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A study on-
**Activity Pattern of University Students during
Covid-19 Pandemic in Bangladesh**

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Abstract

The world is going through a tough situation due to the COVID-19 pandemic. To prevent the spread of the corona virus, most educational institutions and public spaces have been partially or completely shut down, and many activities have been postponed or cancelled. Similarly, in Bangladesh, educational institutions including universities have remained closed since March 2020. This situation has imposed an unprecedented challenge to our education system. While quarantined, staying out of the university environment and schedule, students have undergone through major changes in their regular behaviors and activities. Our study focuses on the activity pattern of university students during COVID-19 pandemic in Bangladesh. We have only included the undergraduate students studying in different public universities.

Students are affected by COVID-19 pandemic in various ways, mostly financially. They are also facing mental health problems due to stress and anxiety. During the lockdown, students were mostly online for recreational purposes. During the non-lockdown period the use of online platforms for studying has increased. During lockdown and non-lockdown periods, the time spent for sleeping is higher than any other indoor activity. Many have spent more time with their families than usual during the lockdown. They have been primarily involved in studies during the non-lockdown period. Maximum students do not prefer to go outside during lockdown period. Students living in city corporation areas have a higher tendency to go outside frequently. During non-lockdown period, the frequency of going outside and long distance travel has increased in City Corporation and Union areas. Involvement in part time jobs increased during non-lockdown period. The reason for going outside of students belonging in lower to middle-income family is primarily part time jobs. However, students belonging in higher income family mostly go outside for eating at restaurants and essential shopping.

Students living in city corporation areas are more active online compared to Paurashava and Union areas. Students have spent least time on physical exercise during the pandemic. Outdoor movements of the students have increased in all areas during non-lockdown periods.

To cope with the pandemic situation, students are compelled to use online platforms for studies and other activities. It is essential to ensure network stability in Paurashava and Union areas. Students should try to maintain healthy lifestyle. Strict lockdown should be maintained to prevent the spread of the disease. Student belonging in lower to middle-income family can be given financial support through universities or Government. Students can also look for alternative income such as online tuition and free lancing.

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List of Abbreviation

WHO – World Health Organization

UNESCO- United Nations Educational, Scientific and Cultural Organization

IEDCR- Institute of Epidemiology, Disease Control and Research

1. Introduction

1.1 Background of the Study

The entire world is now undergoing a crucial crisis called COVID-19 pandemic. COVID-19 was first identified as an infectious disease in Wuhan in the Hubei province of China in December, 2019. The World Health Organization (WHO) declared the novel coronavirus a public health emergency of international concern on January 30, 2020 and it was announced as a global pandemic on March 11, 2020 (WHO, 2020). To reduce the spread of this infectious disease, the leaders of different countries have taken several precautions such as strengthening health facilities, closure of educational institutions, offices, markets, restaurants, museums, movie theatres, etc., prohibition on social gatherings, border shutdown, and travel restrictions. These measures are imposing threatening impact on several sectors, one of the most important of which is the educational sector (Dutta et al., 2020).

Bangladesh diagnosed the first COVID-19 case on March 8, 2020 (IEDCR, 2020). To prevent the spread of the virus, Government of Bangladesh declared the closure of educational institutions on March 17, 2020. Since then, all the educational institutions of Bangladesh including the universities have remained closed and the students from primary to tertiary level are being compelled to stay at home instead of attending classes in educational institutions to maintain social distancing (Dutta et al., 2020).

The university students were habituated to maintain a routined lifestyle before this COVID-19 pandemic. But due to this pandemic, almost all of them have faced changes in their daily lifestyle. As the Government decided to close the dormitories, the students who resided in them were compelled to leave and get back to their native places. This situation may hinder university students' studies, disrupt their daily routines and habits, and impact their mental health (Islam et al., 2020). While quarantined, staying out of the university environment and schedule, students have undergone through significant changes in their regular behaviors and activities. Many of the students got infected by COVID-19 during this time. A very new phenomenon called "Online Class" has been introduced to the education system after the hit of COVID-19 and university students are still struggling to cope up with this. As a result, they are being compelled to spend a large time of their daily schedule with electronic gadgets. In addition, they have never get such a long time to spend out of the university campus, and therefore, they tend to involve themselves in

various indoor and outdoor activities to spend this time fruitfully. Even they have got involved in various voluntary works to help people in this acute pandemic crisis. However, the situation is not same for everyone as many of them are going through financial crisis as their family income got decreased due to this pandemic. Therefore, they are being involved in various part time jobs to support their family.

The Government of Bangladesh declared complete lockdown all over the country in between 27th March 2020 to 30th May 2020 and again strict Lockdown from 1st July 2021. The other time period was considered as a relaxed or non-lockdown period when people were permitted to go outside and perform regular activities. This study has attempted to find out the activity patterns of university students of Bangladesh during this lockdown and non-lockdown period and make a comparison of activities between these two periods. Also, the study aims to find out if there is any relationship between the activities performed by the students and their socio-economic condition. Thus, it will help to assess the current condition of the university students during this time of pandemic and give an overview of their involvement in various activities.

1.2 Objectives of the Study

The aim of our study was to identify the activity pattern of the university students during COVID-19 pandemic. Therefore, we tried to focus on the change in activity pattern between lockdown and non-lockdown period. Another goal of our study was to compare the activity pattern based on current geographic location of the students and their financial background.

Hence the objectives of our study can be defined as follows:

1. To identify the general activities of the university students of Bangladesh during the non-lockdown period due to enforced closer of universities
2. To identify the activities performed by the university students of Bangladesh during the enforced lockdown due to COVID-19
3. To find out the relationships (if any) between activities and socio-economic condition

1.3 Scope of the Study

The study has only focused on the activity pattern of the university students during COVID-19 pandemic. Therefore, the activity pattern of primary and secondary level students is not being

mentioned here. Even the study has excluded students from medical colleges and colleges that are affiliated with universities. Also, the study has focused only on the physical activities performed by students during this period. Thus, the current mental state of students has not been depicted here. Moreover, comparison of activities performed before and after the pandemic is not the focus of this study.

1.4 Limitations

The research is conducted in a situation where everyone of us is compelled to stay at home to prevent the spread of coronavirus. Therefore, face to face interaction with students was not possible while conducting the survey, which eventually hindered the random process of data collection. Hence, the entire survey was conducted virtually, through an online based survey. As a result, only the students with access on Google Account have been reached for the survey. Therefore, a large group of students who have no access on Google Account have been unfortunately eliminated from the survey process. This has made the survey biased by accessing only those students with certain privileges. Therefore, the study may not reflect the actual scenario of students who belong to general economic level. During sample design, students enrolled in post-graduation degrees, students from private universities, medical colleges and colleges that are affiliated with universities have been excluded due to time and accessibility constraints. As a result, activity pattern of these students has not been analyzed in this study. In addition, the survey was unable to reach equal number of students from City Corporation, Paurashava and Union areas. Hence, the comparative study made among these regions may not reflect the actual scenario.

2. Methodology

2.1 Literature Review

Prior to our study, some literatures conducted during pandemic over the university students of Bangladesh as well as over students of other countries have reviewed to generalize the rationale of our study. The operational definition of university students is as follows:

A university is an institution of higher learning, providing facilities for teaching and research and authorized to grant academic degrees. More specifically, one made up of an undergraduate division which provides bachelor's degrees and a graduate division which comprises a graduate school and professional schools each of which may confer master's degrees and doctorates (Merriam-

Webster). The knowledge seekers who got enrolled in these degree courses of various levels to gain knowledge over different fields of study are therefore recognized as university students.

From the literature review, we came to learn that after the diagnosis of COVID-19 cases, the leaders of different countries including Bangladesh decided to close their educational institutions as part of preventive measures against the spread of COVID-19 pandemic (Dutta et al., 2020). According to UNESCO, 191 countries have implemented nationwide closures and 5 have implemented local closures, impacting about 98.4 percent of the world's student population affecting approximately 1.723 billion learners (Begum et al., 2020). As part of this precaution, universities of Bangladesh have remained close since March, 2020. But due to this enforced closure, tertiary-level students are experiencing educational disruptions on an unprecedented scale. A study has revealed that COVID-19 situation induced concerns in students about academic activities along with social and economic affairs and fear of infection (Dutta et al., 2020). However, the number of university students reported COVID-19 positive are not negligible (The Daily Star, 2020).

In Bangladesh, there are approximately four million students in over 5000 tertiary educational institutions, including public and private universities, professional institutions, and affiliated colleges (Dutta et al., 2020). According to a study, COVID-19 has negatively impacted on educational, financial and psychological aspects of students of public universities of Bangladesh (Begum et al., 2020). Staying quarantined and out of the university environment and schedule for a long time, students may experience stress, anxiety, anger, boredom, loneliness, and other emotions, with both shorter and longer-term impacts. In the shorter-term, such feelings may lead to sleep problems, changes in eating habits, and engagement in potentially addictive behaviors (Islam et al., 2020). To compensate the disruptions in tertiary education, a significant shifting of many educational institutions to online learning programs from traditional face-to-face learning programs has been noticed during the COVID-19 situation (Dutta et al., 2020). As a result, students are being compelled to spend a lot of time in online activities than before the pandemic period.

However, students are struggling to cope with the pandemic situation from various aspects. Urban residence (as crowded cities arguably would represent a worse environment when under lockdown), lower age, being from a large family and from an extended family, as these groups may have limited financial resources as more individuals are dependent on the main household

income which has also decreased for many households due to pandemic: all these are acting as catalyst to bring changes in the activity pattern and behaviors of university students (Islam et al., 2020). Apart from all these, many students have involved themselves in various voluntary activities to stand by the side of the distressed people in this acute crisis of COVID-19. Bidyanondo Foundation, Bangladesh Students' Union, Pashe Achhi Foundation, Mission Save Bangladesh, Shishuder Jonno Foundation are some of the name of organizations established by the students of Bangladesh that are helping in COVID-19 relief efforts with crowd funding (The Daily Star, 2020).

Nevertheless, students need to maintain hygiene rules strictly because according to a study conducted in England, they revealed that the spread of coronavirus increased in their country after the relaxation of lockdown during August 2020. After they reopen their university campuses, the large-scale movement of students had induced the spread of virus among themselves as well as in the entire community (Ihm et al., 2021).

2.2 Sample Design

Simple random sampling method was used for designing the sample. The students who are enrolled in undergraduate courses in any public university of Bangladesh were included in the sampling frame. Therefore, students studying in private universities or enrolled in postgraduate courses were automatically eliminated. Hence, 409 students from different public universities of Bangladesh were selected as sample for this study at 95% confidence level with a confidence interval of 4.85.

2.3 Preparation of Tools for Data Collection

2.3.1 Formulation of Co-ordination Schema

A co-ordination schema was formulated before preparing the questionnaire, to identify which variables needed to be measured to know the activity pattern of university students. The co-ordination schema was designed consisting all the possible activities that can be performed by university students during the pandemic period.

2.3.2 Preliminary Survey

After formulating the co-ordination schema, a sample questionnaire was prepared. Based on the sample questionnaire, an online based pilot survey was conducted via Google Form over nearly 25 students from different universities in and outside Dhaka. The aim of the pilot survey was to

understand whether the respondents are being able to answer the question comfortably and whether feasible analysis can be done based on their response. The feedback given from the students have taken under consideration before preparing the final questionnaire.

