A Study on-

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

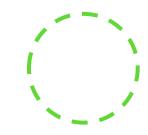**Group:** 05

Roll: 1815001,1815002,1815007,1815023,1815027

Course No: Plan 204-Social and Physical Survey

Level 2/ **Term** 1

Dept. of Urban and Regional Planning

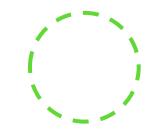*Bangladesh University of Engineering and Technology*

Background of the Study

- COVID-19 was **first identified** in Wuhan in the Hubei province of China in **December, 2019.**

- Novel Coronavirus was declared a public health emergency of international concern on **January 30,2020**.(WHO, 2020)

- Announced as a global pandemic on **March 11, 2020**.(WHO, 2020)

- Bangladesh diagnosed the **first COVID-19 case** on **March 8, 2020** (IEDCR, 2020).

- Government of Bangladesh declared the **closure of educational** institutions on **March 17, 2020.**

- The Government of Bangladesh **declared complete lockdown** all over the country in between **27th March, 2020 to 30th May, 2020.**

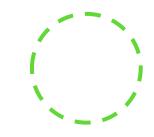- Again **strict Lockdown** from **1st July, 2021.**

Background of the Study

- **Closure of educational** institutions is imposing **threatening impact**: hindering university students' studies, disrupting their daily routines and habits, and impacting their mental health (Islam et al., 2020)

- A very new phenomenon called **"Online Class"** has been introduced to the education system.

- **University students** have undergone through **significant changes** in their regular **behaviors and 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.
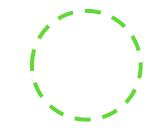
Objectives of the Study

1. To **identify the general activities** of the university students of Bangladesh during the **non-lock down 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**

Scope of the Study

Focused only on the physical activities performed by students during mentioned period. The mental wellbeing of students has not been depicted here.

Comparison of activities performed before and after the pandemic is not the focus of this study.

Excluded students from medical colleges and colleges that are affiliated with universities.

The activity pattern of primary and secondary level students is not included.

Limitations

The survey was **conducted virtually through Google form. Face to face interaction** with students was **not possible** due to pandemic.

A **large group of students** who have **no access on Google Account** have been unfortunately **eliminated** from the survey process.
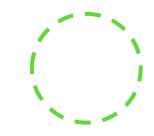
The study **may not reflect the actual scenario of students** who **belong to general economic level.**

The survey became **biased by accessing** only those **students with certain privileges**.

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.**

The survey was **unable to reach equal number** of students from **City Corporation, Paurashava and Union areas**.

Methodology

Literature Review:

According to **UNESCO**,
- **191 countries** have implemented **nationwide closure of educational institutes.** (Begum et al., 2020).
- **5** have implemented **local closures** (Begum et al., 2020).
- Impacting about **98.4 percent of the world's student** population affecting approximately **1.723 billion learners** (Begum et al., 2020).
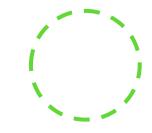
In Bangladesh, there are approximately **four million students** in over **5000 tertiary educational institutions**, including public and private universities, professional institutions, and affiliated colleges (Dutta et al., 2020).

The number of University students reported Covid-19 positive are not negligible. (Daily star,2020)

COVID-19 has negatively impacted on **educational, financial** and **psychological aspects of students** of public universities of Bangladesh (Begum et al., 2020)

Methodology

Literature Review:

- Staying quarantined and out of the university environment and schedule for a long time, students may experience: **Stress, anxiety, anger, boredom, loneliness** etc.

- 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).

- 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.

- Household income 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).

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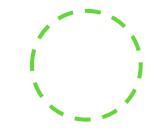# **Methodology**

Literature Review:

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)

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.

Some **organizations are established** by the students of Bangladesh that are helping in COVID-19 relief efforts with crowd funding.(The Daily Star, 2020)

However **hygiene rule is a must for students** as a study of **England** revealed that spread of virus increased there due to **relaxation of lockdown, reopening of university campus and large-scale movement of students**.

Methodology

Sample Design:

Simple random sampling method was used for designing the sample.

The students who are enrolled in **undergraduate degrees in public universities of** Bangladesh were included in the **sampling frame.**

Students studying in **private universities** and enrolled in **post graduate** courses were automatically **eliminated**.

409 students from different public university of Bangladesh have been surveyed for the study.

Methodology

Preparation of Tools for Data Collection:

Formulation of Co-ordination Schema

To identify which **variables needed to be measured** to know the activity pattern of university students.

The Co-ordination Schema **consisted of all possible activities** that can be performed by university students during pandemic period.

Preliminary Survey

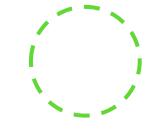**A sample questionnaire** was prepared after formulating the Co-ordination Schema.

Online based pilot survey was conducted **via Google Form** over nearly **25 students** from different universities in and outside Dhaka.

Preparation of Questionnaire

The **questionnaire enquired** about:

- The **academic and financial background** of the students.

- The **impact of COVID-19 on university students** and the **activities performed** by students.

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Methodology

Data Collection:

Surveyed over **409 students** from different public universities of Bangladesh with online survey tool: **Google Form.**

429 respondents submitted the survey form after providing informed consent.

❑ Some responses contained missing data and wrong data as some students enrolled in medical colleges and post graduate degrees also responded to the questionnaire. Hence, after cleaning those data, 409 were included in the final analysis.

Methodology

Data Analysis:

Compiled through the use of Microsoft **Excel** (2016)

Analyzed and interpreted through the use of **graphs**, tables etc.

The **average values** 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

Obtained Data
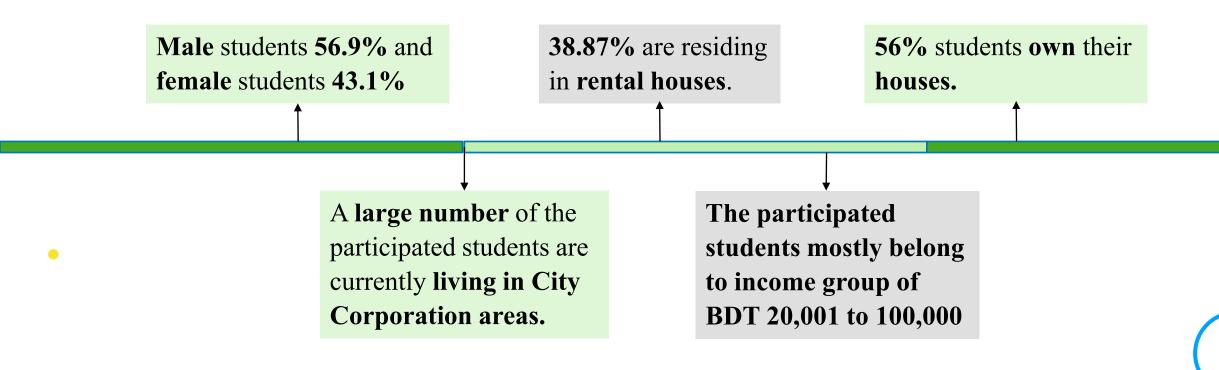
The **tables** mostly **contain the frequency distribution** of **activities performed** on various time intervals and the **average time spent** have been **interpreted** from the tables.

