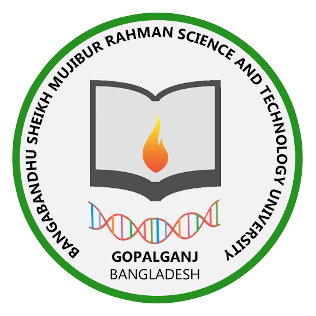
BANGABANDHU SEIKH MUJIBUR RAHAMAN SCIENCE & TECHNOLOGY UNIVERSITY, GOPALGANJ-8100 

**PROJECT ON**

|  |
| --- |
| **“Impact of Corona Pandemic on Small Traders of BSMRSTU Campus & Surrounded Area”** |

|  |  |
| --- | --- |
| **submitted by** | **Submitted to** |
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# Acnowledgement

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# ABSTRACT

The novel coronavirus disease (COVID-19) began spreading in November 2019, in Wuhan, China. Following this, the World Health Organization (WHO) announced COVID-19 as a global pandemic on March 11th, 2020.

The data were collected from BSMRSTU campus using by purposive sampling. The obtained data were analyzed by descriptive statistics, chisquare test, ANOVAand two mean tests.

The study observed that the types of micro business are tea stall, Photostat, stationery and hotel which has 37.3%, 22.7%, 20% and 18.7% respectively. The factor time investment in business and family member are associated with during corona monthly income at 5% level of significance. Compare the mean of present monthly income with during corona monthly income using by two mean tests, which is a significant difference between the outcomes.

Through this project, I have tried to give an idea about Covid-19 situation of vendors on BSMRSTU campus and surrounded area. This project showed and compared vendor’s present monthly income and during corona monthly income situation by different charts, tables, conducting different statistical tests to prove different hypotheses which help us to make a decision on the present condition.

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# Chapter 1: General Discussion

## 1.1 Introduction:

The world is again in crisis. As the coronavirus SARS-CoV-2) and its accompanying disease (COVID-19) have spread globally since December 2019, hundreds of thousands have died, millions more have been infected with the virus, and entire economies have come to a screeching halt amid government-imposed lockdowns. The COVID-19 pandemic is, first and foremost, a global public health crisis, yet its impacts extend far beyond the realm of epidemiology alone. We are also witnessing a political, economic, and social crisis the likes of which the world has not seen since the 1918 influenza pandemic and the Great Depression.

Although the precise origins of the SARS-CoV-2 virus are currently under investigation (Science, 2020), it is well-established that global pandemics are not simply ‘natural’ disasters. Rather, they are directly linked to the emergence of new pathogens in the wake of industrialized agriculture, livestock production deforestation, and capital’s relentless exploitation of nature (Harvey, 2020; Moseley, 2020; Wallace, 2020). In the case of SARS-CV- 2, the first document ed symptoms of a novel corona virus were recorded on December 8, 2019 in Wuhan, China (WHO, 2020a). By December 31, a cluster of 41 cases had been identified and linked to a seafood market which was closed on January 1, 2020 (WHO, 2020a). The Chinese authorities isolated the new virus on January 7, later named SARS-CoV-2 (Severe Acute Respiratory Syndrome Corona virus 2), and confirmed that it spread through human-to-human contact with infection resulting in the Corona virus Disease 2019 (COVID-19). While most of the cases produced mild flu-like symptoms, it was clear the disease could progress to acute respiratory distress, multiorgan failure, and death.

By January 22, there were 571 confirmed cases and 17 deaths in China, with confirmed cases reported in Hong Kong, Japan, South Korea, Taiwan, and the United States (Kuo, 2020). On January 23, China imposed lockdown measures on the 57 million People living in Hubei province in an effort to limit further spread (BBC, 2020a). The first case of COVID-19 in Europe was initially recorded on January 24, although subsequent evidence suggests it had already spread to at least one European country (France) by the end of December2019 (BBC, 2020b). The World Health Organization (WHO) declared a global health emergency on January 30 and a global pandemic on March 11.

By early-to mid-March, dozens of countries had moved from a containment phase of response designed to prevent the virus from spreading (using measures such as increased hygiene as well as testing, tracing, and isolating) to a delay phase designed to reduce the peak of impact and limit overwhelming health care systems (using containment measures plus physical distancing, self-isolation, and quarantining; limiting travel and social gatherings; closing businesses; and enforcing lockdowns). As of July 2020, there were over 10 million confirmed cases and more than 500,000 deaths globally, spread across at least 216 countries, territories, and other areas (WHO, 2020b). The spread of the COVID-19 pandemic, the partial lockdown, the disease intensity, weak governance in the healthcare system, insufficient medical facilities, unawareness, and the sharing of misinformation in the mass media has led to people experiencing fear and anxiety. The present study intended to conduct a perception-based analysis to get an idea of people's psychosocial and socioeconomic crisis, and the possible environmental crisis, amidst the COVID-19 pandemic in Bangladesh.