2.3.3 Preparation of Questionnaire

Based on the sample questionnaire and feedback from pilot survey, the final questionnaire was prepared with the help of our respected course teachers. The questionnaire firstly enquired about the academic and financial background of the students. The impact of COVID-19 on university students was also a concern of the questionnaire. Therefore, to assess the activity pattern, the questionnaire was prepared enquiring about activities performed in different categories (see Appendix-A).

2.4 Data Collection

The questionnaire was surveyed over 409 students from different public universities of Bangladesh (see Appendix-B). The survey was conducted with online survey tool Google Form. In order to collect the data, the link of the online survey form was shared across different online platforms (e.g., Gmail, Whats app, Messenger etc.) to obtain sufficient responses. Initially, 429 respondents submitted the survey form after providing informed consent. After cleaning the survey data that were submitted but contained missing data and wrong data (e.g., students enrolled in medical colleges and post graduate degrees), 409 were included in the final analysis.

2.5 Data Analysis

The obtained data is compiled through the use of Microsoft Excel (2016) and then analyzed and interpreted through the use of graphs, tables etc. The tables used in this report mostly contain the frequency distribution of activities performed on various time intervals and the average time spent have been interpreted from the tables. Here, it is needed to be mentioned that the average values in this study have been measured in Median, to avoid any effect of extreme outliers on the average values. The graphs are mainly generated to focus on the average time spent of activities from different categories. To assess the activity pattern based on geographic location and financial condition, cross tables have been formulated linking the current location and family income of the students with their activity pattern. Thus, an overall assessment has been generated in our study based on these analyses.

3. Demographic and Academic Profile of Participated University Students

3.1 Demographic Profile and Financial Background

The participants of our study mostly consisted of male students (56.9%) and the percentage of female students was 43.1%. A large number of the participated students are currently living in City Corporation areas. Among these students, most of them (56%) are residing in a house owned by their family, 38.87% are residing in rental houses and others are residing in Government quarters, dormitories and other housing facilities. 1.72% of the participated students has informed of residing in university hostel even in pandemic period.

The participated students mostly belong to income group of BDT 20,001 to 100,000. The largest percentage (26.89%) is though visible between range of BDT 30,001 to 50,000. But higher monthly average family income is among students living in city corporation areas. Monthly average family income of students living in Union areas is much less than students living in City Corporation and Paurashava areas. Most of the families of participated students have 4 to 6 family members. However, 64.8% of them have only one earning member in their family, most of whom are engaged in Government service (32.52%). Percentage of household head engaged in business and private service is not less though.

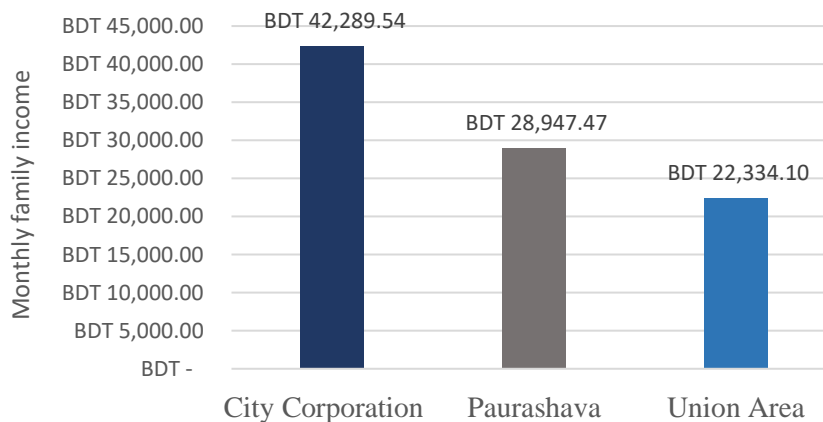


Fig 3.1: Monthly average family income of participated university students based on geographic location

The following table is interpreting the entire demographic and financial characteristics of the participated students:

Table 1: Distribution of Demographic and Financial Characteristics of Participated Students

Variables	Frequency (n)	(%)
Gender		
Male	233	(56.9)
Female	176	(43.1)
Geographic Location		
City Corporation Area	280	(68.46)
Paurashava Area	70	(17.11)
Union Area	59	(14.43)
Living Condition		
House owned by family	229	(56)
Government Quarter	12	(2.93)
Dormitory	1	(0.24)
Rental	159	(38.87)
University Hostel	7	(1.72)
Others	1	(0.24)
Monthly Family Income		
Less than BDT 10,000	30	(7.33)
BDT 10,001-20,000	47	(11.49)
BDT 20,001-30,000	90	(22)
BDT 30,001-50,000	110	(26.89)
BDT 50,001-1,00,000	100	(24.47)
More than BDT 100,000	32	(7.82)
Number of Family Members		
<4	53	(12.95)
$4 \leq n \leq 6$	335	(81.9)
>6	21	(5.15)
Number of Earning Member in the Family		
0	2	(.48)
1	265	(64.8)
2	114	(27.87)
3	24	(5.86)
4	4	(.99)
Occupation of Household Head		
Government service	133	(32.52)
Private service	107	(26.16)
Business	111	(27.13)
Agriculture	16	(3.92)
Others	42	(10.27)

3.2 Impact of COVID-19 on Participated Students

Among the respondents, nearly 28.12% of students claimed that their family was affected by COVID-19. We therefore, tried to identify how their family got affected by COVID-19 and mostly we came to learn that the number of students affected financially is much higher than any other factor. Out of 409 students, 188 of them faced loss of income in their family. 13 students replied that their household head had lost his job during pandemic. Also, this is very unfortunate to learn that 85 students faced infection of COVID-19 in their family and even some were infected by the virus themselves. 11 students lost 1 or more family members in this pandemic period. 4 of them mentioned about mental ill-being and depression. A significant number of the students informed about disruption in study as well. Fortunately, large number of students (48.89%) informed of not being negatively affected by COVID-19 though. Even some of them mentioned about increased income during pandemic.

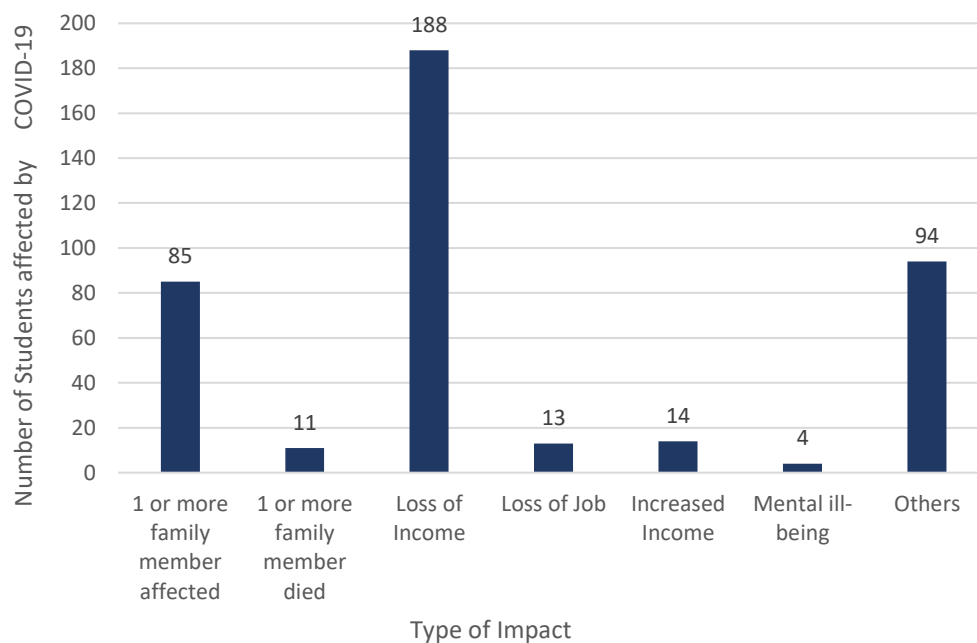


Fig-3.2: Number of participated university students affected by COVID-19

3.2 Academic Background

The participated students of our study are currently enrolled in undergraduate courses of various public universities of Bangladesh. Therefore, students from universities in and outside of Dhaka have been surveyed. The list of universities is given in Appendix-B. Students from different level-term and semesters have been reached for the survey. The data of academic year have been collected as per the system prevailed in their own institutes.

3.3 Introduction and Continuity of Online Class

To prevent the disruption of academic activities, universities of Bangladesh started conducting online class after a few months of the start of lockdown and enforced closure of universities. 99.5% of our respondents answered that their universities are conducting online class. Although the starting time varied in different universities, mostly it was introduced between June, 2020 to August, 2020. 73.35% of the university students informed that their universities conducted online class even during lockdown period. In most cases, the average time of online class is 3-8 hours per week. 57.95% of the participated students were compelled to attend online examination organized by their universities in this period.

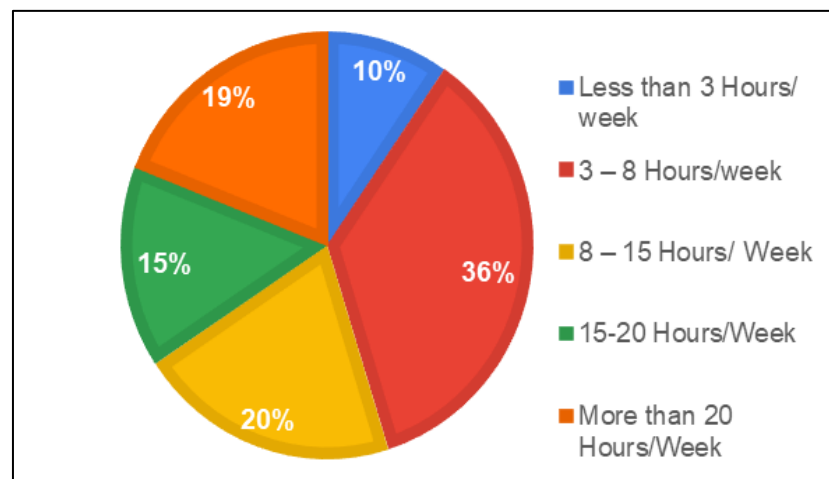


Fig 3.3: Time spent for online class by university students (per week)

4. Activities Performed by University Students during Lockdown and Non-lockdown Period

4.1 Online Activities

Because of online class, students were compelled to spend a large portion of their time in online activities on a daily basis. In our study, we classified the online activities into Study (Other than Class), Other online activity (including reading news, using social media, online entertainment, online gaming but excluding online work) and Online Work as these were most common for university students to perform during pandemic period.

4.1.1 Pattern during Lockdown Period

During lockdown period, students were less active in online platforms. The following table interprets the frequency distribution of students' spent time in online activities along with average time spent during lockdown period.

Table 2: Frequency distribution of time spent on daily online activities and average time spent (Lockdown period)

Time \ Activity	Study (Other than class)	Other online activity	Online work
Didn't spend	108	6	76
Less than 1 hour	149	26	62
1-3 hours	112	84	122
3-6 hours	30	187	99
More than 6 hours	10	106	50
Average time spent	1.03 hour	4.46 hours	2.71 hours

In time of lockdown, students usually spent time in online mostly for recreational purposes. Therefore, the average time spent is largely engulfed (4.46 hours) in other online activities (using social media, online entertainment etc.). Involvement in Online Work is not less though.