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.

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Demographic and Academic Profile of Participated University Students

Demographic Profile and Financial Background:

Male students **56.9%** and **female** students **43.1%**

38.87% are residing in **rental houses**.

56% students **own** their houses.

A **large number** of the participated students are currently **living in City Corporation areas.**

The participated students mostly belong to income group of BDT 20,001 to 100,000

Frequency Distribution of Demographic and Financial Characteristics

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
Number of Family Members		
<4	53	12.95
$4 \geq n \geq 6$	335	81.9
>6	21	5.15

Variables	Frequency (n)	(%)
Monthly Family Income		
Less than 10,000	30	7.33
Tk 10,001-20,000	47	11.49
Tk 20,001-30,000	90	22
Tk 30,001-50,000	110	26.89
Tk 50,001-1,00,000	100	24.47
More than 1,00,000	32	7.82
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

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Impact of COVID-19 on Participated Students

- **28.12%** participated students was **affected** by COVID-19.
- Mostly affected **Financially**
- **Mentioned** about **Mental-ill** being.
- **48.89%** students informed of **not being affected** negatively.
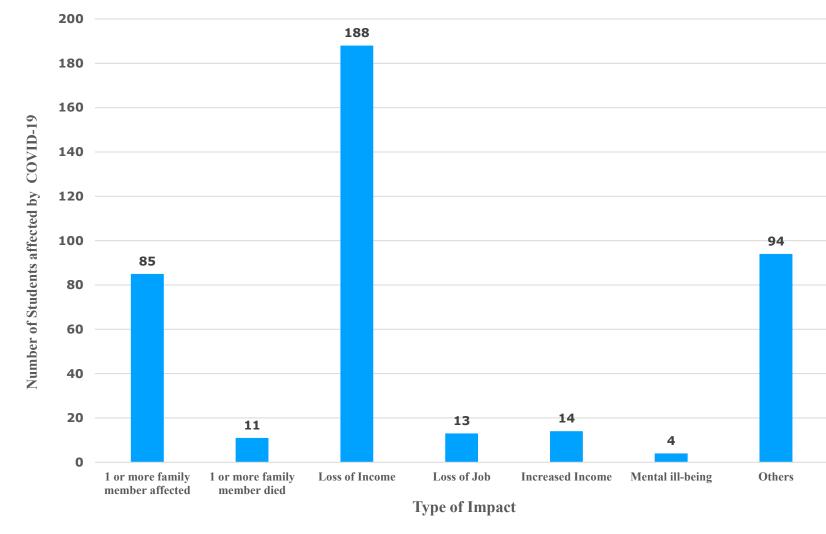
Fig 01: Number of participated university students affected by COVID-19

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Academic Background

Introduction and Continuity of Online Class

- **99.5%** attending online class
- Most universities started online class between **June,2020 to August,2020**
- **73.35% universities** continued online class even during lockdown period
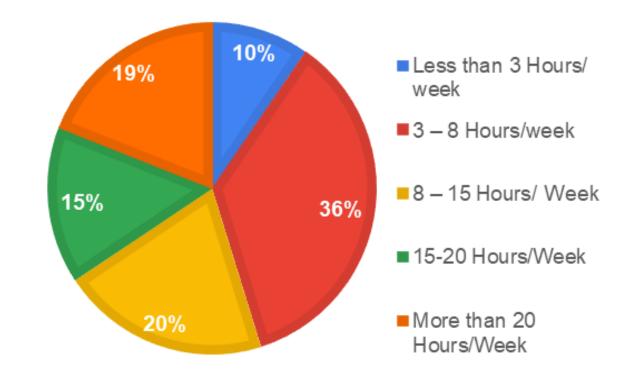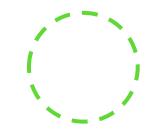
Fig 02: Time spent for online class by university students (per week)

Legend:
- Less than 3 Hours/week — 10%
- 3 – 8 Hours/week — 36%
- 8 – 15 Hours/ Week — 20%
- 15-20 Hours/Week — 15%
- More than 20 Hours/Week — 19%

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

Online Activity
Pattern during Lockdown Period

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
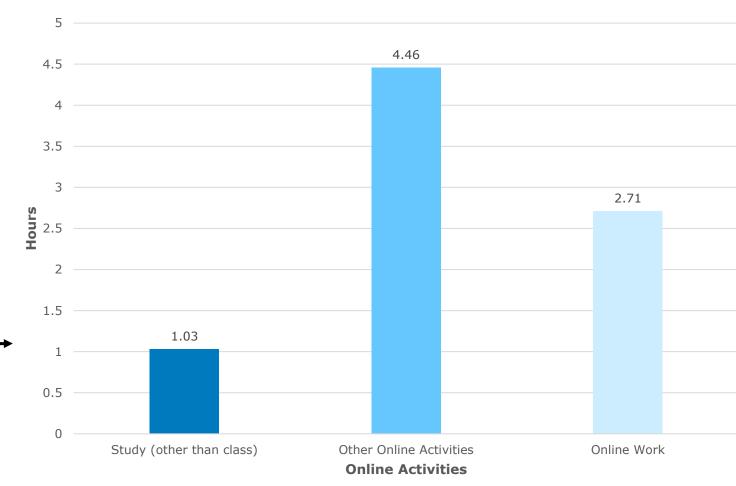
Fig 03: Average time spent for online activities by university students during lockdown (on an average day)

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Online Activity
Pattern during Non-lockdown Period