Through quick administrative action and raising awareness for individuals on social-distancing, stringent steps were taken to manage the spread of the disease by canceling thousands of locations that involved social gathering including offices, classrooms, reception centers, clubs, transport services, and travel restrictions, leaving many countries in complete lockdown.

This is not a new work but as a new researcher I am try to interpret the analysis in different way and the theme of my project is “A comparative study on impact of corona virus in vendors of BSMRSTU campus and surrounded area”

## 1.2 Literature review:

The spread of the COVID-19 pandemic, the partial lockdown, the disease intensity, weak governance in the healthcare system, insufficient medical facilities, unawareness, and the sharing of misinformation in the mass media has led to people experiencing fear and anxiety. The present study intended to conduct a perception-based analysis to get an idea of people's psychosocial and socio-economic crisis, and the possible environmental crisis, amidst the COVID-19 pandemic in Bangladesh.

The government of Bangladesh imposed statewide general holidays and lockdown from the middle of March 2020, which had a negative impact on the livelihoods of the general public, especially on lower income people who usually have a hand to mouth existence. This study found that 94.1% of the respondents’ livelihood was affected by the COVID-19 outbreak. To 83% of respondents, the level of livelihood impact was high to extreme. This level of impact indicates that the lower income people were getting more marginalized than before and were becoming a member of hardcore poor due to COVID19. (Paul et al., 2021).

In rural areas, poor people are at risk of losing their prime income source as they cannot sell their agricultural products or are incapable of storing their produce or have difficulties in the process of producing new products. On the other hand, in the urban context, poor people are completely dependent on incomes from labor or self-employment. The shocks and stresses of the COVID-19 crisis worldwide are leading to devastating socioeconomic disruptions of people and both lives and livelihoods are at risk due to this pandemic. (Livelihood Centre 2020).

Household Income Expenditure Survey says that 8.4 million student’s families live below the poverty level. Their income has dropped by 25% in the last three months. Besides, 24.50% of students from low-income families need proper support. During the three months of the COVID-19 pandemic, the ratio increased by 45%. (Uddin M 2020)

The COVID-19 pandemic is an unforeseen global phenomenon, which has thrown the economy into chaos and effectively put commerce at a standstill. It has affected not only livelihoods but also every economic activate especially business enterprises including small-medium enterprises (SMEs) (Sansa, 2020; Ruiz Estrada et al., 2020).

COVID-19 created its impact on the economy of Bangladesh mainly through two channels: (a) slowdown in global economic activities affecting global trade and international financial flows and (b) supply disruptions in the local economy and depressed domestic demand (Rahman et al., 2020).

## 1.3 Importance of Rationale:

The COVID-19 investigations that have already been done have outlined the many aspects of the pandemic's effects. They do, however, have certain drawbacks. First, previous research has either concentrated on the COVID19's impact on government policy or the macroeconomic and financial problems the COVID-19 has generated. They have, however, been unable to find a balance between the two. The health crises, as well as macroeconomic and financial problems, should all be addressed concurrently by policy. Second, the theoretical underpinnings of health crises and their frequency of recurrence have not been addressed in any current studies. Finally, despite the fact that the COVID-19's macroeconomic impacts may show the effects of a health crisis, past research has been unable to identify the explanatory factors for both the health crisis and the economic transmission channel across different economies. Day laborers play a significant role in our society; thus, it is crucial that we understand their socioeconomic status by examining their education, food, access to healthcare, and income. They continue to play a vital part in our society.

## 1.4 Objective of the study:

The main objective of this study is to evaluate the impact of COVID-19 on small traders on BSMRSTU campus and surrounded area. The specific objectives of the project are;

1. To assess the socio-economic scenery of small business owners on BSMRSTU campus and surrounded area during Corona pandemic.
2. To analyze the difference between socio-economic condition of the small business owners before and during pandemic.

## 1.5 Limitation of the study:

1. There can be various restrictions when performing a research project. My research is not unique in this regard. These restrictions include:
2. Vendors are working at the time and are busy. Many vendors have declined to assist me in leaving their jobs as a result. This forced me to confine my research to 75 responders.
3. I limited my questionnaire to 38 items for the purpose of performing my research.
4. I could not increase my sample because of time and money constant.
5. The research respondent had shown the tendency of hiding correct answer of some aspect such as family income.
6. Non sampling error may arise for this.
7. Lack of knowledge.
8. Lack of awareness about the research of the respondent.

# Chapter 2: Methodology

## 2.1 Introduction:

Research in social sciences often has a methodology component. An intelligent research process is essential for success. Here, we used qualitative analytic techniques including interviewing and observation. Since this study primarily collected qualitative data through questionnaires and surveys, probability sampling was utilized to determine the sampling unit. As a result of the randomness of the samples, random sampling was chosen. The representativeness of the sample in a larger population can be determined before the target sample is taken. The respondents' ages ranged from 25 to 55+, and a total of 75 respondents were chosen for the sample from the study field's entire target demographics. With the aid of random sampling, the sample was selected.