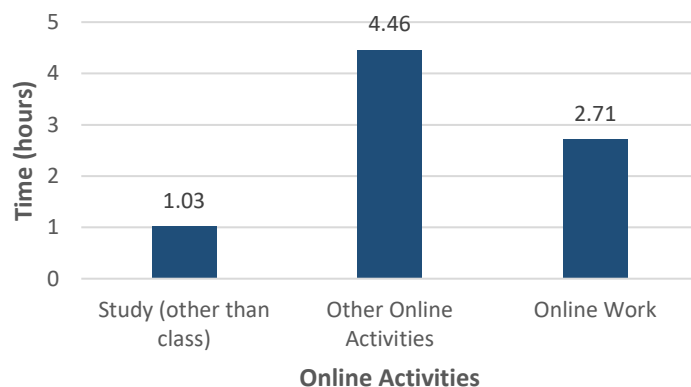


Fig 4.1: Average time spent for online activities by university students during lockdown (on an average day)

4.1.2 Pattern during Non-lockdown Period

Students spend much time in study purpose during non-lockdown period. Also, the time span tends to increase in non-lockdown. The following table interprets the frequency distribution of students' spent time in online activities along with average time spent during non-lockdown period.

Table 3: Frequency distribution of time spent on daily online activities and average time spent (Non-lockdown period)

Time \ Activity	Study (Other than class)	Other online activity	Online work
Didn't spend	34	9	95
Less than 1 hour	88	75	118
1-3 hours	187	189	120
3-6 hours	86	104	50
More than 6 hours	14	32	26
Average time spent	2.06 hours	2.32 hours	1.65 hours

Average time spent for studying and for recreational purpose is nearly equal during non-lockdown period. Time spent for Online Work is less than other two categories of online activity.

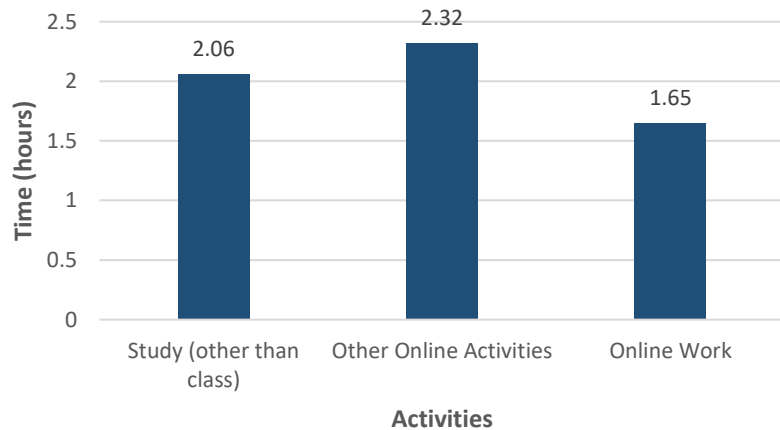


Fig 4.2: Average time spent for online activities by university students during non-lockdown (on an average day)

4.1.3 Change in Pattern between Two Periods

A significant change is visible in average time spent. For example: the time spent for studying increased more than 1 hour from lockdown to non-lockdown period and average time spent for recreational purposes decreased more than 2 hours (see Appendix-C). However, time spent in online is higher among students living in city corporation areas.

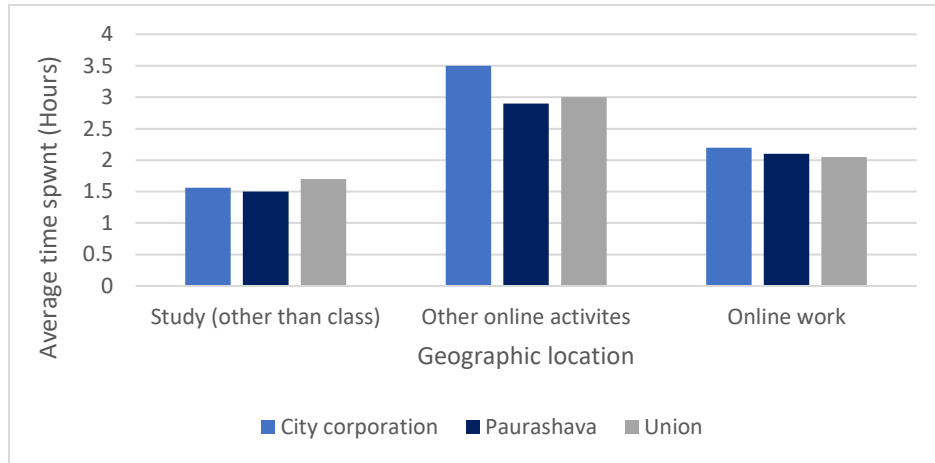


Fig 4.3: Change in average time spent in online activities based on geographic location during lockdown and non-lockdown

4.2 Indoor Activities

University students have never got such a long time of vacation ever before this pandemic. Therefore, they tend to involve themselves in various indoor activities to remain active and cheerful even in this time of global crisis. In our study, we classified the indoor activities into categories like Sleeping, Household Chore, Spending time with family, Study, Recreation (Watching TV, indoor game etc.) and Physical Exercise and identified the time spent by the university students in each activity.

4.2.1 Pattern during Lockdown Period

During lockdown period, most university students of our study slept for 8 to 10 hours in a day, which is regarded as sufficient for leading a healthy lifestyle. Due to closure of universities in time of lockdown, most of them spent less than 1 hour for study purpose. Rather students prefer to spend the time with family members and therefore, most of them spent more than 6 hours of their daily time with them. Nearly 34% of them (140 out of 409 respondents) spent 1 to 3 hours of time for recreational purpose. However, the time spent for physical exercise is negligible to mention. Maximum students didn't take part in any kind of physical exercise.

The following table represents the frequency distribution of students spending time in different indoor activities during lockdown period:

Table 4: Frequency distribution of time spent on daily indoor activities and average time spent (Lockdown period)

Time \ Activity	Household chore	Spent time with family	Study	Recreation
Didn't spend	44	18	93	50
Less than 1 hour	168	59	137	95
1-3 hours	151	113	136	140
3-6 hours	34	103	32	96
More than 6 hours	12	116	11	28
Average time spent	1.19 hours	3.68 hours	1.3 hours	2.2 hours
Time \ Activity	Sleeping			
Less than 4 hours	11			
4-8 hours	155			
8-10 hours	189			
More than 10 hours	54			
Average time spent	8.4 hours			
Time \ Activity	Physical Exercise			
Didn't spend	176			
Less than 1 hour	167			
1-2 hours	54			
2-3 hours	8			
More than 3 hours	4			
Average time spent	0.69 hours			

On an average, students spend much of their daily time for sleeping. As the universities were closed, time spent for studies is relatively much less than other indoor activities. Apart from sleep, they spent a large time of their day with family members and for recreational purposes. The average time spent for daily physical exercise is relatively very low.

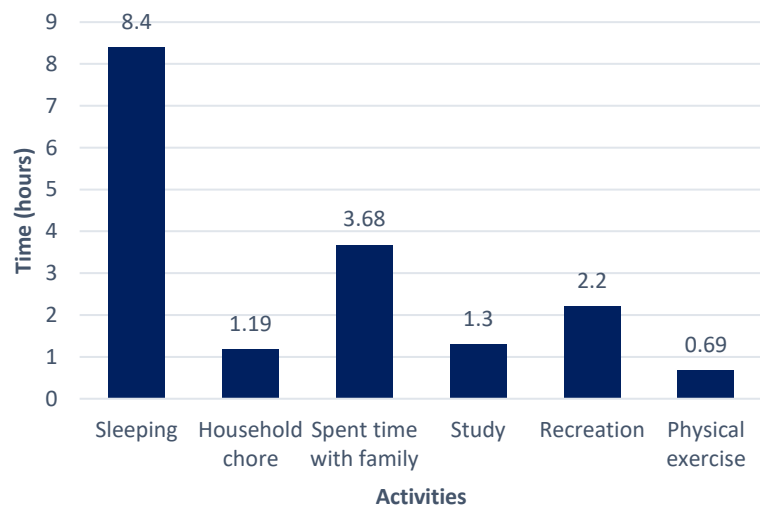


Fig 4.4: Average time spent for daily indoor activities (in lockdown)

4.2.2 Pattern during Non-lockdown Period

The time of sleep tends to reduce and reached at range between 4 to 8 hours in time of non-lockdown. Most students spent less than 1 hour in household chore. A large number of students spent 1 to 3 hours of their daily time for study purpose. The equal amount of time is spent with family members by the students. Most of them spent less than 1 hour of time for recreational purpose. The number of students who didn't spend time for physical exercise is much higher. The ones who spent time in this activity is not more than 1 hour.

Table 5: Frequency distribution of time spent on daily indoor activities and average time spent (Non-lockdown period)

Time \ Activity	Household chore	Spent time with family	Study	Recreation
Didn't spend	98	57	42	73
Less than 1 hour	209	116	90	152
1-3 hours	83	128	187	146
3-6 hours	16	72	73	31
More than 6 hours	3	36	17	7
Average time spent	0.74 hours	1.94 hours	2 hours	1.22 hours
Time \ Activity	Sleeping			
Less than 4 hours	13			
4-8 hours	274			
8-10 hours	108			
More than 10 hours	14			
Average time spent	6.79 hours			
Time \ Activity	Physical Exercise			
Didn't spend	177			
Less than 1 hour	168			
1-2 hours	53			
2-3 hours	9			
More than 3 hours	2			
Average time spent	0.69 hours			

Therefore, the average time spent for daily indoor activities is mostly occupied by sleeping in non-lockdown period. After that, time spent for studying is higher than other activities. Average time spent for family members and recreation is nearly similar. But average time spent for physical exercise is negligible.

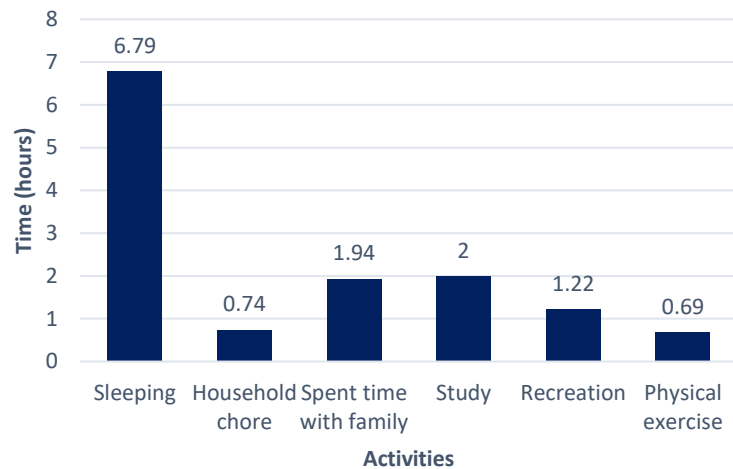


Fig 4.5: Average time spent for daily indoor activities (in non-lockdown)

4.2.3 Change in Pattern between Two Periods

The pattern of indoor activity has significantly changed between lockdown and non-lockdown period. The time of sleep has decreased for nearly 2 hours. Also, the time for household chore, recreation and time spent with family members have decreased during non-lockdown period. As most universities started conducting online class after the first lockdown, time for study has increased during non-lockdown period which has eventually cut out time from other activities. However, no change is visible for time spent in physical exercise.