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
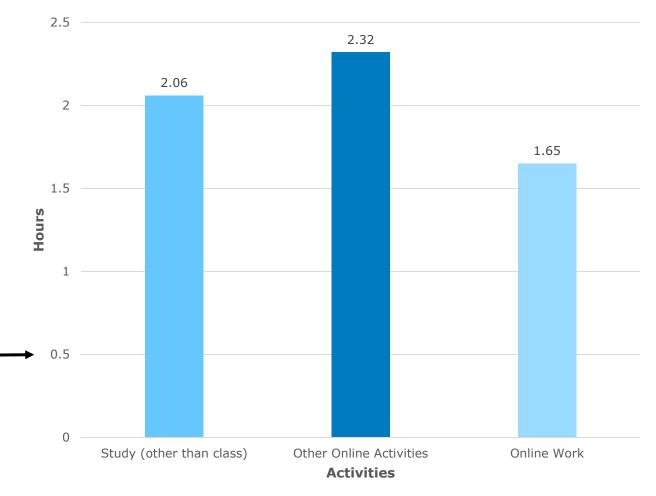
Fig 04: Average time spent for online activities by university students during non-lockdown (on an average day)

Online Activity

Change in Pattern between Two Periods

- Time spent for **studying increased** more than 1 hour from lockdown to non-lockdown period.
- Average time spent for **recreational purposes decreased** more than 2 hours.
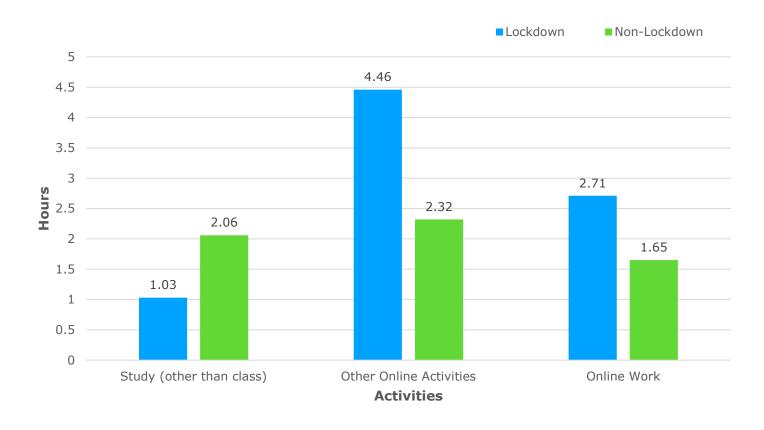
Fig 05: Change in online activity pattern during lockdown and non-lockdown

Time spent for online activities is higher in students among City Corporation areas.
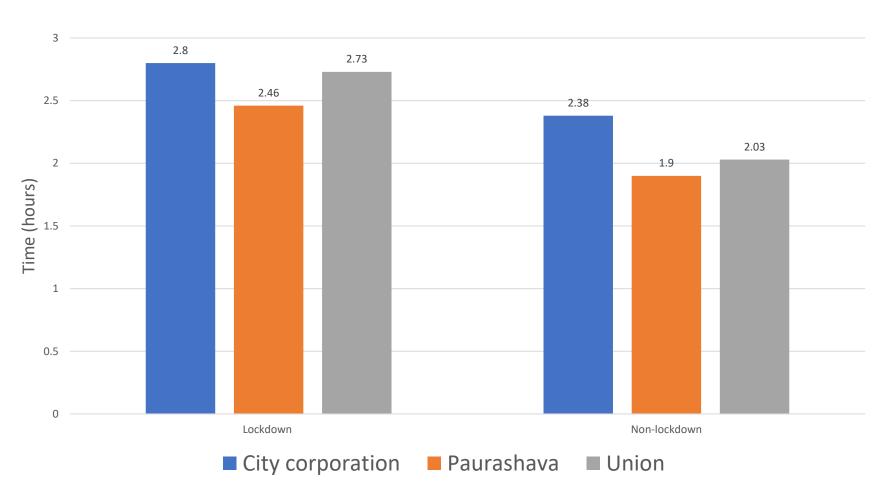
Fig 06: Average time spent in online activities based on geographic location

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Indoor Activity
Pattern during Lockdown Period

Frequency distribution of time spent on daily indoor activities and average time spent (Lockdown period)
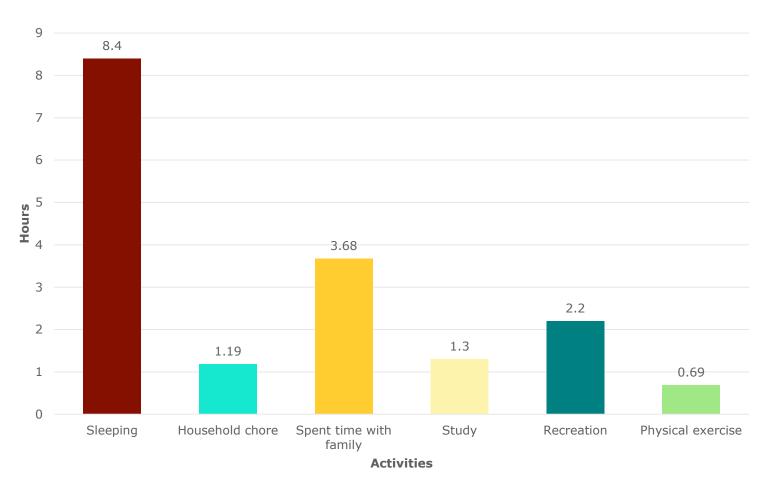
Time \ Activity	Household chore	Spent time with family	Study	Recreation
Didn't spend	44	18	93	50
Less than 1 hour	168	59	137	95
1-3 hours	151	113	136	140
3-6 hours	34	103	32	96
More than 6 hours	12	116	11	28
Average time spent	1.19 hours	3.68 hours	1.3 hours	2.2 hours

Time \ Activity	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

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

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Indoor Activity
Pattern during Lockdown Period

Fig 07: Average time spent for daily indoor activities (lockdown period)

Spending time with family and for **recreation** has been **more prioritized** during lockdown.

