that inquired demographic information (age, gender), anthropometric data (reported weight), dietary habits information (adherence to the diet, daily intake of certain foods, food frequency, number of intakes of outside food before and after lockdown).

OBJECTIVES

1) The main objective is to test whether students' food pattern really changed because of covid-19.
2) To test whether Gender and Food Preference are independent or dependent.
3) To study whether the proportion of Students eating is more than 60% during lockdown.
4) To compare the outside food consumption before lockdown and after Unlock.
5) To know the best immunity booster during COVID-19 pandemic by graphical method.
6) To study whether the proportion of weight gained by Students is more than 60%.
7) To test whether Gender and opinion that COVID-19 taught us to avoid outside food are independent or dependent.
8) To test whether Gender and Food Habits are independent or dependent.

METHODOLOGY

A sample of 120 Undergraduate students from SDM College was chosen using simple random sampling without replacement method.

COLLECTION OF DATA

Opinion of 120 Undergraduate students selected from SDM Degree college of different gender collected through the google forms.

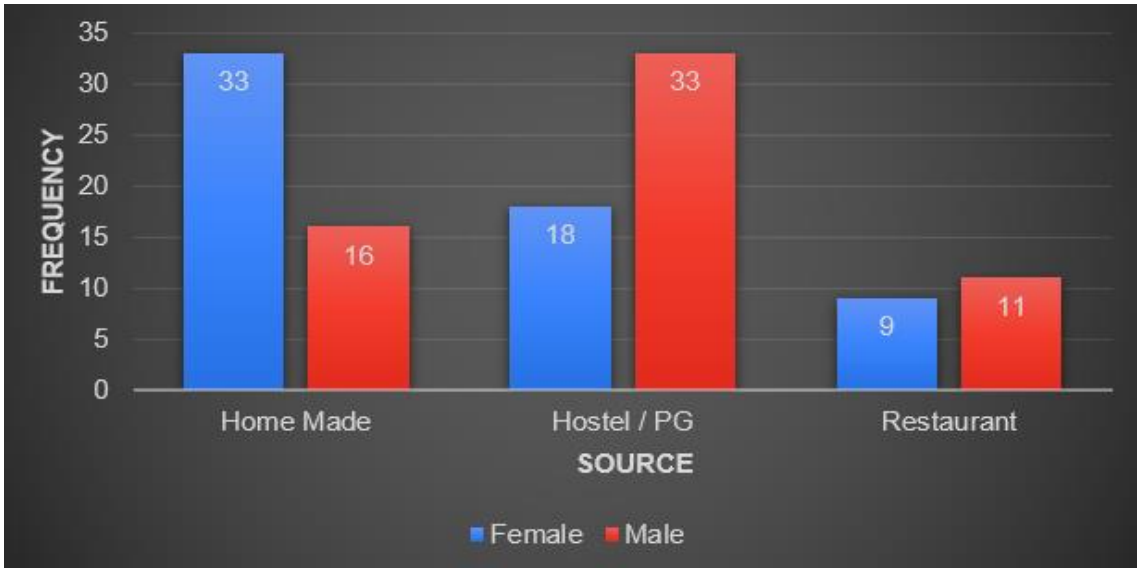
ANALYSIS OF DATA

1. Main source of your daily food during college life

Frequency table count of daily food based on Gender is given by:

Opinion/Gender	Female	Male	Grand Total
Home Made	33	16	49
Hostel / PG	18	33	51
Restaurant	9	11	20
Grand Total	**60**	**60**	**120**

Bar diagram showing count of daily food based on Gender



<u>Conclusion:</u> Females prefer Homemade food more than males.