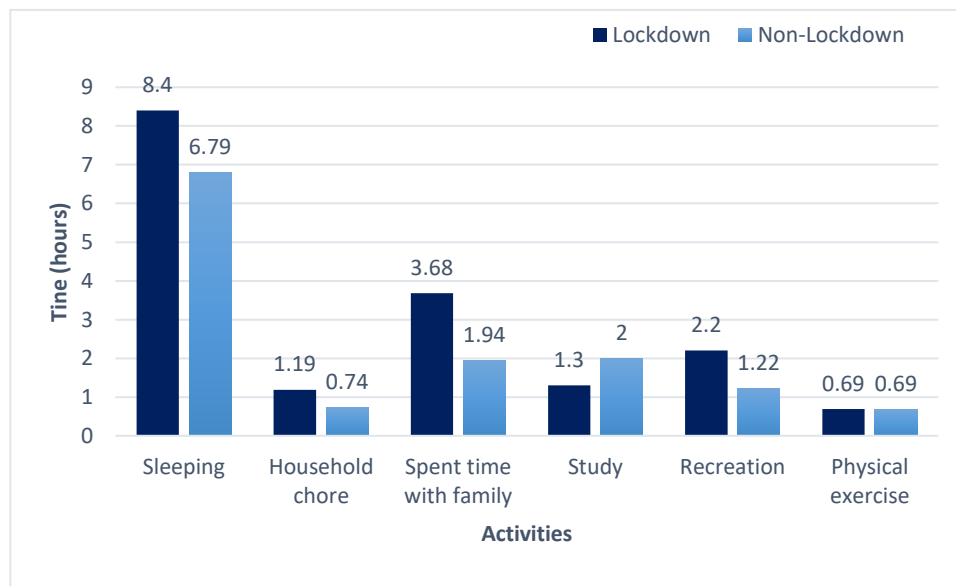


Fig 4.6: Change in indoor activity pattern during lockdown and non-lockdown

4.3 Outdoor Activities

To prevent the spread of coronavirus, movement of people was tried to keep in restriction both in lockdown and non-lockdown period by the Government of Bangladesh. Still, people have gone outside of their residence for various reasons. In our study, we identified the movement reasons of university students and also measured how much time they spent outside in time of lockdown and non-lockdown period.

4.3.1 Pattern during Lockdown Period

43.28% (177 out of 409) students didn't attempt to go outside in lockdown. Those who went, most of them had gone out for less than 2 times in a week. However, percentage of male students going outside is much higher than percentage of female students. 59% of the female students didn't prefer to go outside in lockdown.

The reasons of going outside by all of the surveyed students were mostly for tuition, eating, essential shopping (for example day to day shopping), medical emergency etc. On an average, the respondent students spent 1.3 hours per week outside the residence.

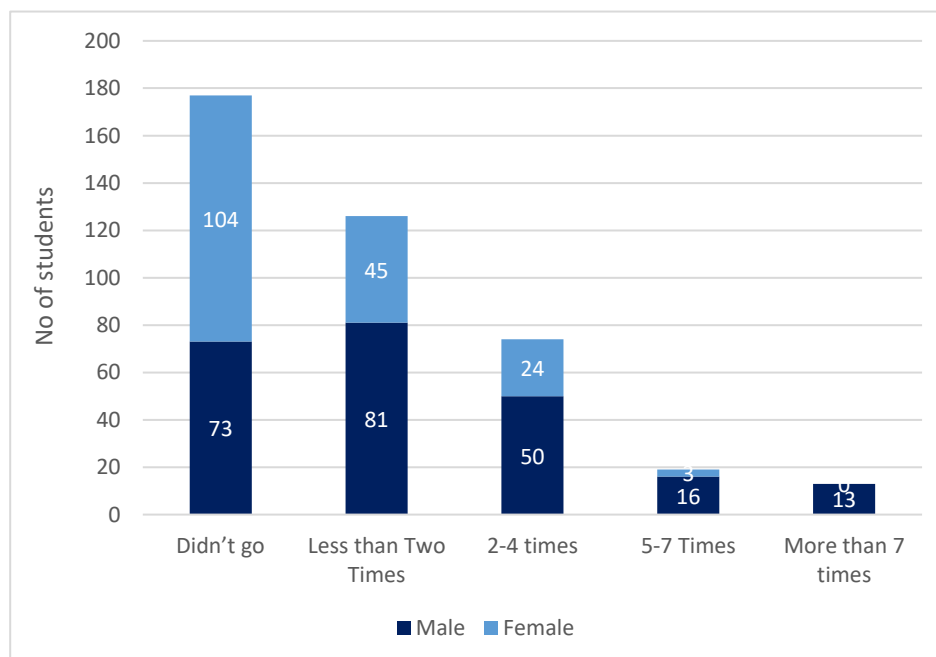


Fig 4.7: Number of times going outside the residence per week (during lockdown)

The following table interprets the time spent outside by students according to geographic location:

Table 6: Frequency distribution of hours spent outside on an average week based on location (Lockdown period)

Time \ Location	City Corporation Area	Paurashava Area	Union Area
Didn't spend	96	27	23
Less than 1 hour	66	18	15
1-3 hours	76	14	13
3-6 hours	17	6	7
More than 6 hours	25	5	1
Average time spent	1.68 hours	1.5 hours	1.46 hours

According to our study, the students who are currently living in City Corporation areas are spending much time outside than students living in Paurashava and Union areas. In city corporation areas, students went outside mostly for eating and essential shopping purposes,

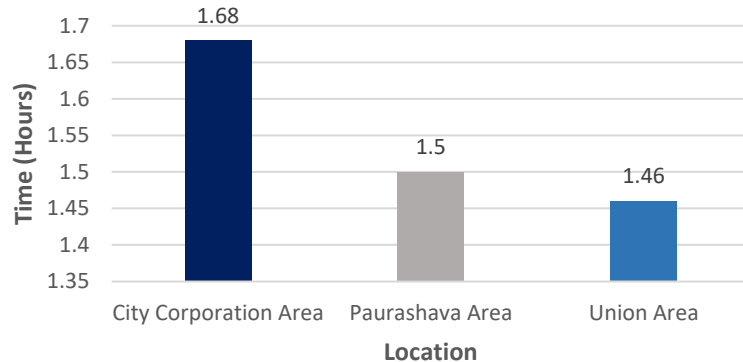


Fig 4.8: Average time spent outside based on location

whereas, in Paurashava and Union areas, the reasons like medical emergency and outdoor games were most vital.

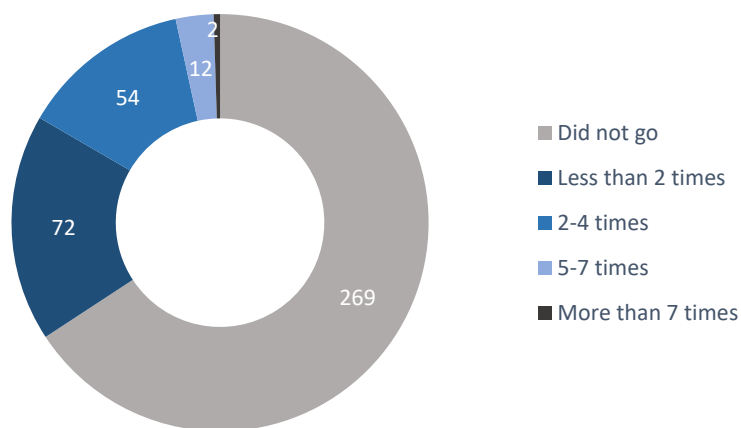
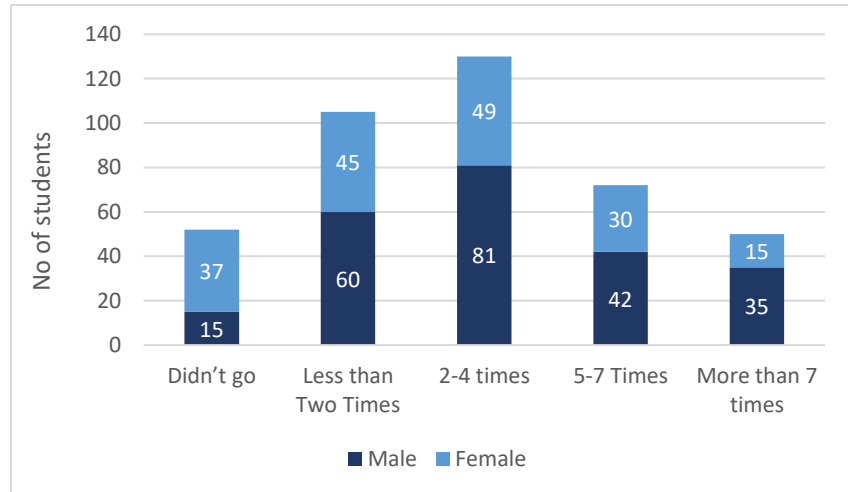


Fig 4.9: Number of times went for long distance travel

Therefore, it was inquired whether the students went to long distance travel in this period, where it is found that most of them didn't go for long distance travel. Those who went mostly had gone for less than two times.

4.3.2 Pattern during Non-lockdown Period

During the non-lockdown period, most students went outside their residence. The greatest number of students went outside for 2 to 4 times in a week. However, percentage of male students is higher in case of going outside the residence. In time of non-lockdown, the most significant reason of students for going outside was tuition. Also, because of essential shopping, medical emergency etc. they came out of residence.



In time of non-lockdown, generally students spent 4.04

Fig 4.10: Number of times going outside the residence per week (during non-lockdown)

hours of time outside their residence on an average week. The following table interprets the time spent outside by students according to geographic location:

Table 7: Frequency distribution of hours spent outside on an average week based on location (Non-lockdown period)

Time \ Location	City Corporation Area	Paurashava Area	Union Area
Didn't spend	19	8	9
Less than 1 hour	32	10	5
1-3 hours	63	25	17
3-6 hours	73	12	15
More than 6 hours	93	15	13
Average time spent	4.46 hours	2.68 hours	3.6 hours

Average time spent outside the residence is higher among students living in city corporation areas than students living in Paurashava and Union areas. The prior reasons among urban students are eating and tuition. Students outside city corporation preferred to go outside mainly for tuition, outdoor games and medical emergency.

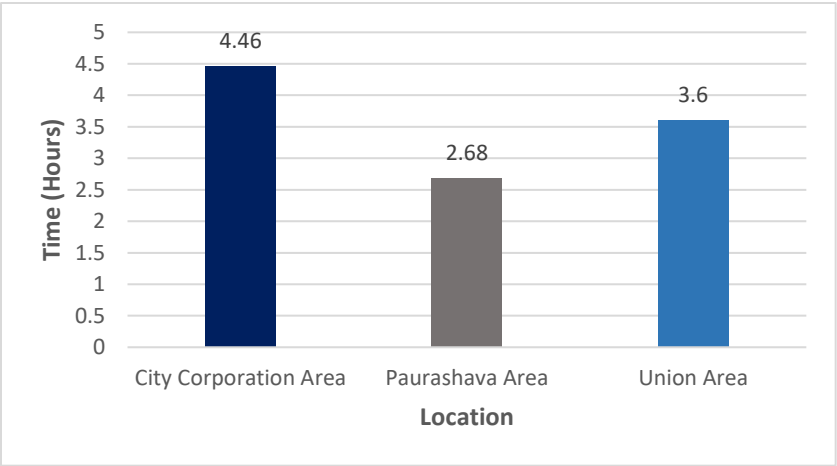


Fig 4.11: Average time spent outside based on location (per week)

In non-lockdown, most students preferred to travel long distance for two to four times. Most of the surveyed students travelled long distance in this period. Therefore, movement from one district to the other will undoubtedly increase the vulnerability of spreading coronavirus.