Indoor Activity
Pattern during Non-lockdown Period

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

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Indoor Activity
Pattern during Non-lockdown Period
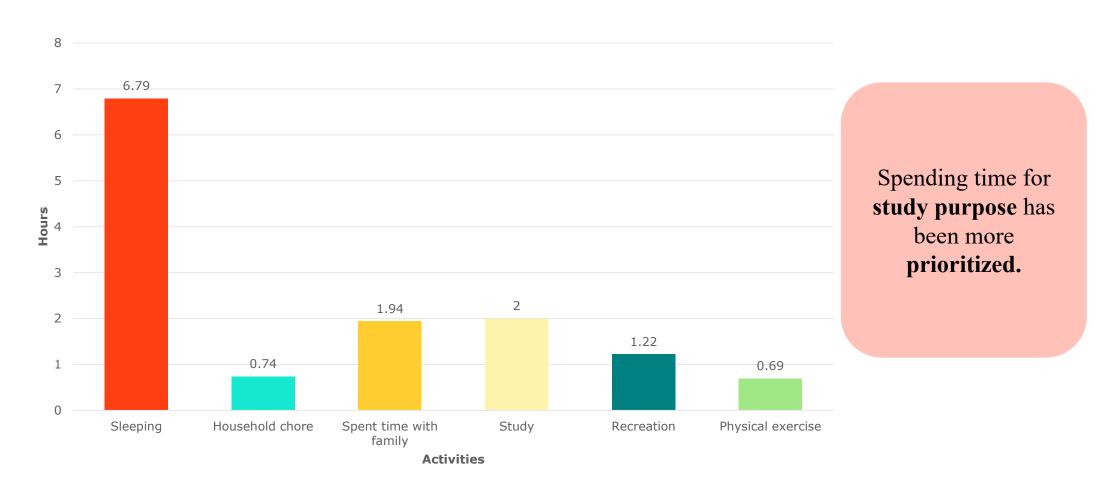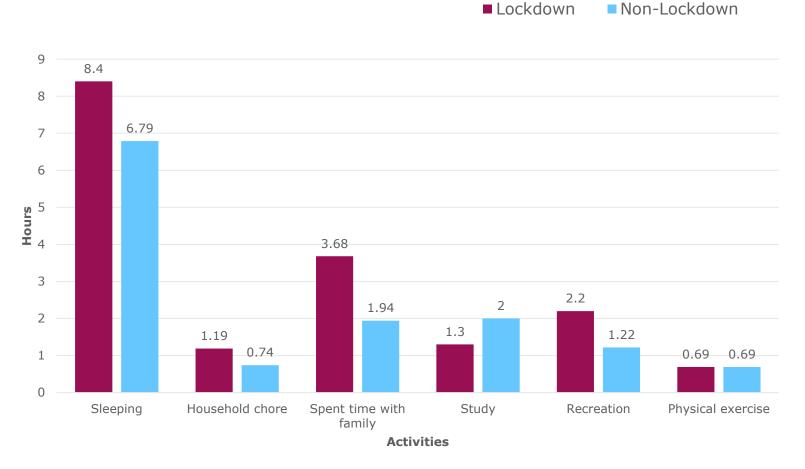
Fig 08: Average time spent for daily indoor activities (Non-lockdown period)

Spending time for **study purpose** has been more **prioritized.**

Indoor Activity
Change in Pattern between Two Periods

Fig 09: Change in online activity pattern during lockdown and non-lockdown
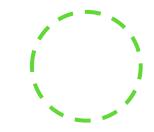
During **non-lockdown**, **study time** has **increased** and time spent for **other indoor activities** has **decreased**.

Outdoor Activity

Pattern during Lockdown Period

More than **43% students** haven't preferred to go outside in lockdown.
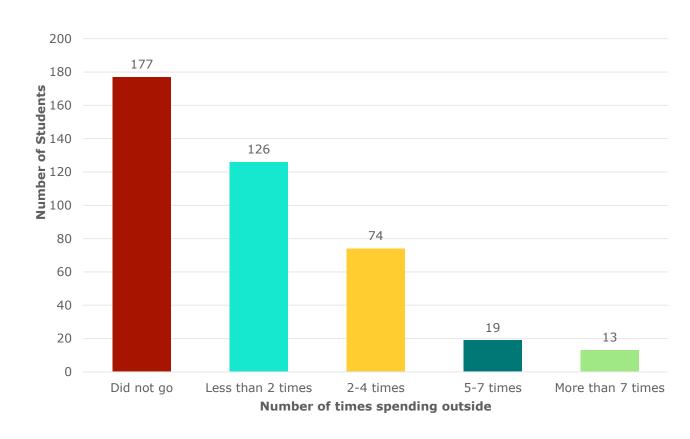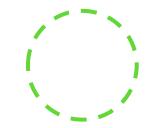
Fig 10: Number of times spending outside the residence per week (during lockdown)

Outdoor Activity
Pattern during Lockdown Period

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

Location / Time	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
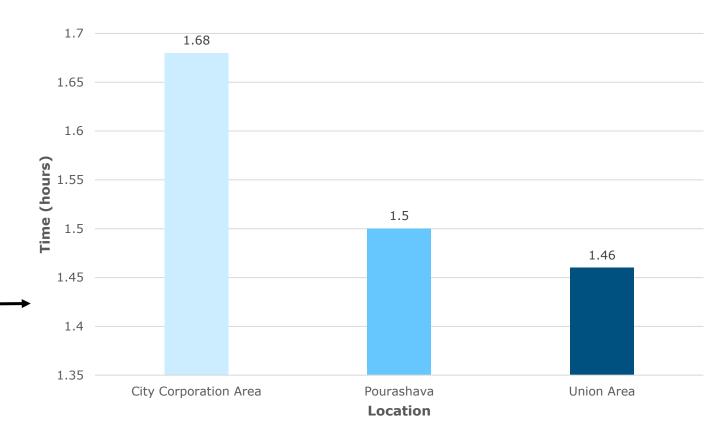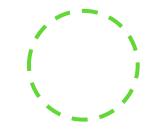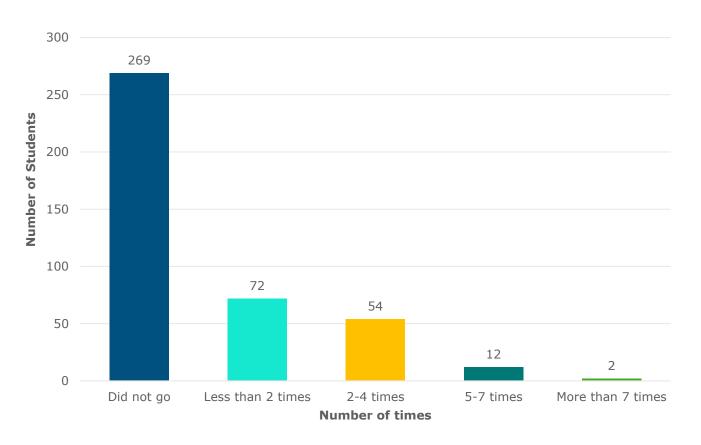
Fig 11: Average time spent outside based on location

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Outdoor Activity

Pattern during Lockdown Period

Fig 12: Number of times went for long distance travel
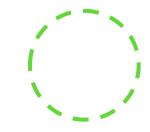
65.77% refrained themselves from long distance travel.