2. Which Food do you prefer the most?

Our objective is to test whether Gender and Food Preference are independent or dependent

Here, the hypothesis is given by,

H_0: Gender and Food preference are independent

v/s

H_1: Gender and Food preference are dependent

Contingency table of Gender and food preference:

- table(data$Gender,data$Food_prefer)

Opinion	Gender	
	Female	Male
Home Made	43	34
Outside	17	26

- chisq.test(data$Gender,data$Food_prefer)

Test statistic	2.3195
Degrees of freedom	1
p-value	0.1278

Here p-value >0.05 therefore we accept h_0

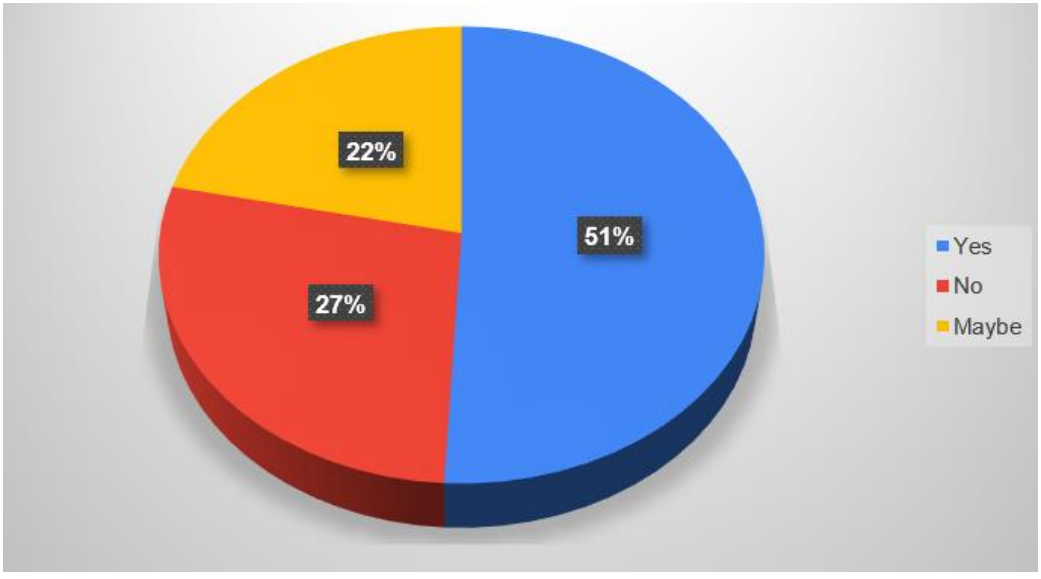
<u>Conclusion:</u> Therefore, Gender and Food preference are independent.

3. Would you say that you are eating more during lockdown?

Frequency table count of Opinions based on UG Program is given by:

Opinion/Program	BBA	BCA	BCOM	BSC	Grand Total
Yes	15	16	18	12	61
No	10	11	6	6	33
Maybe	5	3	6	12	26
Grand Total	**30**	**30**	**30**	**30**	**120**

Pie chart showing percentage of opinion on eating more during lockdown



Our objective is to study whether the proportion of Students eating is more than 60% during lockdown

Here, the hypothesis is given by,

H_0: Students eating more during lockdown is equal to 60%

v/s

H_1: Students eating more during lockdown is more than 60%

Contingency table of Gender and Opinion:

- table(data$Gender,data$Weight_gained)

Opinion	total
Yes	61
No	33
Maybe	26

- prop.test(61,120,p=0.6,alternative = "greater")

Test statistic	3.8281
Degrees of freedom	1
p-value	0.9748

95 percent confidence interval:

0.4298327 1.0000000

sample estimates:

p

0.5083333

here p-value > 0.05 therefore accept H_0

<u>Conclusion:</u> Therefore, Students who are eating more during lockdown is equal to 60%.

4. Have you gained weight during the lockdown?

Our objective is to study whether the proportion of weight gained by Students during lockdown is more than 60% or not

Here, the hypothesis is given by,

H_0: weight gained by Students during lockdown is equal 60%

v/s

H_1: weight gained by Students during lockdown is more than 60%

Contingency table of Gender and opinion on gained weight during lockdown:

- table(data$Gender,data$Weight_gained)

Opinion	Gender	
	Female	Male
Yes	42	41
No	18	20

- prop.test(82,120,p=0.6,alternative = "greater")

Test statistic	3.1337
Degrees of freedom	1
p-value	0.03835

95 percent confidence interval:

0.6057894 1.0000000

sample estimates:

p

0.6833333

here p-value < 0.05 therefore, we reject H_0 and accept H_1

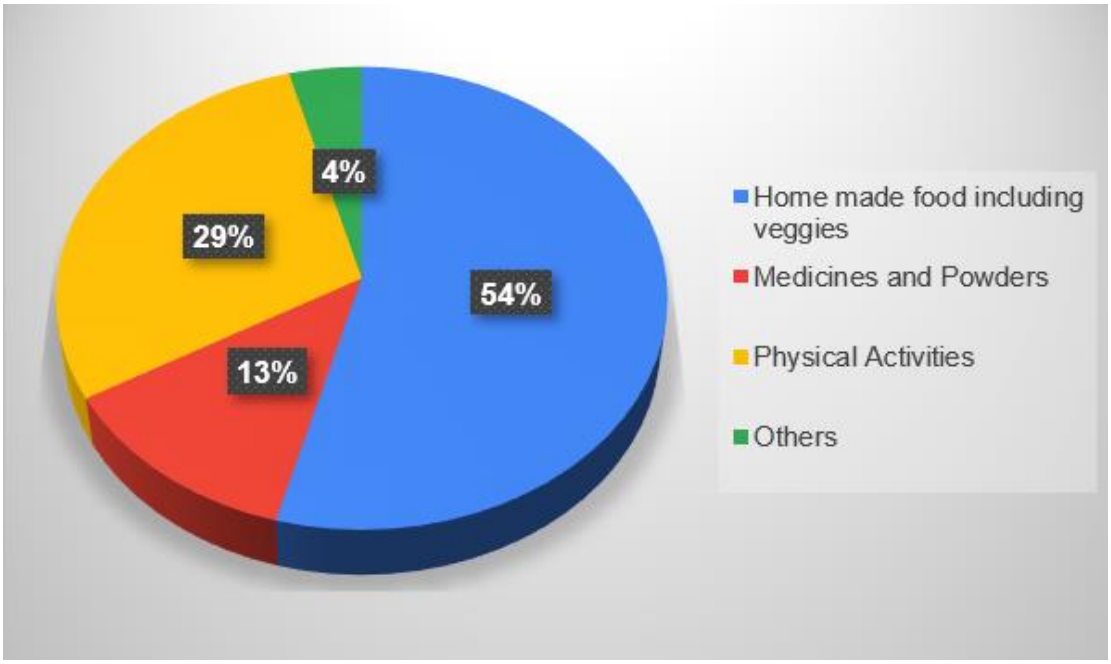
<u>Conclusion:</u> Therefore, Students who gained their weight during lockdown are more than 60%.

5. According to you, which is the best immunity booster during COVID-19

Frequency table count of best immunity booster during COVID-19 based on Gender is given by:

Opinions/Gender	Female	Male	Grand Total
Homemade food including veggies	37	28	65
Medicines and Powders	7	7	15
Physical Activities	14	21	35
Others	2	4	6
Grand Total	**60**	**60**	**120**

Pie chart showing percentage of opinion on best immunity booster during COVID-19



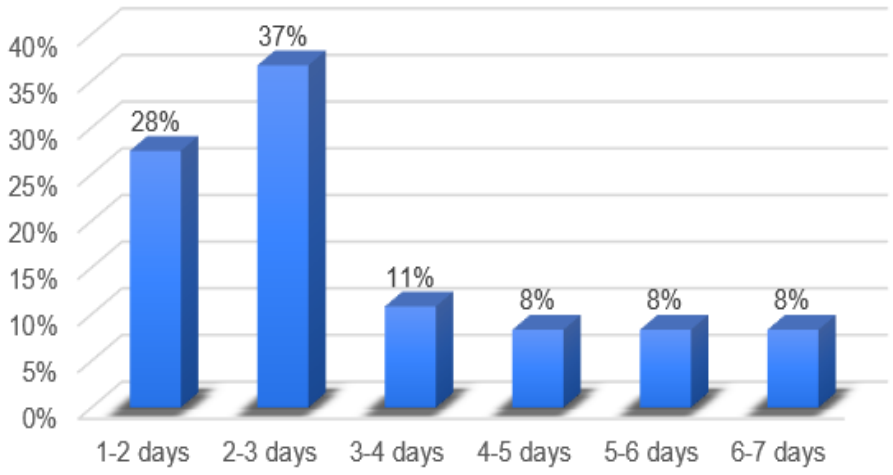
<u>Conclusion:</u> Majority Consider Home-made food as the best immunity booster during COVID-19.