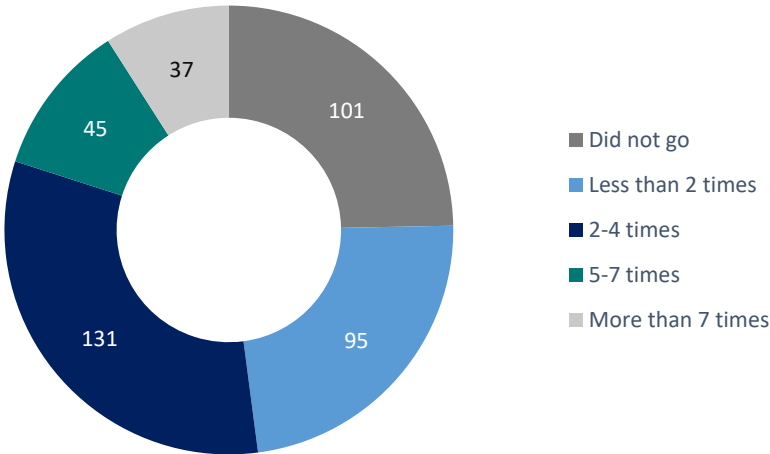


Fig 4.12: Number of times went for long distance travel

4.3.3 Change in Pattern between Two Periods

The movement of students outside the residence has significantly increased during the non-lockdown period. From figure 4.13, we can see that number of students not preferring to go outside has decreased in non-lockdown and therefore, number of times has increased to a great extent by the students.

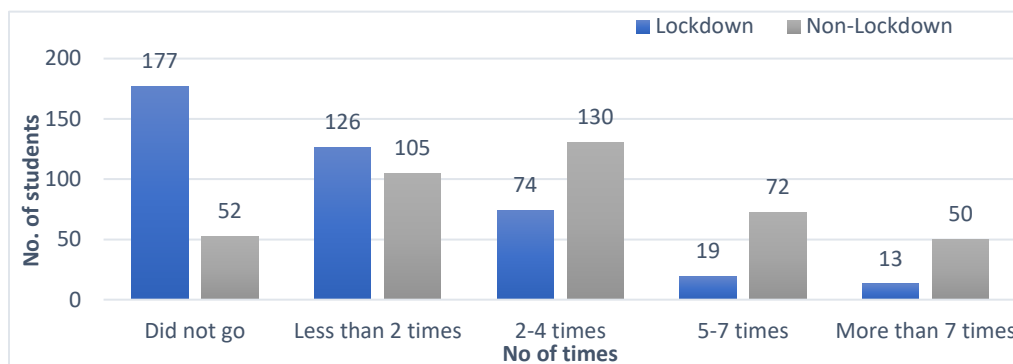


Fig 4.13: Change in no. of times spending outside during lockdown and non-lockdown (per week)

Number of hours spending outside has also increased in City Corporation, Paurashava and Union areas simultaneously. A drastic increase is visible in spent time of urban students. Probably time wasted in traffic jam of city corporation areas has increased the time spent outside by the students living in these areas though it is being vulnerable for the their families (see Appendix-D).

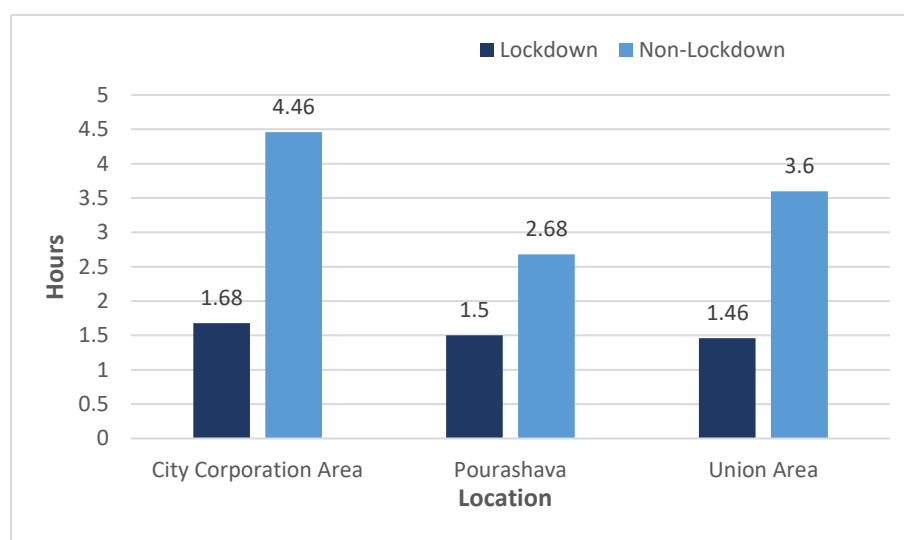


Fig 4.14: Change in no. of hours spending outside during lockdown and non-lockdown (per week)

In addition, the number of students travelling to long distance has significantly increased in non-lockdown period. Number of times travelling long distance has increased simultaneously as Government declared relaxation of lockdown.

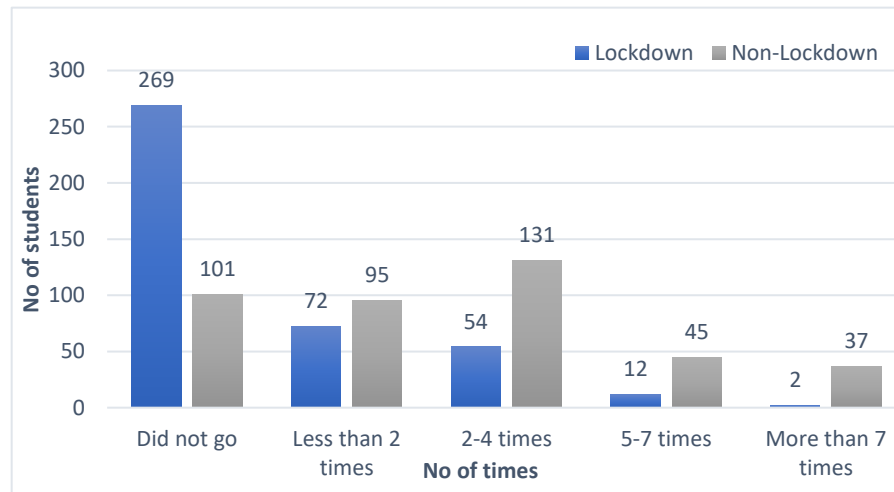


Fig 4.15: Change in no. of times went for long distance travel during lockdown and non-lockdown

4.4 Miscellaneous Activities

The miscellaneous activities performed by university students have been classified into two categories: Part time job and Visiting relatives/neighbors/friends.

4.4.1 Pattern during Lockdown Period

65.04% of the surveyed students were engaged in at least one type of part-time job. The figure shows the involvement of students with various part-time jobs during lockdown period where we can see male students were involved more than females. Most students were engaged in tuition (185 out of 409 respondents). Also, involvement with business, outsourcing, private job and other part time activities is identified among the surveyed students (see Appendix-E).

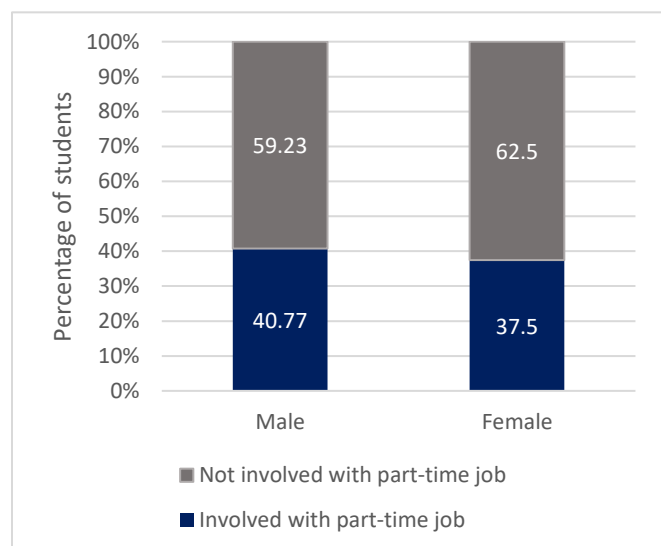


Fig 4.16: Percentage of students' involvement with part-time jobs during lockdown

However, more than 55% students did not prefer to meet with their relatives/neighbors/ friends in time of lockdown. Students who went to visit them, mostly visited for less than 2 times in a week. Only a few (1.7%) of the students visited them for more than seven times.

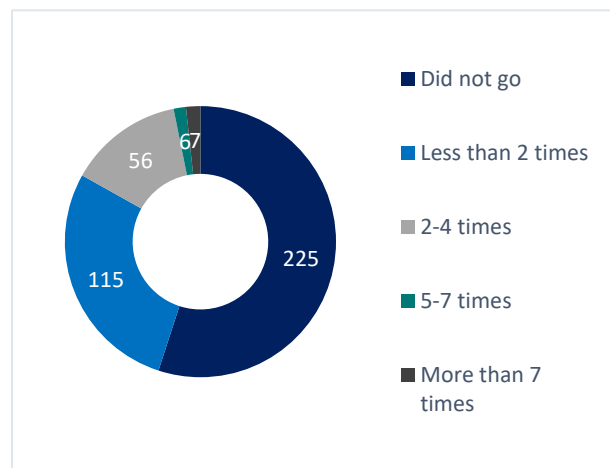


Fig 4.17: Number of students visiting relatives and friends during lockdown

4.4.2 Pattern during Non-lockdown Period

During non-lockdown period, more than 47% of male students were involved with at least one type of part-time jobs. Percentage of female students involved with part-time jobs is comparatively lower. 50.36% (206 out of 409 students) were engaged with tuition in non-lockdown period(Appendix-F). Some were involved with other part-time jobs like business, outsourcing, private job etc. in non-lockdown period also.