## 2.2 Sample Design and Sampling Unit

Sample from the target population and the estimation technique formula for**:** Sample design refers to the plans and methods to be followed in selecting computing the sample statistics. These statistics are the estimates used to infer the population parameters. I have used purposive sampling techniques; 75 respondents were selected as sample.

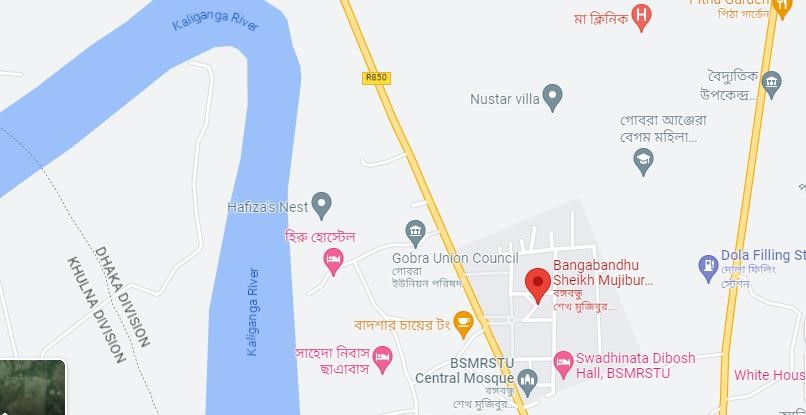
### 2.2.1 Sampling unit:

Elementary units or group of such units which besides being clearly defined, identifiable and observable, are convenient for purpose of sampling are called sampling units. Our target population is the socio-economic scenery of small business owners on BSMRSTU campus and surrounded area during Corona pandemic. We have mainly selected people from BSMRSTU campus and surrounded area.

## 

### 2**.3. Study area and time:**

75 data was collected from Bangabandhu Sheikh Mujibur Rahman Science & Technology University campus & surrounded area on February to April during 2023.



## 2.4 Sources and types of data:

The sources of data can be two types such as primary and secondary source. There are two types of data they are primary data and secondary data. When the data are collected from specific person or any direct field are called primary data. on the other hand, the data which can be collected from any documents, record, organization are called secondary data.

In this study we collect primary data.

## 2.5. Data Collection procedure:

We initially considered 75 samples for our study. Purposive sampling technique was used for selecting sample. There are certain numbers of vendors in my target area. We collect data from different shop in BSMRSTU campus and surrounded area by several groups and we accumulate that data.

### 2.5.1. Data Collection:

An appropriate data collection method is a part and parcel of a successful study. There are different kinds of data collection methods such as

* + 1. Observation method
    2. Interview method
    3. Questionnaire method
    4. Schedule method among those method. we used questionnaire method for our study

## 2.6. Questionnaire preparation:

I have created a series of questionnaires in order to achieve my goal. For the BSMRSTU it has been prepared. Given that the majority of the respondents lacked formal education, I was extremely cautious when creating the questionnaire. There are two different types of questions, including a) Open ended and

1. Close ended questionnaire: Constitutes with multiple choice question, short type question and objective type question.
2. Avoid long and confusing question and formulate short and simple question.
3. Start with easy question then slowly put the difficult ones.

## 2.7 Data processing:

For conducting research and writing a report, data processing is essential. The three steps of the data processing process are editing, coding, and tabulation. With the aid of a personal computer, the entire procedure is carried out.

## 

## 2.8 Data Editing:

Following the day-by-day completion of data collection, I carefully reviewed each questionnaire schedule. To correct any inconsistencies in the data that may have existed and to reduce non-sampling error in the study, the data were rigorously edited. I edit data to ensure that it is comprehensive, reliable, accurate & homogeneous.

### 2.8.1 Data Coding:

A thorough code plan was used to code the captured data in code sheets. I make every effort to reduce any potential bias brought on by open questions code.

### 2.8.2 Computerization:

Data that had been edited and coded was then computer processed. I initially entire each piece of data into the worksheet. The qualitative data were translated using appropriate numeric values, whilst the quantitative data are typed as it were. A computer program called SPSS (Statistical package for social science) IBM SPSS statistics 27 version was used for the complete data analysis. In addition, the MS-WORD and MS-EXCEL package is utilized.

## 2.9 Variable:

Variable is a characteristic which varies over time, place and individual.

In statistics, a variable has two defining characteristics:

* A variable is an attribute that describes a person, place, thing, or idea.
* The value of the variable can "vary" from one entity to another.

**Variables can be classified as:**

1) qualitative (categorical)

2) quantitative (numeric).

**Qualitative**

The value of a qualitative variable is a name or a label. The color of a ball (e.g., red, green, blue) or the breed of a dog (e.g., collie, shepherd, terrier) would be examples of qualitative or categorical variables.

**Quantitative**

The value of a quantitative variable is a number. For example, when we speak of the population of a city, we are talking about the number of people in the city - a numerical attribute of the city. Therefore, population would be a quantitative variable.