Outdoor Activity

Pattern during Non-lockdown Period

Most students (nearly **32%**) attempted to **go outside** for **2-4 times.**
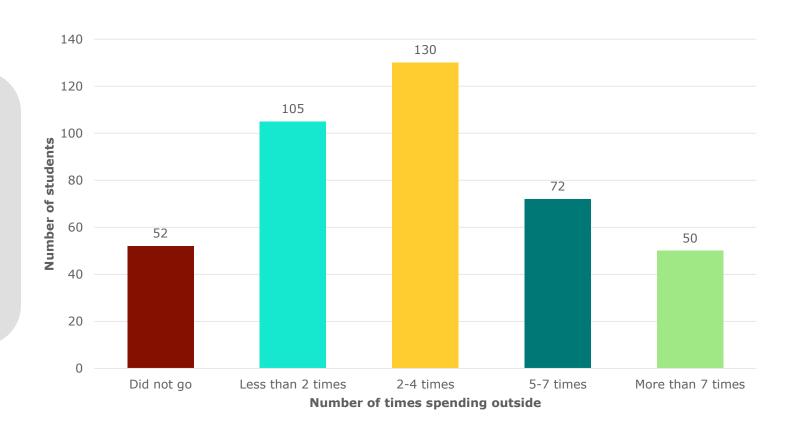
Fig 13: Number of times spending outside the residence per week (during non-lockdown)

Outdoor Activity
Pattern during Non-lockdown Period

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

Location / Time	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

Non-Lockdown Period
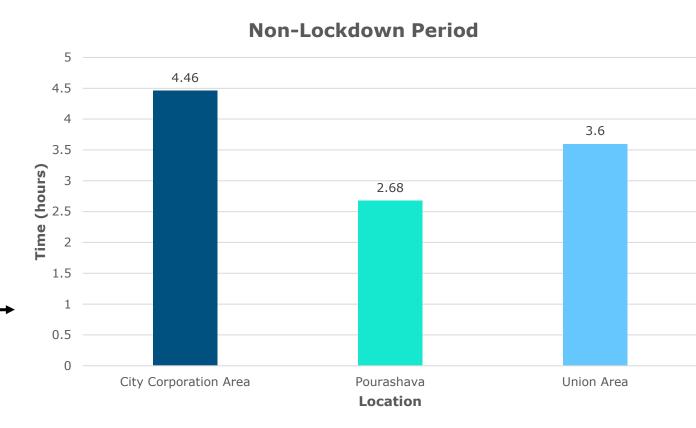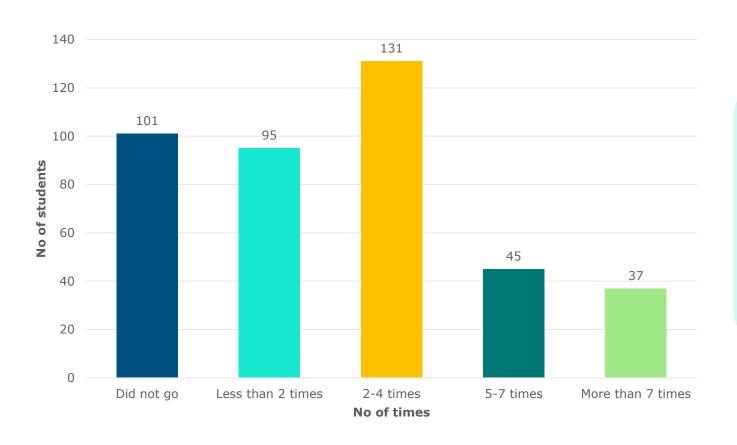
Fig 14: Average time spent outside based on location (per week)

Outdoor Activity
Pattern during Non-lockdown Period

Fig 15: Number of times went for long distance travel
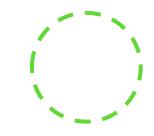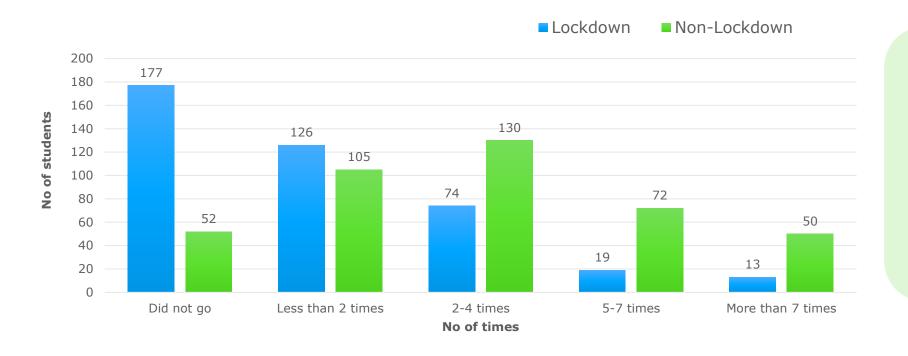
55.25% went to **travel long distance** for **less than 2 times to 4 times**.

Outdoor Activity

Change in Pattern between Two Periods

Fig 16: Change in no. of times spending outside during lockdown and non-lockdown (per week)
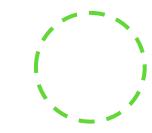
Frequency of moving outside the residence **increased** during **non-lockdown period**.

Outdoor Activity

Change in Pattern between Two Periods

Legend: ■ Lockdown ■ Non-Lockdown

Time spent outside is higher among students of City Corporation areas.
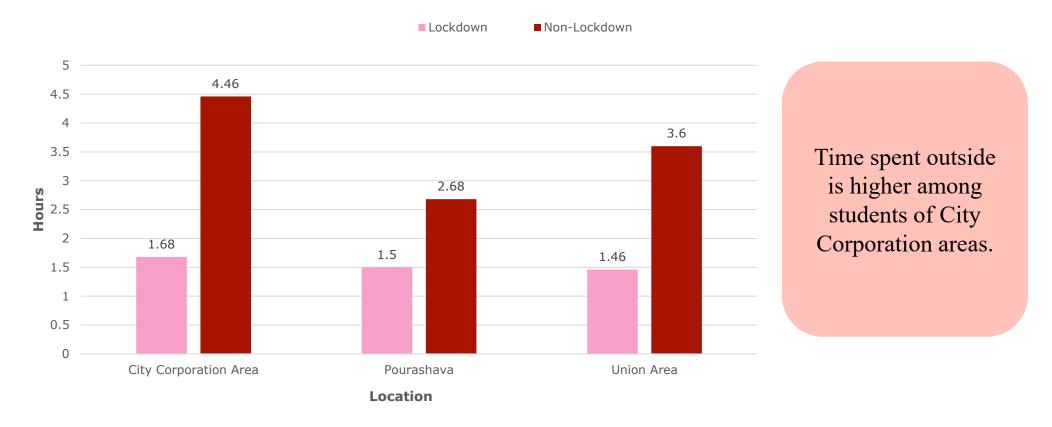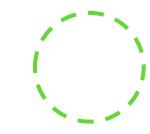
Fig 17: Change in no. of hours spending outside during lockdown and non-lockdown (per week)

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Outdoor Activity

Change in Pattern between Two Periods

Fig 18: Change in no. of times went for long distance travel during lockdown and non-lockdown

Travelling to long distance increased during **non-lockdown** period.