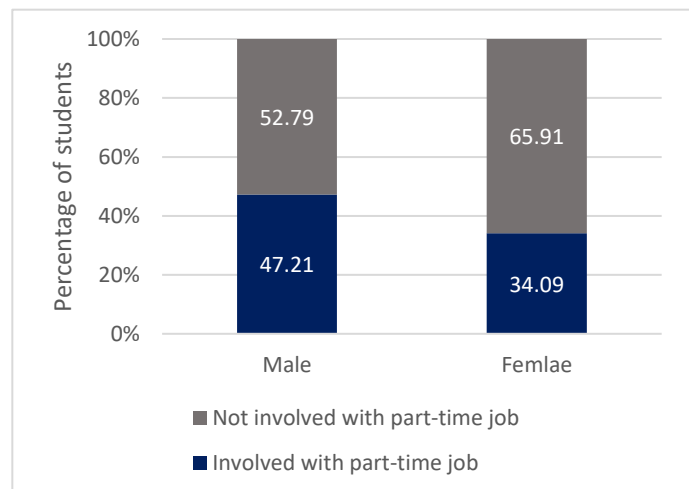


Fig 4.18: Percentage of students' involvement with part-time jobs during non-lockdown

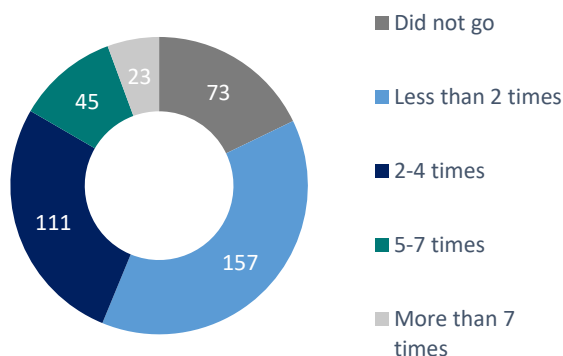


Fig 4.19: Number of students visiting relatives and friends during non-lockdown

In time of non-lockdown, most student visited their relatives/neighbors/ friends for at least less than two times in a week. Number of students visited for 2 to 4 times is also quite large. Even many of them preferred to visit for more than 4 times as well. This indicates the increase in outdoor movement of students during non-lockdown.

4.4.3 Change in Pattern between Two Periods

In case of part-time job, number of students involved in tuition has increased during non-lockdown period. However, in terms of other part-time jobs, number of students' involvement has decreased from lockdown to non-lockdown period. Involvement of male students has increased during non-lockdown period whereas involvement of female students tends to decrease from lockdown to non-lockdown.

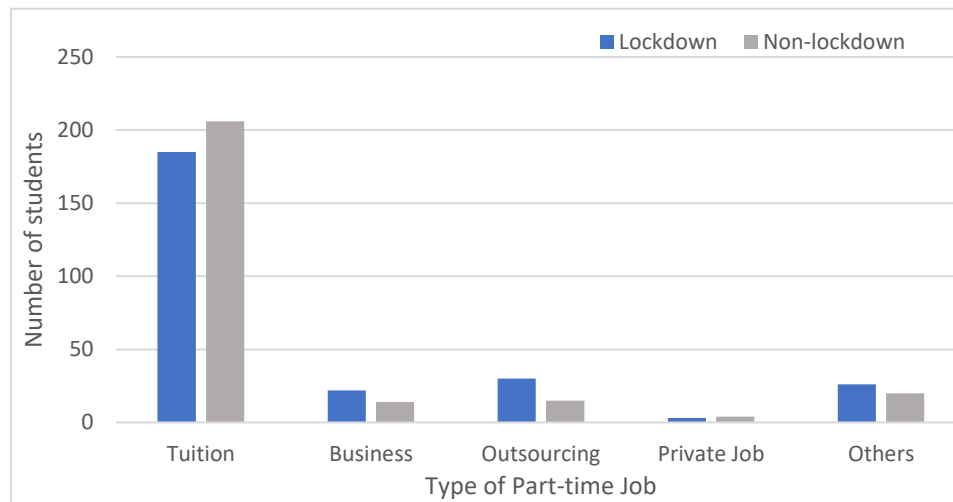


Fig 4.20: Change in involvement with part-time jobs during lockdown and non-lockdown

A significant change is visible in case of visiting relatives/neighbors/ friends. Most students tend to prefer not visiting them in lockdown period. But because of relaxation in lockdown, they increase visiting them during non-lockdown period. Hence, the increased frequency of visiting reflects frequent outdoor movement of the students.

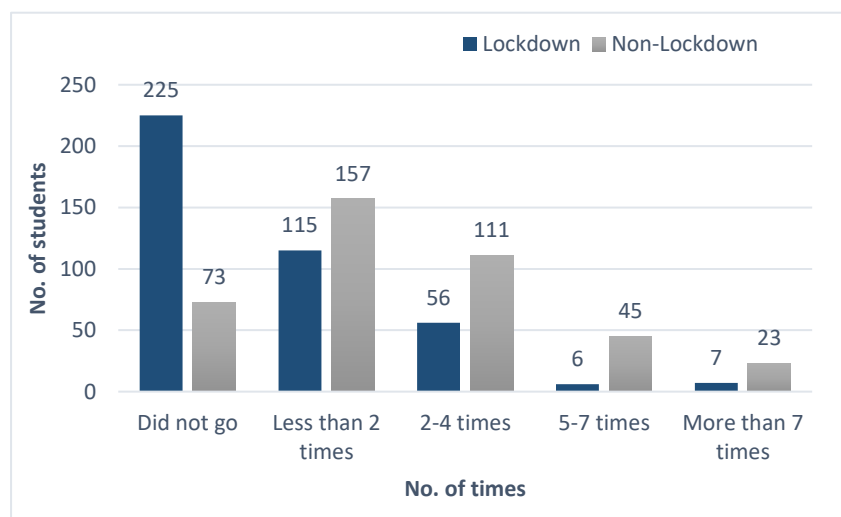


Fig 4.21: Change in no of times visiting friends, relatives and neighbors during lockdown and non-lockdown

5. Relation Between Activity Pattern and Socio-economic Condition

5.1 Involvement with Part-time Job Based on Family Income

A significant number of students who participated in our survey were involved in various part-time jobs. Most of them however was involved with tuition only. Some students were involved with more than one part-time job simultaneously. According to the monthly family income of students, we studied that a large number of students from family income range BDT 20,000-100,00 are mostly involved in part-time jobs. However, the involvement decreased to some extent in time of non-lockdown between family income range BDT 30,001 to 100,00. Rather students belonging to family income less than BDT 10,000 to BDT 30,000 increased their involvement with part time job in non-lockdown period.

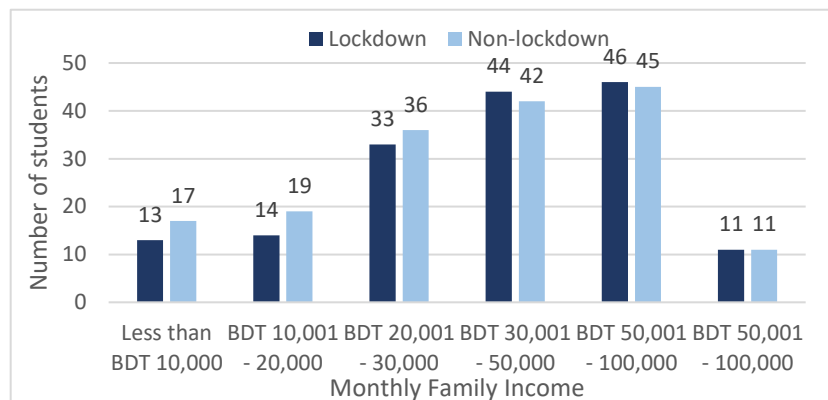


Fig 5.1: Number of students involved with part-time job based on family income

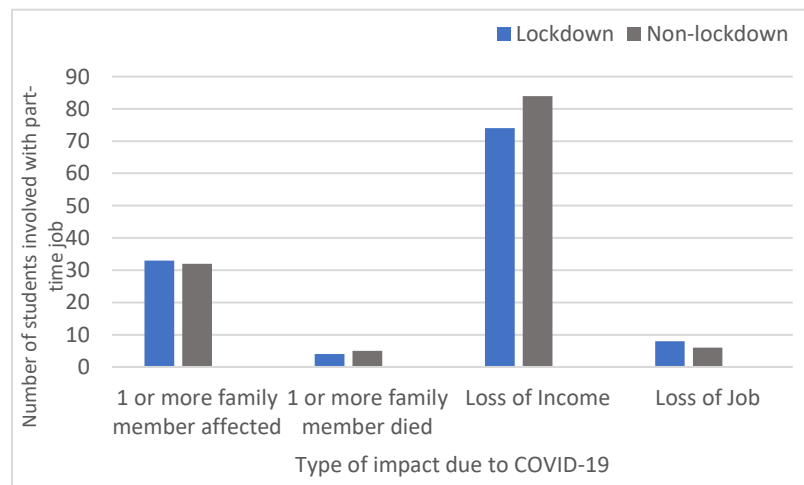


Fig 5.2: Part-time job involvement based on COVID impact

We therefore tried to link the part-time job involvement of students with the impact of COVID-19. We found that students, whose families have been negatively impacted by COVID-19 mostly because of loss of income, are being involved with part time jobs more than others.

The figure 5.2 shows that students affected by loss of income and one or more death of family members have increased involvement with part-time jobs during the non-lockdown period.

5.2 Outside Time Spent According to Family Income

The time spent outside the residence has significantly increased by the students from lockdown to non-lockdown period. Hence, this study focused the time spent according to monthly family income of the students. In time of lockdown period, students from family income BDT 50,00-100,000 spent time outside more than students from other income groups. At this period, time spent outside was least among students from family income of less than BDT 10,000.

However, in time of non-lockdown, time spent outside has drastically increased for students from family income of less than BDT 10,000 BDT 50,000. Also, the spent time has increased for students from every income group and the student belonging to income group of more than 100,000 spent time outside the residence more than others.

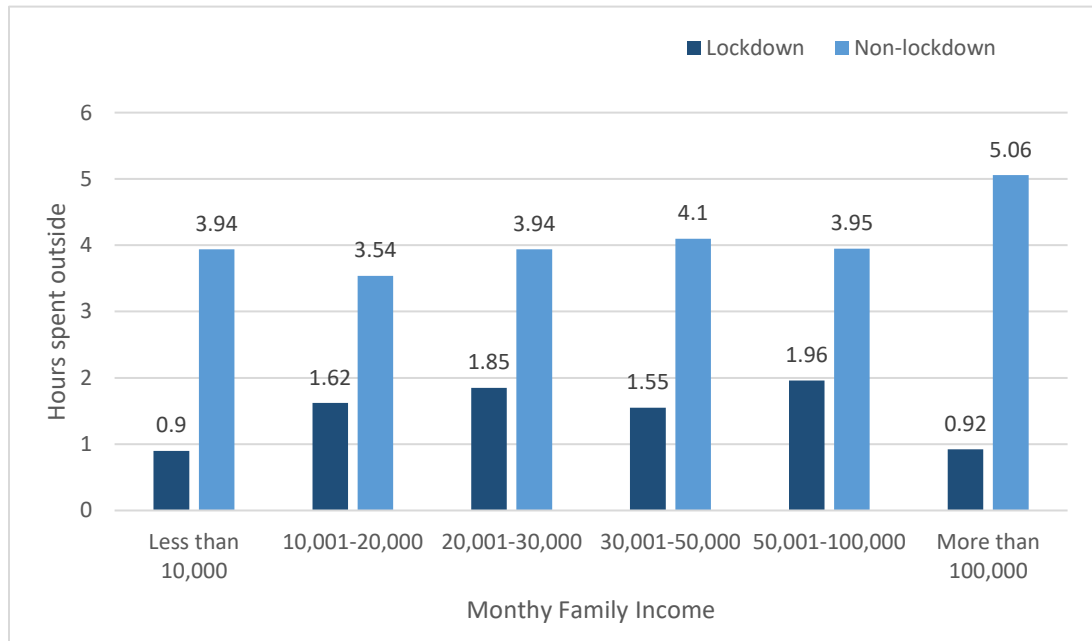


Fig 5.3: Average time spent outside by students based on family income

In this regard, we focused on the reasons of going outside by students based on their monthly family income.