6. **How many days in a week you are taking outside food before COVID-19 Pandemic?**

Frequency table count of outside food consumption before COVID-19 Pandemic based on Gender is given by:

Days/Gender	Female	Male	Grand Total
1-2 days	19	14	33
2-3 days	22	22	44
3-4 days	5	8	13
4-5 days	4	6	10
5-6 days	5	5	10
6-7 days	5	5	10
Grand Total	**60**	**60**	**120**

Bar diagram showing percentage of outside food consumption before COVID-19 Pandemic based on Gender



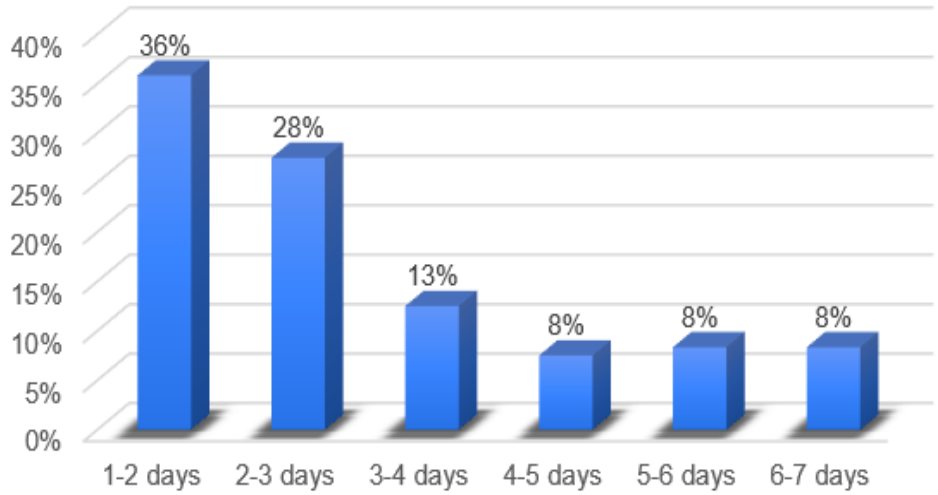
<u>Conclusion:</u> From the Bar diagram we observe that before covid-19 pandemic most students consume outside food twice or thrice a week.

7. How many days in a week you are having outside food after Unlock time?

Frequency table count of outside food consumption after unlock based on Gender is given by:

Days/Gender	Female	Male	Grand Total
1-2 days	29	14	43
2-3 days	16	17	33
3-4 days	4	11	15
4-5 days	1	8	9
5-6 days	5	5	10
6-7 days	5	5	10
Grand Total	**60**	**60**	**120**

Bar diagram showing percentage of outside food consumption after unlock based on Gender



<u>Conclusion:</u> From the Bar diagram we observe that after unlock most of the students consume outside food once or twice a week.

8. COVID-19 taught us to avoid outside food

Our objective is to test whether Gender and opinion that COVID-19 taught us to avoid outside food are independent or dependent

Here, the hypothesis is given by,

H_0: Gender and opinion that COVID-19 taught us to avoid outside food are independent

v/s

H_1: Gender and opinion that COVID-19 taught us to avoid outside food are dependent

Contingency table of Gender and Opinion:

- table(data$Gender,data$taught_us)

Opinion	Gender	
	Female	Male
Agree	16	13
Disagree	7	11
Neutral	30	15
Strongly agree	5	9
Strongly disagree	2	12

- chisq.test(data$Gender,data$taught_us)