**Selection of variable:**

In this study we selected the following quantitative and qualitative variables which are-

* Age
* Height
* Weight
* Sex
* Religion
* Family Member
* Earning members
* Educated Children
* Educational Qualification
* present Monthly Income
* During Corona Monthly Income
* Present Monthly Expenditure
* Corona Monthly Expenditure
* Corona affected your family Member
* Govt Subsidy
* Financial help for medical purpose
* Corona impact on your life style
* Types of Effect
* Time investment in Business
* Financial problem during corona time
* Get loan
* Time with Family member
* Business Switch during covid time
* Types of Work
* Vaccinated all Family Member
* Types of Micro Business
* Ownership of Business
* Experience year in related Business

## 2.10. Statistical method:

### 2.10.1 Chi Square Test:

The Chi square statistic is commonly used for testing relationship between categorical variables. The null hypothesis of the chi square test is that no relationship exists on the categorical variables in the population they are independent. The chi square test is intended to test how likely it is that an observed distribution is due to chance. It is called a “goodness of fit”, because it measures how well the observed distribution of data fits with the distribution that is expected if the variables are independent. There are many ways for analyzing data. Here I use cross-table, Chi-square test, ANOVA, for my analysis.

The discrepancy between the observed cell counts and what you would expect if the rows and columns were unrelated. If asymptotic significance (p-value) is less than α% where α is the level of significance, then null hypothesis may be rejected.

### 2.10.2 Chi-square statistic:

The chi square test statistics is a non-parametric statistics technique used to determine if a distribution of observed frequencies differs from the theoretical frequencies.

We will apply the following formula for calculating chi-square is,

𝜒2=

Where,

𝜒2=chi-square test of independence

Oij =observed value of two nominal variables.

Eij=Expected value of two nominal variables. r=number of rows

c=number of columns.

We need to take hypothesis to test the independency between them.

Let us consider,

Ho = There is no relationship between them or there is insignificant relationship.

H1= Ho is not true.

Then we make a decision from the calculated value or form corresponding p-value. If p-value ≤ 𝛼 or 𝜒𝑐𝑎𝑙2 . ≥ 𝜒𝑡𝑎𝑏2 . , reject Ho , otherwise accepted.

### 2.10.4 Two mean tests:

The usual statistical technique used to compare the means of two groups is a confidence interval or significance test based on the t distribution. For this we must assume that the data are samples from normal distributions with the same variance.

Let's start with the good news, namely that we've already done the dirty theoretical work in developing a hypothesis test for the difference in two population means µ1 - µ2 when we developed a (1−α)100% confidence interval for the difference in two population means. Recall that if you have two **independent samples** from two **normal distributions** with **equal variances** 𝜎2𝑥=𝜎2𝑦=𝜎2, then:

Follows a 𝑡𝑛+𝑚−2 distribution where 𝑆𝑝2 , the pooled sample variance:

is an unbiased estimator of the common variance 𝜎2 . Therefore, if we're interested in testing the null hypothesis:

𝐻:= 𝜇𝑦

𝐻:≠ 𝜇𝑦

we can use the test statistic:

and follow the standard hypothesis testing procedures.

## 2.11 Related definition

### 2.11.1 Bar Diagram:

A bar graph (also known as a bar chart or bar diagram) is a visual tool that uses bars to compare data categories. A bar graph may run horizontally or vertically. The important thing to know is that the longer the bar, the greater its value. Bar graph consist of two axes.

### 2.11.2 Pie chart:

A pie chart (or a circle chart) is a circular statistical graphic, which is divided into slices to illustrate numerical proportion. In a pie chart, the arc length of each slice (and consequently its central angle and area), is proportional to the quantity it represents. While it is name for its resemblance to a pie which has been sliced, there are variations on the way it can be presented.

### 2.11.3 Histogram

A histogram is a graphical representation that organizes a group of data points into user specified ranges. It is similar in appearance to a bar graph. The histogram condenses a data series into an easily interpreted visual by taking many data points and grouping them into logical ranges.

### 2.11.4 Scatter plot:

Scatter plots are the graphs that present the relationship between two variables in a data-set. It represents data points on a two-dimensional plane or on a Cartesian system. The independent variable or attribute is plotted on the Xaxis, while the dependent variable is plotted on the Y-axis. These plots are often called scatter graphs or scatter diagrams.

# Chapter 3: Result and Discussion

## 3.1.1 Introduction:

The history of the study, the procedure for gathering data, and computerization are covered in these earlier chapters. In general, before conducting any statistical analysis, it is critical to understand the nature or characteristics of the data. A graphic representation and knowledge of the frequency distribution of data can be very helpful. This chapter's introduction includes some frequency distributions and the related graphs. This chapter also looks into the effects of Corona on small business owners in BSMRSTU. Numerous statistical methods, including frequency distribution, contingency analysis, regression analysis, etc., are used to accomplish this.

## 3.1.2 Frequency Distribution:

Our study used a 75-person sample size. The following table includes the frequency distribution, pertinent diagrams, and summaries of the data: This chapter describes the findings and includes a graph of the frequency distribution. More effective and simple to understand than tabular information graphical depiction.