The figure 5.4 shows that students belonging to monthly family income group less than BDT 10,000 to BDT 30,000 are mainly going outside for the purpose of tuition. Then they prioritize medical emergency and essential shopping as most important reasons for which they are getting outside the residence. Eating is the least important reason for students of family income group less than BDT 10,000 to BDT 20,000 which is on the other hand, considered as the prime reason of students from income group BDT 50,000 to more than BDT 100,000 for which they are going outside the residence more frequently during non-lockdown period. As we noticed that university students prefer physical exercise a least important concern, therefore going outside for playing outdoor games is considered as less prioritized reason by all of them.

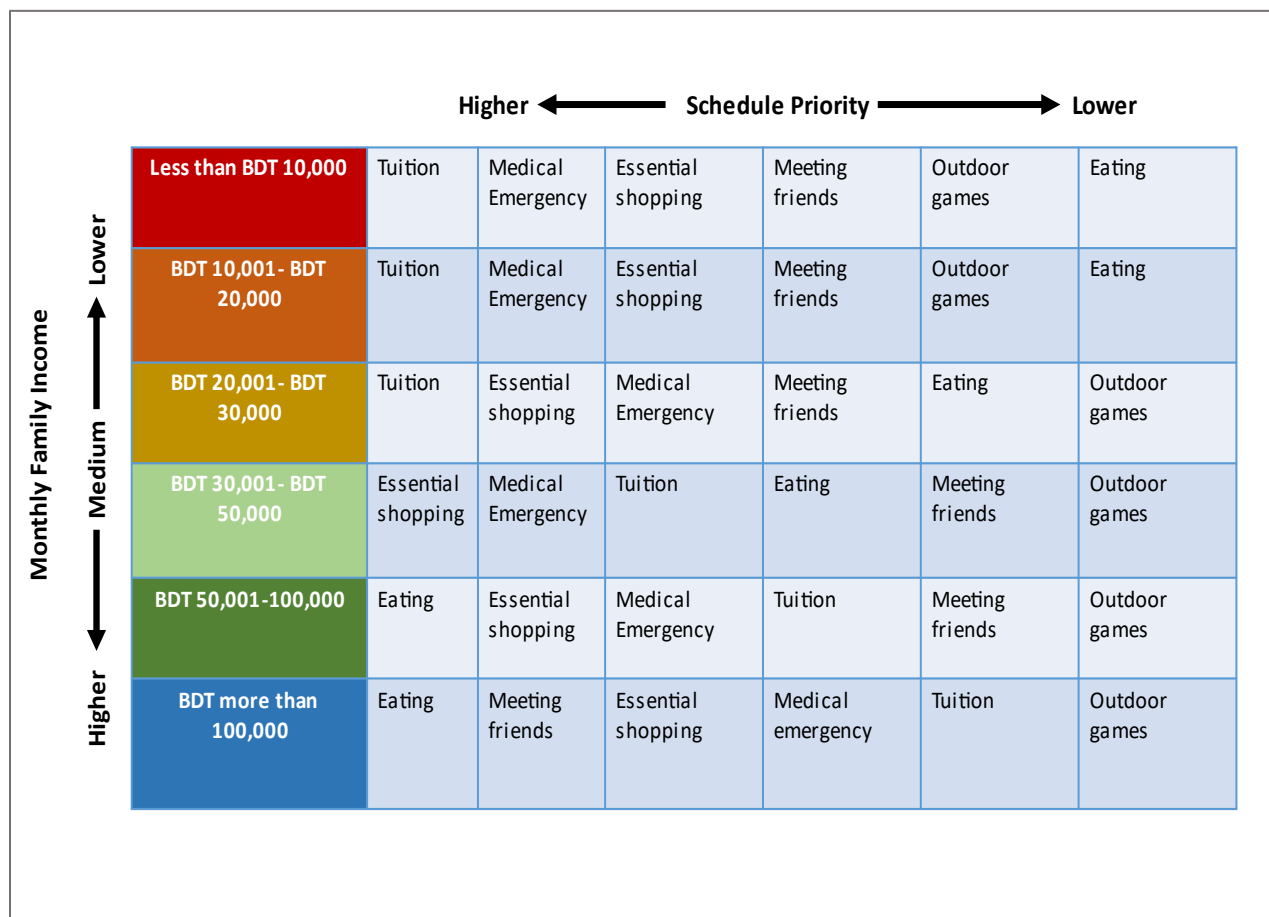


Fig 5.4: Priority ranking of reasons by students for going outside

6. Conclusion

Due to COVID-19 pandemic, the closure of universities has brought about significant changes in the behavior and activity pattern of the university students of Bangladesh. The change in their earlier routine has eventually led them to get involved in various online, indoor, outdoor activities and part-time jobs. The pandemic has impacted the families of the university students in various ways. Decrease in household income has induced many of the students to come out of the residence for earning money by tuition and other part-time jobs. Thus, the outdoor movement of university students has significantly increased from lockdown to non-lockdown period. However, the overall outdoor movement of university students has largely increased during the non-lockdown period and students spent much time outside their residence, which is alarming in terms of the spread of coronavirus.

The analysis of our study has therefore come into the following conclusions:

- In terms of online activities, the students living in Paurashava and Union areas are spending less time in online than students living in the City Corporation areas. As most of the universities are conducting their academic activities through online during the pandemic, students living outside the city corporation areas may face difficulty in attending online activities for various reasons. Poor network connection and deficiency of electronic devices can be significant reasons behind their less time spent. As our study revealed that average family income of the students living in Paurashava and Union areas is much less than others, the incapability of bearing the costs of online activities may compel them to spend less time in online. Further research is needed to identify the reasons behind this to provide adequate support for students living in these regions.
- While staying indoor, students are spending less time in physical activities. Time spent for recreational purpose is noticeably high among students during lockdown, but less importance is given to practice physical exercises. To maintain a healthy lifestyle, physical exercise is considered as a must. Staying refrained from physical exercise may lead the university students to obesity and ill health.
- The outdoor movement of university students has drastically increased during the non-lockdown period simultaneously in City Corporation, Paurashava and Union areas. The time spent outside has also increased in this period. This frequent movement may therefore

induce the spread of coronavirus. It is revealed by this study that students whose one or more family members infected or died of COVID-19 has spent more time outside the residents. Therefore, there is a huge chance that he/she may act as the carrying agent of the virus to his/her family.

- The long-distance travel of the students has also significantly increased from lockdown to non-lockdown period. As a result, movement from one district to another is frequently occurring mostly during the non-lockdown period. This is resulting in the spread of infectious coronavirus from one region to the others. This would eventually made the whole country to suffer from the outbreak of the disease.
- The study identified that the prime reason of the lower to middle family income group's students for going outside is tuition. As these households are suffering from income loss and even job loss of the earning members of their families due to pandemic, the students from these households are being compelled to go outside for earning money so that they can financially support their family. Students are also involved in many other part-time jobs but this may hinder their studies and hamper their academic life.
- On the other hand, students belonging to higher family income are going outside mainly for eating outside foods and meeting with friends. This may result in unnecessary public gathering and induce spreading of coronavirus.

It can be concluded by saying that the COVID-19 pandemic has enabled the university students of Bangladesh to spent time in various activities apart from studying which is eventually helping them to develop their skills and knowledge. However, many of them have been negatively impacted by the pandemic which is compelling them to undergo financial and familial crisis. It is therefore needed to identify the problems that are being faced due to pandemic by the university students living in City Corporation, Paurashava and Union areas through further research. The university authorities as well as the Government should stand by the distressed students to support them both financially and mentally.

7. Recommendation

Providing better online facilities: As students living in Paurashava and Union areas are spending less time online (most probably for poor network quality), providing them a better network access is necessary so that they can attend the online class without any disruption. Also providing internet loan for distressed students is urgent that needs to be taken under consideration by university authorities,

Creating awareness for physical exercise: As this study identified that university students are paying less attention to their health and therefore, not spending much time for physical exercise, awareness programs can be spread even via online platforms to encourage them for doing regular physical exercise.

Imposing strict restriction over frequent outdoor movement: Students are roaming outside more frequently during non-lockdown period. To prevent the spread of coronavirus, the movement of not only students but also all the people need to be restricted both in lockdown and non-lockdown period.

Restricting long distance travel: The travelling of students from one district to the others needs to inhibit as students may act as carrying agent of the virus and spread it to his/her family as well as to the entire community.

Providing support to the distressed students: Providing financial support to the students who are currently suffering from economic crisis may prevent them to go outside more frequently for tuition and other part-time jobs.

Encouraging students to earn via online: Students should be encouraged to earn without going outside the residence. Online tuition needs to be encouraged. Also, the field of freelancing is developing day by day. Proper training can be given to students so that they can gain necessary skills to earn using online platforms.

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Appendix-A: Questionnaire

Activity Pattern of University Students during COVID-19 Pandemic in Bangladesh

Assalamualaikum/Adab. We are the Level-2, Term-1 students of Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology (BUET). We are conducting a research on 'A Study on Activity Pattern of University Students during COVID-19 Pandemic in Bangladesh'. To fulfill objectives of our research we need to know about your activity pattern at the lockdown and non-lockdown period during the COVID-19 period. This research is designed solely for academic purpose and all your responses will remain confidential. We shall be extremely grateful if you agree to co-operate with us and give some of your time to answer few questions.

We thank you in advance for your kind co-operation.

Email _____

General Information

1. Gender

- ☐ Male ☐ Female ☐ Others

2. You are living in a –

- ☐ City Corporation Area ☐ Paurashava ☐ Union Area

3. You are residing in –

- ☐ House owned by family ☐ Government quarter ☐ Dormitory ☐ Rental House ☐ University hostel ☐ Others

4. Monthly family income to the best of your knowledge

- ☐ Less than BDT 10,000 ☐ BDT 10,001-20,000 ☐ BDT 20,001-30,000 ☐ BDT 30,001-50,000 ☐ BDT 50,001-100,000 ☐ More than BDT 100,000

5. Occupation of Household Head

- ☐ Government Service ☐ Private Job ☐ Business ☐ Agriculture ☐ Others

6. Number of Earning Member in the family: _____

7. Number of Family Member: _____

8. Has your Family affected by COVID-19?

- ☐ Yes ☐ No

9. How your family is affected by COVID-19?

- ☐ 1 or more family member affected
☐ 1 or more family member died
☐ Loss of income
☐ Loss of job
☐ Increased income
☐ More job opportunity
☐ Others

Educational Information

10. What is the name of Your Educational Institute?

11. In which level-term/ Semester/ Year you are currently studying?

If you are studying in Level-1, Term- 1, write 1-1. If you are studying in 1st semester, write 1sem. If you are studying in 1st year, write 1y

Information on Online Class

12. Did your university organize Online Class?

- ☐ Yes ☐ No

12 (a). If your answer Yes, when it Started (Month and Year). If No, then write N/A.

12 (b). Was it held during complete Lockdown/ Shut Down?

- ☐ N/A ☐ Yes ☐ No

12 (c). On Average, how much time was the class held?