Outside time spent of students whose 1 or more family members affected or died of COVID-19
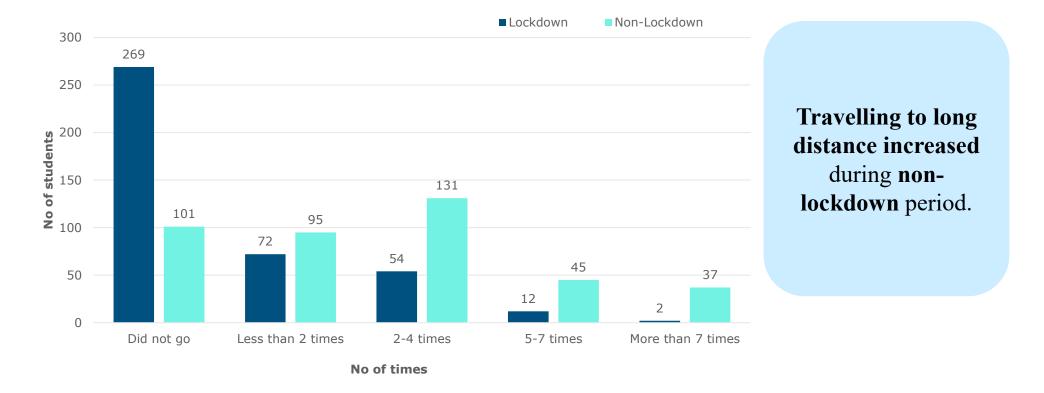
Time spent outside increased in **non-lockdown** among students affected by COVID-19.
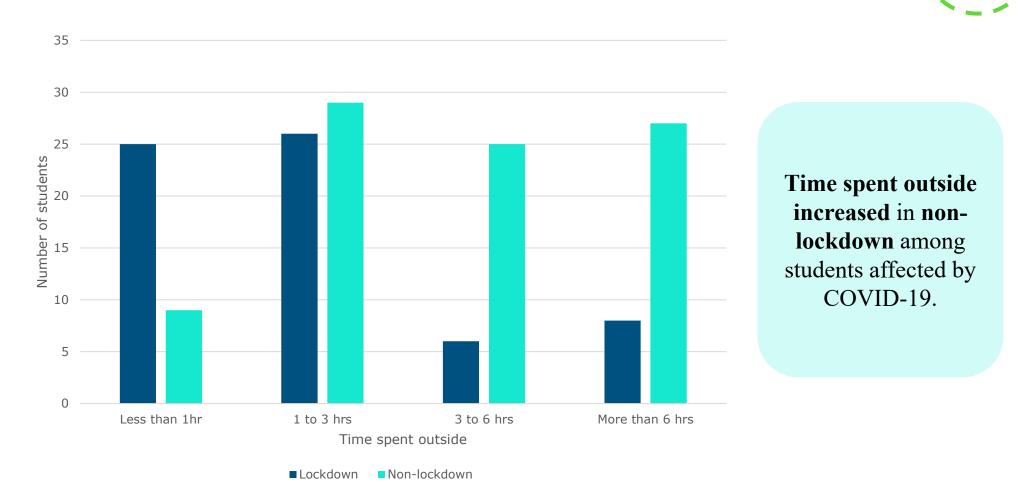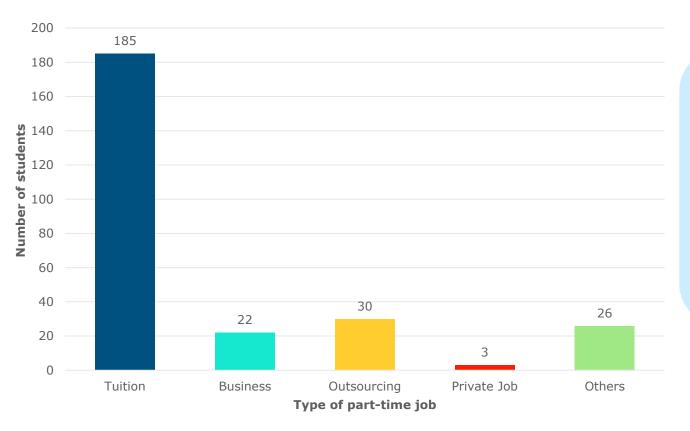
Fig 19: Outside time spent of students whose 1 or more family members affected or died of COVID-19 during lockdown and non-lockdown

Miscellaneous Activity
Pattern during Lockdown Period

Fig 20: No of students involved with part-time jobs
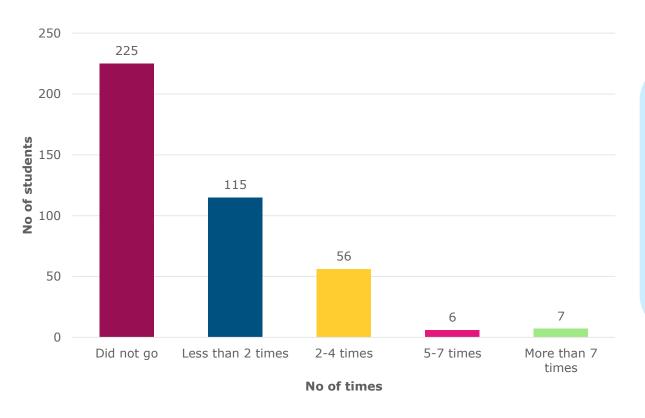
More than **45%** students were involved with **tuition**

Miscellaneous Activity
Pattern during Lockdown Period

Fig 21: No of times visiting friends, relatives and neighbors
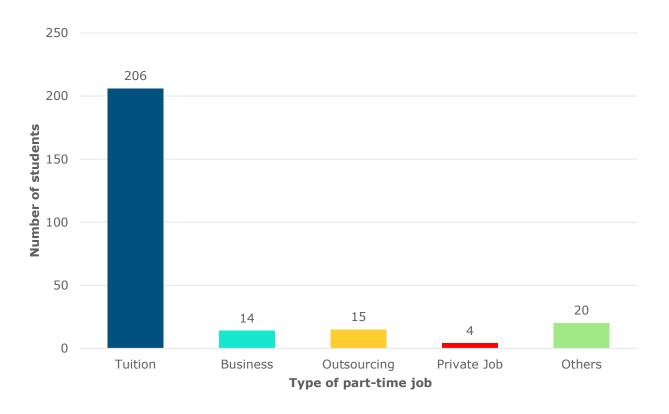
In terms of visiting the dear ones, **55%** didn't prefer to meet them.