## 3.2.1 Frequency distribution of all types of Micro Business

#### Table 3.1: Types of Micro Business

|  |  |  |
| --- | --- | --- |
| Business | **Frequency** | **Percent** |
| Tea stall | 28 | 37.3 |
| Photostat | 17 | 22.7 |
| Stationary | 15 | 20.0 |
| Hotel | 14 | 18.7 |
| Total | 75 | 100.0 |

##### TYPES OF MICRO BUSINESS

We have collected total 75 data from BSMRSTU campus. We have several types of vendors such as tea stall 25, Photostat 14, stationary 12 and hotel 14. The pie chart of the types of Micro business is given below:

## 3.2.2 Frequency distribution of Educational Qualification:

#### Table 3.2: Educational Qualification

|  |  |  |
| --- | --- | --- |
| **Educational Qualification** | |  |
| **Education Level** | **Frequency** | **Percent** |
| Illiterate | 4 | 5.3 |
| Primary | 22 | 29.3 |
| Secondary | 40 | 53.3 |
| Higher Secondary | 8 | 10.7 |
| Honors | 1 | 1.3 |
| Total | 75 | 100 |

From the above frequency distribution table, we can see that 5.3% vendors are illiterate, 29.3% vendors are primary, 53.3% vendors are Secondary, and 10.7% vendors are Higher secondary and 1.3 vendors are honor’s among the all the vendors. The bar chart of the education qualification of the vendors is given below:

## 3.2.3 Frequency Distribution of Get loan:

#### Table 3.3: Distribution of Get loan

|  |  |  |
| --- | --- | --- |
| **Get loan** | |  |
| **Loan Source** | **Frequency** | **Percent** |
| Bank | 34 | 45.3 |
| NGO | 10 | 13.3 |
| Cooperative Society | 8 | 10.7 |
| Others | 23 | 30.7 |
| Total | 75 | 100.0 |

From the above table we see that 45.3% people are get loan from Bank, 13.3% people are NGO, 10.7% people are Cooperative Society and 30.7% people are others . The bar chart of the get loan is given below:

## 3.2.4 Frequency Distribution of Experience year in related Business:

#### Table 3.4: Experience year in related Business

|  |  |  |
| --- | --- | --- |
| **Experience Year** | **Frequency** | **Percent** |
| 1-10 | 19 | 25.3 |
| 10-20 | 38 | 50.7 |
| 20-30 | 17 | 22.7 |
| 30+ | 1 | 1.3 |
| Total | 75 | 100.0 |

We have seen that the traders experience of 1-10 years are 25.3% , 10-

20 years are 50.7% ,20-30 years are 22.7% and above 30 years are

## 3.2.5 Frequency distribution of the family member:

#### Table 3.5: Distribution of the family member

|  |  |  |
| --- | --- | --- |
| **Family Member** | **Frequency** | **Percent** |
| 2-4 | 47 | 62.7 |
| 4-5 | 17 | 22.7 |
| 5+ | 11 | 14.7 |
| Total | 75 | 100.0 |

From above frequency distribution, we can see that 47 families have 2-4 family members, 17 families have 4-5 family members and more than 11 families have 5 family members among all the vendors.

## 3.2.6 Frequency distribution of Present monthly income of vendors:

#### Table3.6: Present Monthly Income

|  |  |  |
| --- | --- | --- |
| **Income Range** | **Frequency** | **Percent** |
| 10000-15000 | 40 | 53.3 |
| 15000-20000 | 25 | 33.3 |
| 20000+ | 10 | 10.3 |
| Total | 75 | 100.0 |

We see that from the table most of the vendors are lie in the present monthly income range 10,000-15,000 which is 53.3%. It can also present in bar diagram as follows:

## 3.2.7 Frequency During Corona Monthly Income of vendors:

#### Table 3.7: During Corona Monthly Income

|  |  |  |
| --- | --- | --- |
| **Income Range** | **Frequency** | **Percent** |
| 3000-6000 | 38 | 50.7 |
| 6000-9000 | 33 | 44 |
| 9000+ | 4 | 5.3 |
| Total | 75 | 100.0 |

We see that from the table most of the vendors are lie in the during corona time income range 3,000-6,000 which is 50.7%. It can also present in bar diagram as follows:

We can see that present monthly income and during corona monthly income on graph paper. So, we can conclude that in our sample, the present monthly income is higher than the during corona monthly income.

## 3.2.9 Frequency distribution Types of Work during corona:

#### Table 3.8: Types of Work during corona

|  |  |  |
| --- | --- | --- |
| **Occupation** | **Frequency** | **Percent** |
| **Day Labor** | 30 | 40 |
| **Monthly Income work** | 23 | 30.7 |
| **Another Business** | 9 | 12 |
| **Others** | 4 | 5.3 |
| **No Work** | 9 | 12 |
| **Total** | 75 | 100 |

We have collected total 75 data from BSMRSTU campus. We have several types of vendors are work during corona time such as day labour40%, Monthly income work 30.7%, another business 12%, others5.3% and no work 12%.