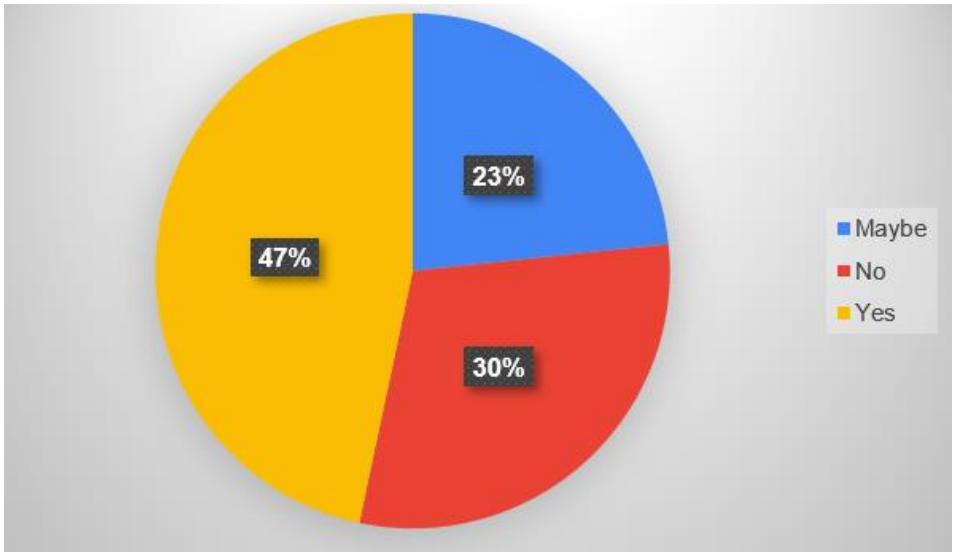
Test statistic	14.485
Degrees of freedom	4
p-value	0.005898

Here p-value < 0.05 therefore we reject H_0 and accept H_1

<u>Conclusion:</u> Therefore, Gender and opinion that COVID-19 taught us to avoid outside food are dependent.

9. Does COVID-19 really changed your food habits?

Pie chart showing percentage of opinion on Change in Food Habits



Our objective is to test whether Gender and opinion that COVID-19 changed food habits are independent or dependent

Here, the hypothesis is given by,

H_0: Gender and opinion are independent v/s

H_1: Gender and opinion are dependent

Contingency table of Gender and Opinion:

- table(data$Gender,data$taught_us)

Opinion	Gender	
	Female	**Male**
Yes	24	32
No	17	19
Maybe	19	9

- chisq.test(data$Gender,data$taught_us)

Test statistic	4.8254
Degrees of freedom	2
p-value	0.08957

Here p-value > 0.05 therefore we accept H_0

<u>Conclusion:</u> Therefore, Gender and opinion that COVID-19 changed food habits are Independent.

APPENDIX

FORMAT OF QUESTIONNAIRE

Shri Dharmasthala Manjunatheshwara College (AUTONOMOUS), Ujire-574240.

IMPACT OF FOOD PATTERN OF STUDENTS BEFORE & AFTER COVID LOCKDOWN

Name _____

Age _____

Gender a. Male b. Female

UG Program a. BSC b. BCOM c. BCA d. BBA

Weight (in Kg) _____

1. Main source of your Daily Food During College Life

a. Home Made
b. Hostel / PG
c. Restaurant

2. Which Food do you prefer the most

a. Outside
b. Home Made

3. Would you say that you are eating more during lockdown

a. Yes
b. No
c. May be

4. Have you gained weight during the lockdown

a. Yes
b. No

5. According to you, which is the best immunity booster during COVID-19

a. Medicines and Powders
b. Homemade food including veggies
c. Physical Activities
d. Other:

_____

6. How many days in a week you are taking outside food before COVID-19 Pandemic

a. 1-2 days
b. 2-3 days
c. 3-4 days
d. 4-5 days
e. 5-6 days
f. 6-7 days

7. How many days in a week you are taking outside food after Unlock time

a. 1-2 days
b. 2-3 days
c. 3-4 days
d. 4-5 days
e. 5-6 days
f. 6-7 days

8. COVID-19 taught us to avoid outside food

a. Strongly Disagree
b. Disagree
c. Neutral
d. Agree
e. Strongly Agree

9. Does COVID-19 really changed your food habits

a. Yes
b. No
c. May be

MAJOR FINDINGS

- By this survey it is found that Gender and Food preference are independent.
- Females prefer Homemade food more than males.
- Students who gained their weight during lockdown are more than 60%.
- Students who are eating more during lockdown is equal to 60%.
- Gender and opinion that COVID-19 taught us to avoid outside food are dependent.
- By comparing bar diagram, we can conclude that most students after unlock prefer outside food once or twice a week.
- Majority Consider Home-made food as the best immunity booster during COVID-19.
- Gender and opinion that COVID-19 changed food habits are Independent.

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