Miscellaneous Activity

Pattern during Non-lockdown Period

Fig 22: No of students involved with part-time jobs
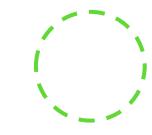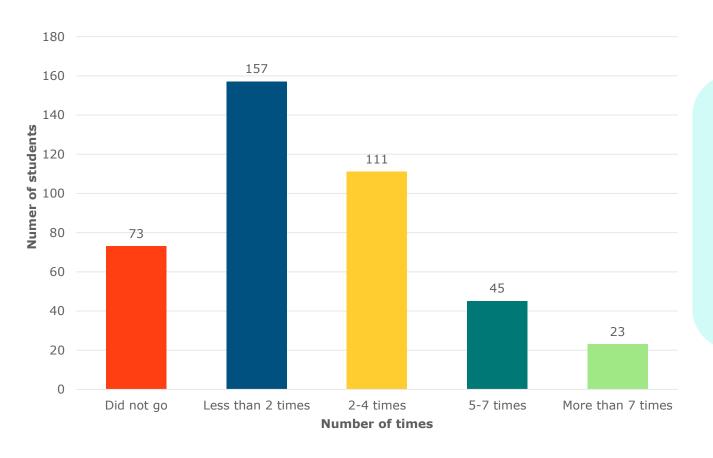
More than 50% got involved with tuition.

Miscellaneous Activity
Pattern during Non-lockdown Period

Fig 23: No of times visiting friends, relatives and neighbors
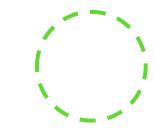
More than 65% preferred to visit friends, relatives and neighbors for less than 2 to 4 times.

Miscellaneous Activity

Change in Pattern between Two Periods

Involvement with **tuition increased** while with other part-time job decreased.
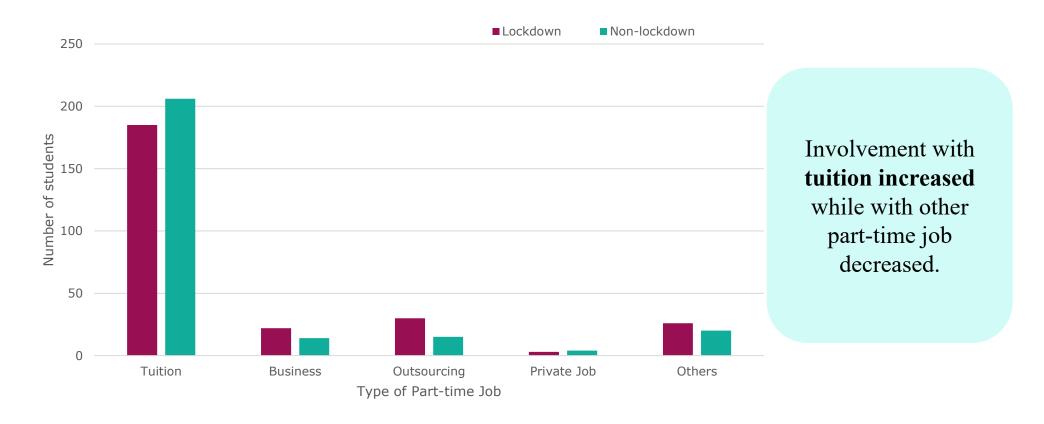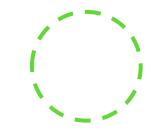
Fig 24: Change in involvement with part-time jobs during lockdown and non-lockdown

Miscellaneous Activity
Change in Pattern between Two Periods

Movement increased for visiting friends, relatives and neighbors .
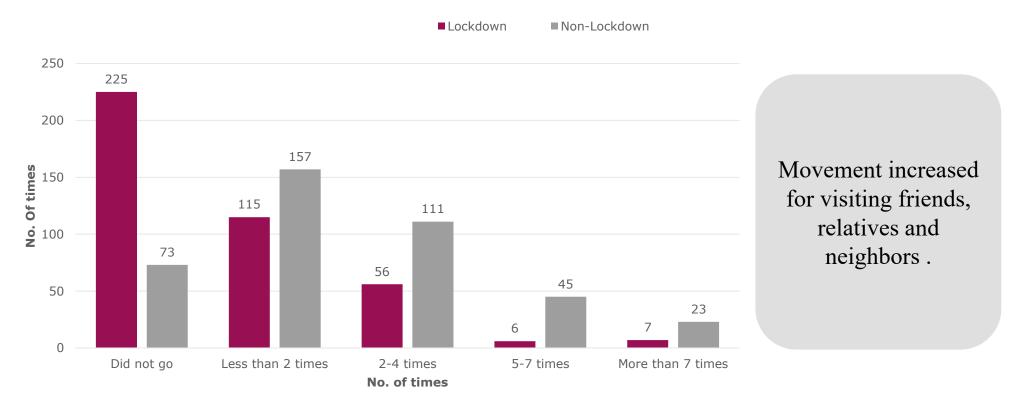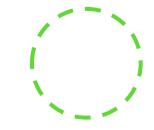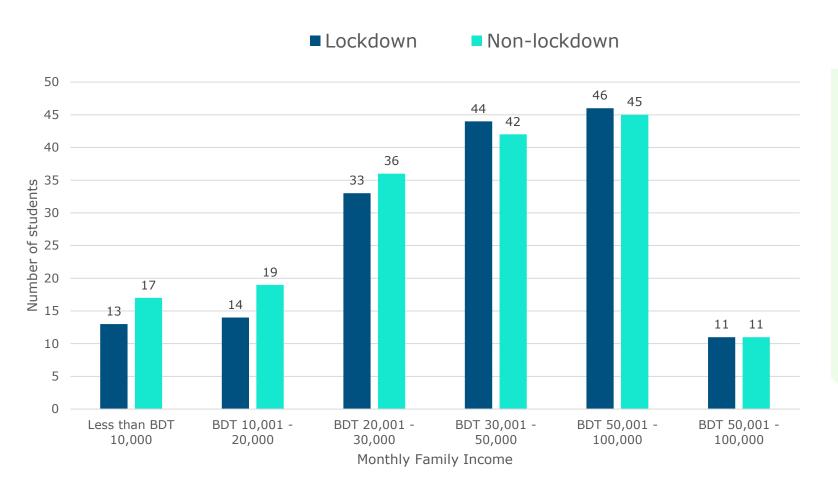
Fig 25: Change in no of times visiting friends, relatives and neighbors during lockdown and non-lockdown