## 3.3.1 Test association between Educational Qualification and Present Monthly Income:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | **Present Monthly Income\_** | | | **Total** |  |
| **-** | **-** | **20000+** | **sig.** |
| **Educational**  **Qualification** | **Illiterate** | Count | 1 | 3 | 0 | 4 | **0.007** |
| Expected Count | 2.1 | 1.3 | 0.5 | 4.0 |
| % of  Total | 1.3% | 4.0% | 0.0% | 5.3% |
| **Primary** | Count | 9 | 6 | 7 | 22 |
| Expected Count | 11.7 | 7.3 | 2.9 | 22.0 |
| % of  Total | 12.0% | 8.0% | 9.3% | 29.3% |
| **Secondary** | Count | 27 | 11 | 2 | 40 |
| Expected Count | 21.3 | 13.3 | 5.3 | 40.0 |
| % of  Total | 36.0% | 14.7% | 2.7% | 53.3% |
| **Higher**  **Secondary** | Count | 3 | 5 | 0 | 8 |
| Expected Count | 4.3 | 2.7 | 1.1 | 8.0 |
| % of  Total | 4.0% | 6.7% | 0.0% | 10.7% |
| **Honours** | Count | 0 | 0 | 1 | 1 |
| Expected Count | 0.5 | 0.3 | 0.1 | 1.0 |
| % of  Total | 0.0% | 0.0% | 1.3% | 1.3% |
| **Total** | | Count | 40 | 25 | 10 | 75 |
| Expected Count | 40.0 | 25.0 | 10.0 | 75.0 |
| % of  Total | 53.3% | 33.3% | 13.3% | 100.0% |

**Hypothesis:**

**H0:** There is no association between educational qualification and present monthly income. **H1:** H0 is not true.

**Comment**: We see that the p-value is 0.007, which is less than 0.05, the level of significance. That is, the null hypothesis is rejected at 5% level of significance.

## 3.3.2 Test association between Corona Monthly Income and During Corona Monthly Expenditure:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Corona Monthly Expenditure**  **Group** | | | **Total** | **Sig.** |
| **5000-**  **10000** | **10000-15000** | **15000+** |
| **During**  **Corona Monthly Income** | **3000-**  **6000** | Count | 30 | 7 | 1 | 38 | .001 |
| Expected  Count | 22.8 | 14.7 | 0.5 | 38.0 |
| % of Total | 40.0% | 9.3% | 1.3% | 50.7% |
| **6000-**  **9000** | Count | 15 | 18 | 0 | 33 |
| Expected  Count | 19.8 | 12.8 | 0.4 | 33.0 |
| % of Total | 20.0% | 24.0% | 0.0% | 44.0% |
| **9000+** | Count | 0 | 4 | 0 | 4 |
| Expected  Count | 2.4 | 1.5 | 0.1 | 4.0 |
| % of Total | 0.0% | 5.3% | 0.0% | 5.3% |
| **Total** |  | Count | 45 | 29 | 1 | 75 |
| Expected  Count | 45.0 | 29.0 | 1.0 | 75.0 |
| % of Total | 60.0% | 38.7% | 1.3% | 100.0% |

**Hypothesis:**

**H0**: There is no significance between corona monthly income and during corona monthly expenditure.

**H1**: H0 is not true.

**Comment**: The significant level is 0.001 which is less than 0.05. Hence, we may reject null hypothesis (H0). That is, there is significant association between during corona monthly income and corona monthly expenditure.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **During** | **Corona** | **Monthly** |  |  |
|  |  |  | **Income** |  |  | **Total** | **sig.** |
| **3000-**  **6000** | **6000-**  **9000** | **9000+** |
| **Present**  **Monthly**  **Income** | **10000-15000** | Count | 31 | 9 | 0 | 40 | **0.001** |
| Expected Count | 20.3 | 17.6 | 2.1 | 40.0 |
| % of  Total | 41.3% | 12.0% | 0.0% | 53.3% |
| **15000-20000** | Count | 4 | 20 | 1 | 25 |
| Expected Count | 12.7 | 11.0 | 1.3 | 25.0 |
| % of  Total | 5.3% | 26.7% | 1.3% | 33.3% |
| **20000+** | Count | 3 | 4 | 3 | 10 |
| Expected Count | 5.1 | 4.4 | 0.5 | 10.0 |
| % of  Total | 4.0% | 5.3% | 4.0% | 13.3% |
| **Total** |  | Count | 38 | 33 | 4 | 75 |
| Expected Count | 38.0 | 33.0 | 4.0 | 75.0 |
| % of  Total | 50.7% | 44.0% | 5.3% | 100.0% |

## 3.3.3 Test association between Present Monthly Income and Corona Monthly Income

**Hypothesis:**

H0: There is no Significance between present monthly income and corona monthly income.

H1: H0 is not true.