- ☐ N/A ☐ Less than 3 hours/week ☐ 3 to 8 hours/week ☐ 8 to 15 hours/week ☐ 15 to 20 hours/week ☐ More than 20 hours/week

13. Did your university organize Online Examination?

- ☐ Yes ☐ No

Government declared complete lockdown all over the country in between 27th March 2020 to 30th May 2020 and Shut down from 1st July 2021; For the other time period as Relaxed Lockdown. Consider 27th March 2020 to 30th May 2020 and Shut down from 1st July 2021 as Lock down period and the other time when the university is physically closed as non-lockdown period to answer the questions.

Online Activities

14. How much time did you spend on studying other than class on an average day?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How much time did you spend on other online activities (including reading news, using social media, online entertainment, online gaming but excluding online work) on an average day?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. How much time did you spend on online work on an average day?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. How many hours did you sleep (On an average Day)?

	Less than 4 hours	4 to 8 hours	8 to 10 hours	More than 10 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. How much time did you spend in helping your family members in household works (On an average Day)?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. How much time did you spend with family (On an average Day)?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. How much time did you spend on studying (On an average Day)?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. How much time did you spend for recreation (Watching TV, indoor game) (On an average Day)?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. How much time did you spend in physical exercise (On an average Day)?

	Didn't spend	Less than 1 hour	1 to 2 hours	2 to 3 hours	More than 3 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Outdoor Activities

23. Number of times spending outside the residence per week (On an average Week)

	Didn't spend	Less than 2 times	2 to 4 times	5 to 7 times	More than 7 times
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. What were the reasons for going outside?

Eating	Essential Shopping (for example day to day shopping)	Tuition	Meeting Friends	Medical Emergency	Outdoor Games	Others
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Lockdown Period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-lockdown Period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24 (a). If you select Others, please specify it _____

25. How many hours did you spend outside (On an average week)?

	Didn't spend	Less than 1 hour	1 to 3 hours	3 to 6 hours	More than 6 hours
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Did you travel long distance in this period?

	Didn't spend	Less than 2 times	2 to 4 times	5 to 7 times	More than 7 times
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. Did you engage in any part time job?

	Yes	No
Lockdown Period	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>

28. Which type of part time job did you get engaged in?

	Business	Tuition	Outsourcing	Private Job	Others
Lockdown Period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-lockdown Period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. How many times did you visit relatives/neighbors/friends per week?

	Didn't spend	Less than 2 times	2 to 4 times	5 to 7 times	More than 7 times
Lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-lockdown Period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix-B

List of Surveyed Universities	
1. Bangladesh University of Engineering and Technology	14. Sylhet Agricultural University
2. Khulna University of Engineering and Technology	15. Patuakhali Science and Technology University
3. Jahangirnagar University	16. Comilla University
4. Dhaka University	17. Sher-e-Bangla Agricultural University
5. Chittagong University of Engineering and Technology	18. Bangladesh University of Professionals
6. Shahjalal University of Science and Technology	19. Jagannath University
7. Bangladesh University of Textiles	20. Rajshahi University
8. Jatiya Kabi Kazi Nazrul Islam University	21. University of Barisal
9. Hajee Mohammad Danesh Science and Technology University	22. Noakhali Science and Technology University
10. Rajshahi University of Engineering and Technology	23. Bangabandhu Sheikh Mujibur Rahman Agricultural University
11. Islamic University	24. Bangamata Sheikh Fojilatunnesa Mujib Science & Technology University
12. Bangabandhu Sheikh Mujibur Rahman Science and Technology University	25. University of Chittagong
13. Bangladesh Agricultural University	

Appendix-C

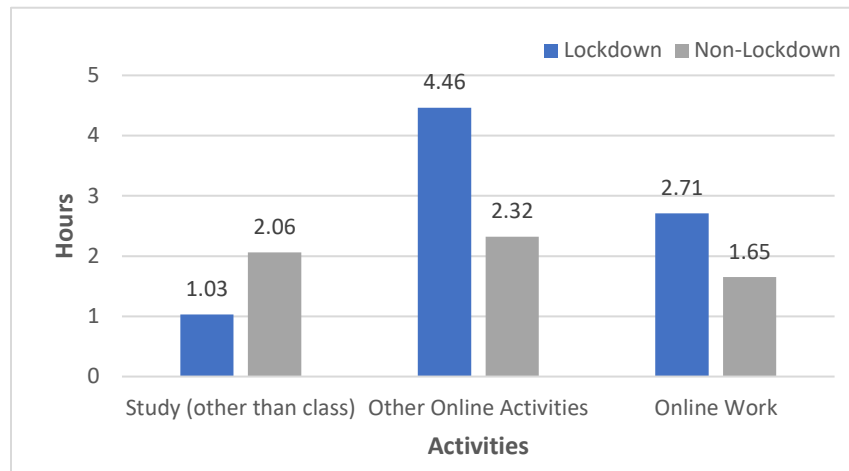


Fig 4: Change in online activity pattern during lockdown and non-lockdown

Appendix-D

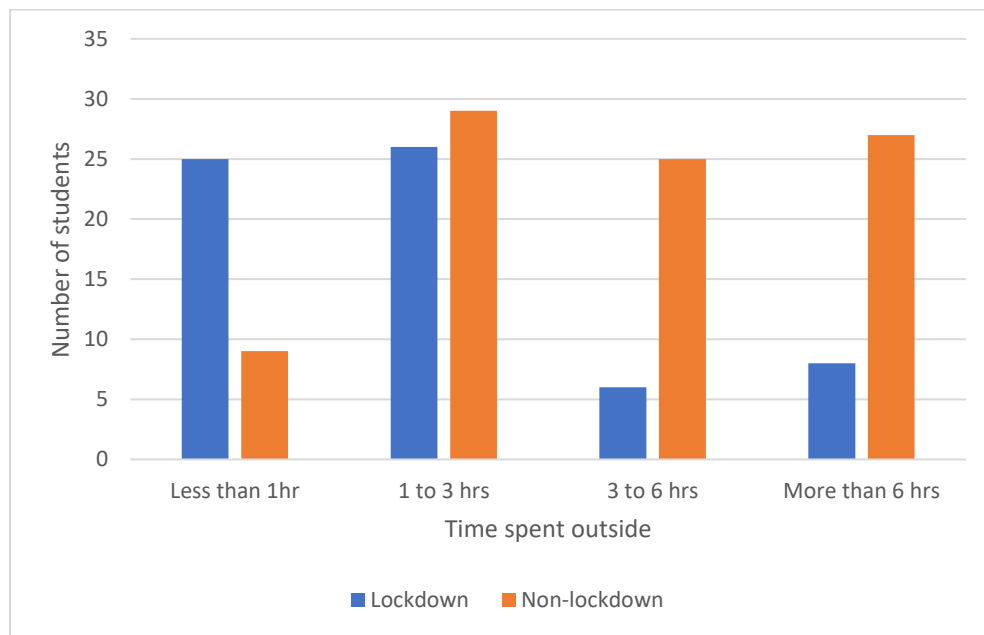


Fig: Outside time spent of students whose 1 or more family members affected or died of COVID-19

Appendix-E

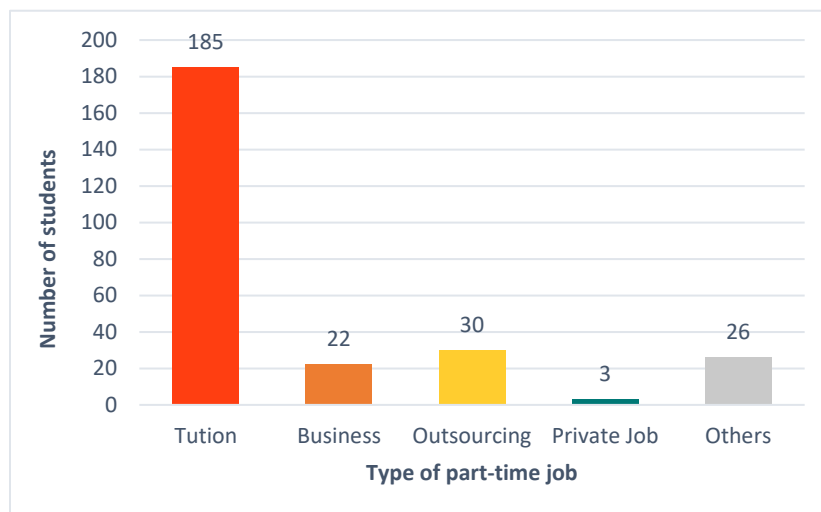


Fig: No of students involved with part-time jobs (during lockdown)

Appendix-F

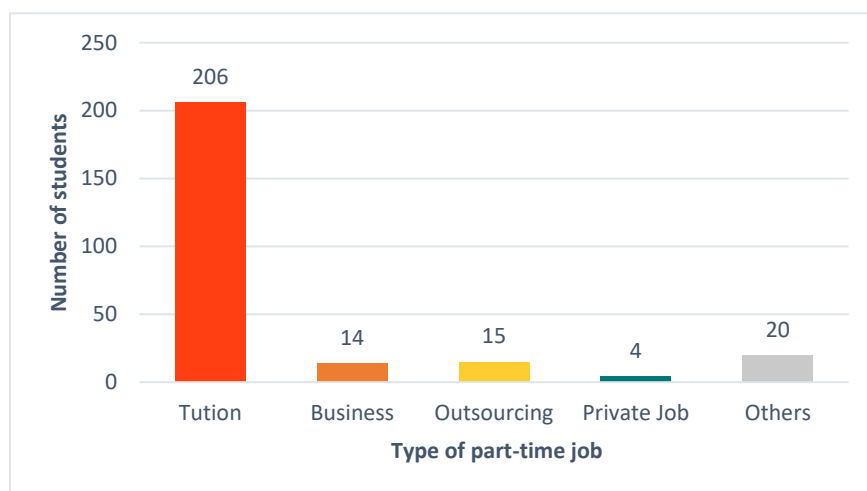


Fig: No of students involved with part-time jobs (during non-lockdown)

Appendix-G: Glossary

Pandemic: A pandemic is the worldwide spread of a new disease, such as a new influenza virus or the coronavirus, COVID-19.

Coronavirus: Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases, for example: Respiratory Syndrome. A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans.

COVID-19: COVID-19 is a disease caused by a new strain of coronavirus.

Lockdown: A lockdown is a restriction policy for people or community to stay where they are, usually due to specific risks (for example: Pandemic) to themselves or to others if they can move and interact freely (Wikipedia).

City Corporation: A city corporation or municipal corporation is the legal term for a local governing body. The term can also be used to describe municipally owned corporations.

Paurashava: Pourashava means a secondary level town in the territory of the city corporation (Law Insider).

Union: Union councils (or union parishads or rural council or Unions) are the smallest rural administrative and local government units in Bangladesh.

Online class: Online class is an electronically supported learning system that relies on the Internet for teacher/student interaction and the distribution of class materials.

Long distance travel: Similar to daily trips, long-distance travel includes trips made by all modes, including personal vehicle, airplane, bus, train, and ship; and for all purposes, such as commuting, business, pleasure, and personal or family business (Bureau of Transportation Statistics).

Online tuition: Online tuition is one-to-one tuition conducted using internet where tutor and student are not in the same room, or even the same continent.

Freelancing/Outsourcing: Outsourcing is a business practice in which services or job functions are conveyed to a third party. The whole process is usually conducted using internet.