Relation Between Activity Pattern and Socio-economic Condition

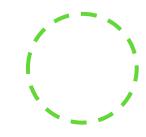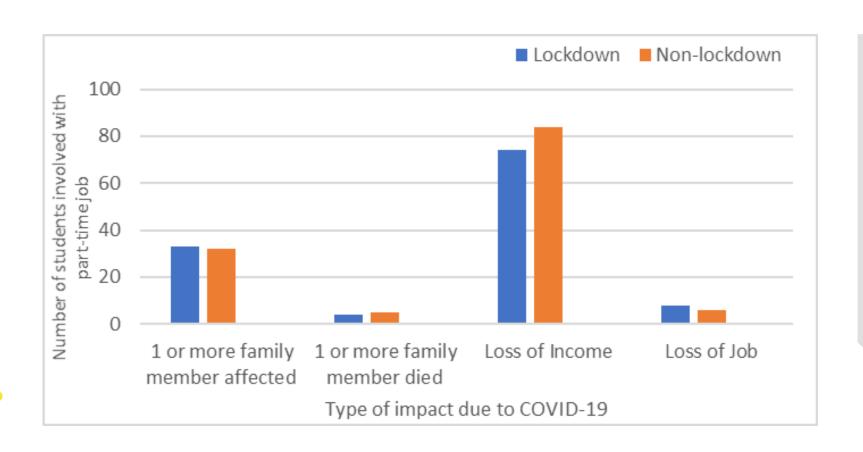# Involvement with Part-time Job

Based on Family Income:

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

Involvement with Part-time Job

Based on COVID-19 Impact:

Students **affected by loss of income** and 1 or more **death of family members** have **increased** involvement with **part-time jobs** during the **non-lockdown** period.

Fig 27: Part-time job involvement based on COVID impact
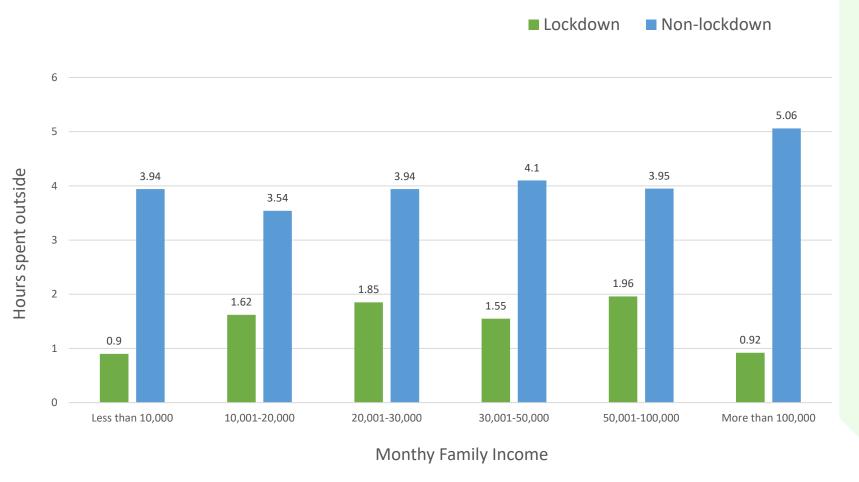
Outside Time Spent According to Family Income

Fig 28: Average time spent outside by students based on income

Lockdown:
Students from family income BDT 50,00-100,000 spent time outside more than students from other income groups.

Non-lockdown:
Time spent outside has drastically increased for students from family income of less than 10,000 BDT.

Priority Ranking of Reasons for Going Outside

Higher ← **Schedule Priority** → **Lower**

Monthly Family Income (Lower → Medium → Higher)

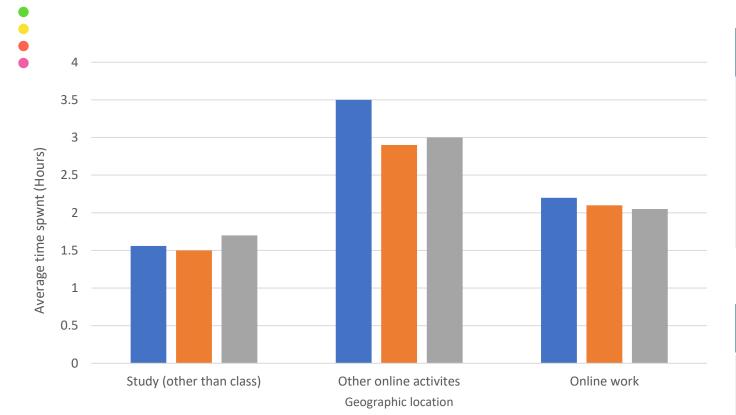| Monthly Family Income	Higher → → → → → Lower					
Less than BDT 10,000	Tuition	Medical Emergency	Essential shopping	Meeting friends	Outdoor games	Eating
BDT 10,001- BDT 20,000	Tuition	Medical Emergency	Essential shopping	Meeting friends	Outdoor games	Eating
BDT 20,001- BDT 30,000	Tuition	Essential shopping	Medical Emergency	Meeting friends	Eating	Outdoor games
BDT 30,001- BDT 50,000	Essential shopping	Medical Emergency	Tuition	Eating	Meeting friends	Outdoor games
BDT 50,001-100,000	Eating	Essential shopping	Medical Emergency	Tuition	Meeting friends	Outdoor games
BDT more than 100,000	Eating	Meeting friends	Essential shopping	Medical emergency	Tuition	Outdoor games

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Conclusions and Recommendations

Fig 29: Average time spent for online activity based on location

Conclusion

Time spent for online activities by students is less outside the City Corporation regions.

Recommendation

Facilities need to be upgraded to provide better access in online services for students living in Paurashava and Union areas.

Fig 30: Change in no. of times went for long distance travel during lockdown and non-lockdown

Conclusion

During non-lockdown period, long distance increased drastically.

Recommendation

Movement from one district to the other needs to be restricted.

Higher ← **Schedule Priority** → **Lower**

BDT 50,001-100,000	Eating	Essential shopping	Medical Emergency	Tuition	Meeting friends	Outdoor games
BDT more than 100,000	Eating	Meeting friends	Essential shopping	Medical emergency	Tuition	Outdoor games

Conclusion

Students belonged to family income range BDT 50,000 to more than BDT 100,000 is going outside in large-scale mainly for eating purpose.

Recommendation

Restaurants should avail only take away service to prevent gathering both in lock-down and non-lockdown period.

Thank You