**Comment:**

The significant level is 0.001 which is less than 0.05. Hence, we may reject null hypothesis (H0). That is, there is significant association between during corona monthly income and present monthly income.

## 3.3.4 Test association between Types of Work and During Corona Monthly Income:

## 

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **During Corona Monthly Income** | | | **Total** | **sig.** |
| **3000-**  **6000** | **6000-**  **9000** | **9000+** |
| **Types of**  **Work** | **Day labour** | Count | 16 | 14 | 0 | 30 | **0.003** |
| Expected Count | 14.1 | 14.1 | 1.8 | 30.0 |
| % of Total | 24.2% | 21.2% | 0.0% | 45.5% |
| **Monthly income work** | Count | 8 | 14 | 1 | 23 |
| Expected Count | 10.8 | 10.8 | 1.4 | 23.0 |
| % of Total | 12.1% | 21.2% | 1.5% | 34.8% |
| **Another Business** | Count | 3 | 3 | 3 | 9 |
| Expected Count | 4.2 | 4.2 | 0.5 | 9.0 |
| % of Total | 4.5% | 4.5% | 4.5% | 13.6% |
| **Others** | Count | 4 | 0 | 0 | 4 |
| Expected Count | 1.9 | 1.9 | 0.2 | 4.0 |
| % of Total | 6.1% | 0.0% | 0.0% | 6.1% |
| **Total** |  | Count | 31 | 31 | 4 | 66 |
| Expected Count | 31.0 | 31.0 | 4.0 | 66.0 |
| % of Total | 47.0% | 47.0% | 6.1% | 100.0% |

**Hypothesis:**

**H0**: There is no Significance between types of work and during monthly income.

**H1**: H0 is not true.

**Comment:** The significant level is 0.003 which is less than 0.05. Hence, we may reject null hypothesis (H0). That is, there is significant association between types of work and during corona monthly income.

## .4 Test association between Types of Micro Business and

Present Monthly Income

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **Present Monthly Income** | | | **Total** | **sig.** |
| **10000-**  **15000** | **15000-**  **20000** | **20000+** |
| **Types of Micro**  **Business** | **Tea stall** | Count | 19 | 7 | 2 | 28 | **0.001** |
| Expected Count | 14.9 | 9.3 | 3.7 | 28.0 |
| % of Total | 25.3% | 9.3% | 2.7% | 37.3% |
| **Photostat** | Count | 0 | 1 | 0 | 1 |
| Expected Count | 0.5 | 0.3 | 0.1 | 1.0 |
| % of Total | 0.0% | 1.3% | 0.0% | 1.3% |
| **Stationary** | Count | 14 | 1 | 2 | 17 |
| Expected Count | 9.1 | 5.7 | 2.3 | 17.0 |
| % of Total | 18.7% | 1.3% | 2.7% | 22.7% |
| **Hotel** | Count | 5 | 10 | 0 | 15 |
| Expected Count | 8.0 | 5.0 | 2.0 | 15.0 |
| % of Total | 6.7% | 13.3% | 0.0% | 20.0% |
| **others** | Count | 2 | 6 | 6 | 14 |
| Expected Count | 7.5 | 4.7 | 1.9 | 14.0 |
| % of Total | 2.7% | 8.0% | 8.0% | 18.7% |
| **Total** | | Count | 40 | 25 | 10 | 75 |
| Expected Count | 40.0 | 25.0 | 10.0 | 75.0 |
| % of Total | 53.3% | 33.3% | 13.3% | 100.0% |

**Hypothesis:**

**H0**: There is no Significance between types of micro business and present monthly income. **H1**: H0 is not true.

**Comment:** Hence, we may reject null hypothesis (H0). That is, there is significant association between types of micro business and present monthly income

## 3.5 Two Mean Test:

We Know that,

Follows a 𝑡𝑛+𝑚−2 distribution where 𝑆 , the pooled sample variance:

is an unbiased estimator of the common variance 𝜎2 . Therefore, if we're interested in testing the null hypothesis:

𝐻:= 𝜇𝑦

𝐻:≠ 𝜇𝑦

we can use the test statistic:

and follow the standard hypothesis testing procedures.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Paired Samples Test** | | | | |  |  |
|  | | **Paired Differences** | | **t** | **D.F** | **Sig. (2tailed)** |
| **Mean** | **Std. Deviatio n** |
| **Pair 1** | **Educational Qualification Present Monthly Income** | 16090.60 0 | 3760.40 7 | 37.05 7 | 74 | 0.001 |
| **Pair 2** | **During Corona Monthly**  **Income Present Monthly**  **Expenditure** | 7586.667 | 2335.64 2 | 28.13 0 | 74 | 0.001 |
| **Pair 3** | **Present Monthly Income**  **– During Corona Monthly Income** | 9606.667 | 3237.54 7 | 25.69 7 | 74 | 0.001 |
| **Pair 4** | **Types of Work During**  **Corona Monthly Income** | 6626.985 | 1524.88 6 | 35.30 6 | 65 | 0.001 |
| **Pair 5** | **Types of Work Present Monthly Income** | 15937.59 1 | 3542.45 3 | 36.55 0 | 65 | 0.001 |
| **Pair 6** | **Types of Micro Business**  **Present Monthly Income** | 16090.52 0 | 3759.64 4 | 37.06 4 | 74 | 0.001 |
| **Pair 7** | **Types of Micro Business – During Corona Monthly**  **Income** | 6483.853 | 1552.44 0 | 36.17 0 | 74 | 0.001 |

**Comment:**

The p-value of the test statistic is about<.001, which is less than 5% level of significance. So, the null hypothesis is rejected. That, there is a significant difference between the outcomes.

**Discussion:**

This research looked at the Impact of Corona pandemic on small traders in BSMRSTU campus and surrounded area. An overwhelming percentage of the respondents reported that due to COVID-19’s lockdown, it was hard for them to find a job to maintain the daily family expenses. The effects of COVID-19 pandemic are not only limited to health but also have a major impact on the social and economic aspects. (Bhuiyan AI, et al. (2020))

The COVID-19 would badly affect the livelihood of almost half of the global workforce both in cities and rural areas. (Goshu D, et al 2020) It was reported that more than 10 million people will be further marginalized due to the loss of wages and jobs in Bangladesh. (Bodrud-Doza M et al) reported that many low- and middle-income people of Bangladesh will lose their jobs and income sources due to COVID-19 outbreaks.

In our research project we can see that, The COVID-19 would badly affect the present monthly income and during corona monthly income. The impact of COVID-19 pandemic is not only income but also impact of the corona monthly expenditure. Most of the variables are significance such as educational qualification and present monthly income, corona monthly income and corona monthly expenditure, during corona monthly income and present monthly income, types of work and during corona monthly income, types of micro business and present monthly income. Finally, we can see that, all associated variable is significant and there has no insignificant variable.

# Chapter 4: SUMMARY AND CONCLUSION

## 5.1 Summary:

We have collected total 75 data from BSMRSTU campus. We have several types of traders such as tea stall, Photostat, stationary, hotel. From 75 data, we have traders with 28 tea stalls, Photostat 17, stationary 15 and hotel 14. From 3.2.5 frequency distribution, we can see that 47 families have 2-4 family members, 17 families have 4-5 family members and more than 11 families have 5 family members. From 3.2.3 frequency distribution table, we can see that 5.3% vendors are illiterate, 29.3% vendors are primary, 53.3% vendors are Secondary, and 10.7% vendors are Higher secondary among the all the vendors. From 3.2.9 frequency distribution, we can see that several types of vendors are work during corona time such as Day labor 40%, monthly income worker are 30.7%, Another income worker are 12% and others 5.3%. From 3.2.4 frequency distribution table we see that the traders experience of 1-10 years is 25.3%, 10-20 years are 50.7% ,20-30 years are 22.7% and above 30 years are 1.3%. From 3.2.3 Frequency distribution table we see that 45.3% people are get loan from Bank, 13.3% people are NGO, 10.7% people are Cooperative Society and 30.7 % people are Others. From 3.2.6 Frequency distribution table we see that most of the vendors are lie in the present monthly income range 10,000-15,000 which is 53.3%. From 3.2.7 Frequency distribution table we see that most of the vendors are lie in the during corona time income range 3,000-6,000 which is 50.7%. In our research project we deal with various factors or variables. Viz: age, sex, during corona monthly income, present monthly income, type of business, educational qualification, experience years in related business, number of family member etc. we see the association among the factors to see the effect in their socio-economic condition. Among all the variables 31.7% dependent variable explained by the independent variable

From the 3.3.1 cross table, we test the association between educational qualification and present monthly income using by the Chi-square test.

We see that there is association between educational qualification and present monthly income.

From 3.3.2 distribution table we can see that, there is significant association between present monthly income and during corona monthly income.

From 3.3.3 distribution table we can see that, there is significant association between during corona monthly income and corona monthly expenditure.

From 3.3.4 distribution table we can see that, there is significant association between types of work and during corona monthly income.

From 3.3.5 distribution table we can see that, there is significant association between types of micro business and present monthly income.

From the 3.4 above table information, we get the value of adjusted R square is 0.317, so we may say that the dependent variable is explained 31.7% by the independent variable.

From the 3.5 two mean test the null hypothesis is rejected. That, there is a significant difference between the present monthly income & during corona monthly income.

## 5.2 CONCLUSION:

The result from the findings of this study that, though the COVID-19 pandemic has negative effects on small businessman such as tea stall, Photostat, stationary, hotel etc. COVID-19 has badly effect on corona monthly income. Even though all groups of people in society have been affected, the small treaders have become more vulnerable. In developing countries, where the majority of the people depend on their daily income. This research had some limitations. First, it interviewed only 75 people in BSMRSTU campus and surrounded area. Second, we considered only a limited number of variables to understand the impact. The results of this study that the socioeconomic scenery of small business owners on BSMRSTU campus and surrounded area has negative effect during Corona pandemic.

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